Proposed Plan Change 120: Housing Intensification and Resilience (PC120)

to the Auckland Unitary Plan (Operative in part)

SECTION 32

SECTION 32 OF THE RESOURCE MANAGEMENT ACT 1991

RESIDENTIAL AND BUSINESS ZONES

EVALUATION REPORT
16 OCTOBER 2025

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1 Introduction

1. The purpose of this report is to provide an evaluation of Proposed Plan Change 120 – Housing Intensification and Resilience (**PC120**) to the residential and relevant business chapters, being H3: Residential - Single House Zone; H4: Residential - Mixed Housing Suburban Zone H5: Residential - Mixed Housing Urban Zone; H6: Residential - Terraced Housing and Apartment Zone; H10: Business - Town Centre Zone; H11: Business - Local Centre Zone; H12: Business - Neighbourhood Centre Zone; H13: Business – Mixed Use Zone; H15: Business – Business Park Zone of the Auckland Unitary Plan (Operative in Part, November 2016) (**AUP(OP)**) in accordance with section 32 of the Resource Management Act 1991 (**RMA** or **the Act**). The report also evaluates other consequential changes to Chapter G Rural Urban Boundary (RUB), Chapter J Definitions and Chapter E38 Subdivision – Urban.

2. PC120 responds to the National Policy Statement on Urban Development 2020 (May 2022 version) (**NPSUD**) and the RMA as amended by the Resource Management (Consenting and Other System Changes) Amendment Act 2025 (**Amendment Act**), including:

    - Meeting the requirement in Schedule 3C Clause 4(1)(a) by enabling at least the same amount of housing capacity as Proposed Plan Change 78: Intensification (**PC78**) (as notified) would have provided if made operative;

    - Meeting the requirement in Schedule 3C Clause 4(1)(b) by enabling building heights of at least fifteen storeys within at least a walkable catchment of Maungawhau, Kingsland and Morningside Stations;

    - Meeting the requirement in Schedule 3C Clause 4(1)(c) by enabling building heights of at least ten storeys within at least a walkable catchment of Baldwin Avenue and Mount Albert Stations;

    - Giving effect to NPSUD Policy 3(c) by enabling at least six storey development in specified locations;

    - Giving effect to NPSUD Policy 3(d) by enabling densities and heights commensurate to the level of commercial activities and services in areas within and adjacent to neighbourhood, local and town centre zones;

    - Enabling less development than that required by Schedule 3C Clause 4(1)(b) and (c) and NPSUD Policy 3, where authorised to do so by Schedule 3C Clause 8;

    - Other changes as necessary to support the implementation of the RMA.

3. This section outlines how the Auckland Council's response to the NPSUD, and RMA has been evaluated. The rest of this report will follow the evaluation approach

described in Table 1 below. In accordance with s32(6) of the RMA and for the purposes of this report:

- the 'proposal' means PC120
- the 'objectives' means the objectives of PC120; and
- the 'provisions' means the policies, rules, or other methods that implement, or give effect to, the objectives of PC120.

Table 1: evaluation approach

Sections of this report	Evaluation Approach
Section 2: Overview and Purpose	Explains the legislative background and purpose of this section of PC120. This section outlines the reasons for PC120, the scope of changes and provides an overview of proposed changes.
Section 3: Issues	Explains the resource management issues and why there is a need to resolve them. It also addresses the scale and significance of the issues.
Section 4: Development and evaluation objectives and provisions	In accordance with section 32(1)(b) and (2) of the RMA, evaluates the relevance of PC120 to Part 2 (sections 5-8) and other relevant parts / sections of the RMA. Provides an evaluation of the proposed provisions in terms of effectiveness and efficiency in achieving the objectives.
Section 5: Development of the plan change	This part of the report outlines the methodology and development of the proposed provisions within PC120.
Section 6: Conclusion	Concludes that PC120 is the most efficient, effective and appropriate means of addressing the resource management issues identified.

4. This section 32 evaluation includes three appendices providing more detailed analysis of the options considered for the proposed standards introduced through PC120. These standards have been developed in response to the statutory requirements that relate to PC120 and have taken into account issues identified through the Council's s35 monitoring of the environment to ensure the efficiency and effectiveness of policies, rules, or other methods under section 35(2)(b) RMA. The contents of the attachments are as follows:

- **Appendix 1** – Terrace Housing and Apartment Buildings and Relevant Business Zones, addressing the changes made to the height and bulk standards to enable building heights of at least 6, 10 and 15-storeys and enable additional capacity in these zones where they are located in NPSUD Policy 3(c) and 3(d) locations or a legislated location as identified in a RMA Schedule 3C, Clause 4.

- **Appendix 2** – Mixed Housing Urban, addressing the changes made to the height in relation to boundary standard in the zone.

- **Appendix 3** – Well Functioning Urban Environment, addressing the changes made to include and amend standards for higher-quality built environment and resilience outcomes. These changes are consistent with the section 35 Monitoring Report, NPSUD and AUP-RPS for climate resilience.

2 Overview and purpose

5. The following section sets out the legislative context behind PC120 and provides an overview of the proposed amendments in response to key legislative drivers. In summary, the key legislative drivers of the PC120 are to:

- Meet the requirements in Schedule 3C Clause 4 of the RMA;

- Give effect to Policy 3(c) and 3(d) of the NPSUD;

- Enable less development than that required by Schedule 3C Clause 4(1)(b) and (c) and NPSUD Policy 3, where authorised to do so by Schedule 3C Clause 8; and

- Undertake consequential changes to objectives, policies, standards, methods and zones in order to achieve well-functioning urban environment outcomes with a quality compact urban form as directed under Sections B2.2, B2.3 and B2.4 of the Auckland Unitary Plan Regional Policy Statement (the AUP RPS).

2.3 Meet the requirements in Schedule 3C of the RMA

6. Schedule 3C of the RMA requires the Council to:

    - provide at least the same amount of housing capacity as the notified PC78 could have achieved if made operative;

    - increase heights and densities and enable at least fifteen storey building heights within at least a walkable catchment of the Maungawhau, Kingsland and Morningside Stations;

    - increase heights and densities and enable at least ten storey building heights within at least a walkable catchment of the Baldwin Avenue and Mount Albert Stations; and

    - give effect to NPSUD Policy 3.

7. In meeting the requirements of Schedule 3C, the Council may amend the AUP to enable less development than required in these locations if authorised to do so by Clause 8.

8. In introducing these directions into the RMA the government is seeking to increase the density of urban areas to give people more choices about where they can live

affordably in a wider variety of housing types that have good access to jobs, transport, and community facilities.

2.4 Give effect to Policy 3 NPSUD

9. The RMA requires Auckland Council as a Tier 1 local authority to give effect to NPSUD Policy 3(a), Policy 3(b), Policy 3(c) and Policy 3(d). With regards to NPSUD Policy 3(a) which relates to city centre zones and NPSUD Policy 3(b) which relates to metropolitan centre zones these have been the subject of recent planning processes under PC78. Through the PC78 process the proposed changes to the Business – City Centre zone have been adopted by the Council and those changes made operative on 6 June 2025. Whereas with the PC78 proposed changes to the Business – Metropolitan Centre zone, evidence and submissions have been heard by the Independent Hearings Panel with recommendations to be released and pending Council decision making on these recommendations. No further changes are proposed as part of PC120 to either the City Centre zone or Metropolitan Centre zone. With regards to NPSUD Policy 3(a), it is considered that the City Centre zone provisions give effect to it and this has been confirmed by recent decisions on PC78 for the City Centre zone. With regards to NPSUD Policy 3(b), at the time of writing, Auckland Council's decisions on PC78 Metropolitan Centre zone recommendations have not yet been made.

10. Consequently, PC120 seeks to give effect to NPSUD Policy 3(c) and Policy 3(d) which read as follows:

> *Policy 3: In relation to tier 1 urban environments, regional policy statements and district plans enable:*
>
> *(c) building heights of at least 6 storeys within at least a walkable catchment of the following:*
>
> *(i) existing and planned rapid transit stops:*
>
> *(ii) the edge of city centre zones:*
>
> *(iii) the edge of metropolitan centre zones; and*
>
> *(d) within and adjacent to neighbourhood centre zones, local centre zones, and town centre zones (or equivalent), building heights and density of urban form commensurate with the level of commercial activities and community services*.

11. In giving effect to Policy 3, the Council must have particular regard to Policy 6 of the NPSUD:

> *When making planning decisions that affect urban environments, decision-makers have particular regard to the following matters:*
>
> *(a) the planned urban built form anticipated by those RMA planning documents that have given effect to this National Policy Statement;*
>
> *(b) that the planned urban built form in those RMA planning documents may involve significant changes to an area, and those changes:*
>
> *(i) may detract from amenity values appreciated by some people but improve amenity values appreciated by other people, communities, and future generations, including by providing increased and varied housing densities and types; and*

(ii) are not, of themselves, an adverse effect

(c) the benefits of urban development that are consistent with well-functioning urban environments (as described in Policy 1);

(d) any relevant contribution that will be made to meeting the requirements of this National Policy Statement to provide or realise development capacity the likely current and future effects of climate change.

2.5 Amendments and Qualifying Matters

12. As provided for under Clauses 4 and 8 of Schedule 3C and ss74(1)(ea) and 75(3)(a) and (c) of the RMA, PC120 contains amendments to plan provisions, including objectives, policies, rules, standards, and zones, and other plan methods that implement Policies 3(c) and 3(d). The proposed amendments address a range of topics, including but not limited to:

- enabling the heights of buildings to be increased up to 10 and 15-storeys in walkable catchments where identified factors are evident (as outlined in paragraph 14 below) and support increased height and density of development, i.e.: . building heights and densities of urban form commensurate with the level of commercial activity and community services.

- enabling the heights of buildings to be increased to at least 10 and 15-storeys in walkable catchments identified by RMA Schedule 3C clause 4(1)(b) and (c).

- enabling increased building heights, up to 6-storeys in the THAB zone outside of walkable catchments and for further intensification in the MHU zone.

13. Collectively these outcomes contribute to the achievement of the requirement to provide at least the same amount of housing capacity that would have been enabled if PC78 were made operative. There are also instances where qualifying matters reduce building heights and densities in clause 4(1)(b) and (c) areas where those heights and densities have been assessed to be inappropriate in those areas.

14. In the clause 4(1)(b) and (c) areas evaluations have been undertaken to determine a whether there is preferred height that is above 10 or 15-storeys. That analysis found that heights above 10 and 15-storeys would not be commensurate with demand and the appropriate level of accessibility. Walkable catchments outside of clause 4(1)(b) and (c) areas have also been allocated building heights in recognition of factors evident in each area for intensification. These factors comprise: strategic importance including proximity to a centre and the role and function of that centre; accessibility including access to the rapid transit network; concentration of amenities; and residential demand relative to other areas.

15. The AUP(OP) currently includes a range of provisions that seek to achieve key directions for urban growth set out in the Auckland Unitary Plan Regional Policy Statement (RPS). In particular, the provisions seek to achieve a well-functioning urban environment (Objective B2.2.1(1) of the RPS), with a quality compact urban form that enables a higher-quality urban environment (RPS Objective B2.2.1(1)(a)), and improved resilience to the effects of climate change (RPS Objective B2.2.1(1)(h)). This

is implemented through, the AUP(OP) zones and their objectives, policies, standards and other consenting requirements that manage activities and development including building bulk, height and design.

16. The evaluation of the proposed amendments and qualifying matters includes an assessment of how the AUP(OP) will continue to achieve a 'well-functioning urban environment with particular regard had to achieving higher-quality urban environments and building resilience to climate change.

2.6 A high-level summary of scope of PC120 Residential and Business Zones Section 32 Evaluation Report

17. PC120 is the Auckland Housing Planning Instrument (**AHPI**) and includes proposed amendments to the following chapters of the AUP(OP) in response to the intensification requirements of the RMA:

- H3: Residential - Single House Zone (**SHZ**);
- H4: Residential - Mixed Housing Suburban Zone (**MHS**);
- H5: Residential - Mixed Housing Urban Zone (**MHU**);
- H6: Residential - Terraced Housing and Apartment Zone (**THAB**);
- H10: Business - Town Centre Zone (**TCZ**);
- H11: Business - Local Centre Zone (**LCZ**);
- H12: Business - Neighbourhood Centre Zone (**NCZ**);
- H13: Business – Mixed Use Zone **MUZ**);
- H15: Business – Business Park Zone (**BPZ**)[1];
- E38: Auckland-wide Subdivision; and
- G: Rural Urban Boundary (RUB), to include sections on Walkable Catchments and Height Variation Controls.

18. PC120 is an integrated package of changes to implement and incorporate intensification provisions of the RMA into the AUP(OP). Table 2 below provides a synopsis of the extent and scope of the proposed changes considered in this evaluation report.

[1] The 'TCZ', 'LCZ', 'NCZ', 'BPZ' and 'MUZ' are also collectively referred to as the '**relevant business zones'** hereafter.

Table 2: Summary of the proposed key changes and regulatory scope for change

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Meet the requirements in Schedule 3C, Clause 4	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(d)	Give effect to the RPS (s75(3)(c))
H6: Terraced Building and Apartment Zone					
Increase building heights to 10 or 15 storeys in certain walkable catchments.	Clause 4(1)(a) of Schedule 3C requires the same amount of housing capacity as provided by the notified PC78. Clause 4(1)(b) and (c) require at least 10 or 15 fifteen storey buildings and increased heights and densities in certain locations.	Yes. However a qualifying matter is introduced to manage the built form in these locations under Schedule 3C, clause 8.	Yes.	Yes, Policy 3(d) building heights and densities of urban form commensurate with the level of commercial activity and community services where it relates to allocation of heights greater than 6-storeys in walkable catchments and the increase development capacity outside walkable catchments.	N/A
Retain and increase building heights outside walkable catchments.	Amendments to height in relation to boundary standards to better enable heights up to 6 storeys.				
Increase building heights in walkable catchment of at least 6 storeys.	Enable development of at least 6 storeys within walkable catchment through amendments to height and height in relation to boundary standards to enable this.				
Incorporate additional standards for dwellings.	Consequential changes are proposed to achieve well-functioning urban environments, including higher-quality built environments and climate change resilience.	Not applicable.			Yes.
Changes in response to, qualifying matters, and including deletions, and additions to notification clauses standards, matters of	Other amendments proposed to align with increased housing capacity, 6 storey buildings, achieve well-functioning urban				

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Meet the requirements in Schedule 3C, Clause 4	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(d)	Give effect to the RPS (s75(3)(c))
discretion and assessment criteria.	environment outcomes and give effect to qualifying matters.				
Incorporation of provisions to ensure that development is able to be adequately serviced by stormwater and wastewater infrastructure; and that there is sufficient capacity in these networks to support development.	To give effect to the qualifying matter that relates to the combined wastewater network.	Yes, but modified to recognise the values of the qualifying matter.	Not applicable.	Not applicable.	
Increase the range and scale of commercial and community activities enabled.	To enable small scale non-residential activities, that contribute to and are compatible with the wellbeing of residents	Not applicable.	Not applicable.	Not applicable.	
H5: Residential – Mixed Housing Urban Zone					
Retain and improve building heights.	Amendments to height in relation to boundary standards to better enable heights up to 3 storeys.	Yes – contributes to Clause 4(1)(a).	No - MHU is not applied in walkable catchments, except where qualifying matters apply.	No – MHU does not provide a level of commercial activity or community services that could support increased height or density anticipated by Policy 3(d).	Yes.
Incorporate additional standards for dwellings.	Changes are proposed to align achieve well-functioning urban environments, including higher-quality built environments and climate change resilience.	Not applicable.	Not applicable.		
Consequential and related updates in response to qualifying matters (including natural hazards), and including deletions, and additions to notification clauses standards, matters of discretion	Other amendments proposed to achieve well-functioning urban environment outcomes, including higher-quality built environments and climate change resilience.				

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Meet the requirements in Schedule 3C, Clause 4	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(d)	Give effect to the RPS (s75(3)(c))
and assessment criteria.					
Incorporation of provisions to ensure that development is able to be adequately serviced by stormwater and wastewater infrastructure; and that there is sufficient capacity in these networks to support development.	To give effect to the qualifying matter that relates to the combined wastewater network.	Yes, but modified to recognise the values of the qualifying matter.	Not applicable.	Not applicable.	
H4: Residential – Mixed Housing Suburban Zone					
Incorporate additional standards for dwellings.	Changes are proposed to align achieve well-functioning urban environments, including higher-quality built environments and climate change resilience.	Not applicable	Not applicable	Not applicable	Yes.
Consequential and related updates in response to qualifying matters, and including deletions, and additions to notification clauses standards, matters of discretion and assessment criteria.	Other amendments proposed to achieve well-functioning urban environment outcomes, including higher-quality built environments and climate change resilience. .				
Incorporation of provisions to ensure that development is able to be adequately serviced by stormwater and wastewater infrastructure; and that there is sufficient capacity in these networks to support development.	To give effect to the qualifying matter that relates to the combined wastewater network.	Yes, but modified to recognise the values of the qualifying matter.	Not applicable	Not applicable	

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Meet the requirements in Schedule 3C, Clause 4	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(d)	Give effect to the RPS (s75(3)(c))
H3: Residential – Single House zone					
Apply the Single House Zone in part where certain qualifying matters apply and where a lower intensity of residential development is anticipated. Consequential and related updates in response to qualifying matters (including natural hazards).	Clause 4 of Schedule 3C requires that a relevant residential zone provides for additional development capacity in Schedule 3C Clause 4(1)(a); Clause 4(1)(b); and Policy 3 areas, except where a qualifying matter applies.[2]	Yes, but modified to recognise the values of the qualifying matter	Not applicable due to the incompatibility of the building height with the relevant values of the qualifying matters.	Not applicable	Yes.
Incorporation of provisions to ensure that development is able to be adequately serviced by stormwater and wastewater infrastructure; and that there is sufficient capacity in these networks to support development.	To give effect to the qualifying matter that relates to the combined wastewater network.	Yes, but modified to recognise the values of the qualifying matter.	Not applicable	Not applicable	
H10: Business - Town Centre Zone, H11: Local Centre Zone, H12: Neighbourhood Centre Zone, H13: Mixed Use Zone, H15: Business Park Zone					
Increase building heights to 10 or 15 storeys in certain walkable catchments.	Clause 4(1)(a) of Schedule 3C requires the same amount of housing capacity as provided by the notified PC78. Clause 4(1)(b) and (c) require at least 10 or 15 fifteen storey buildings and increased heights and densities in certain locations.	Yes	Yes	Yes (Policy 3(d)).	Not applicable

[2] Schedule 3C Clause 4(2)

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Meet the requirements in Schedule 3C, Clause 4	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(d)	Give effect to the RPS (s75(3)(c))
Enable building heights of at least 6 storeys in walkable catchments.	Enable development of at least 6 storeys within walkable catchment through amendments to height standards to enable this.		Yes,	Not applicable	
Consequential and related updates in response to qualifying matters, and including deletions, and additions to standards and assessment criteria.	Other amendments proposed to align with Policy 3(c) requirements and achieve higher-quality built environment outcomes.		Not applicable	Not applicable	Yes.
E38: Auckland-wide Subdivision					Not applicable
Consequential and related amendments to address natural hazards	To align with the revised natural hazard risk management approach proposed to be introduced through significant revisions to chapter E36.	Yes, but modified to recognise the values of the qualifying matter.	Not applicable	Not applicable	Yes
Incorporation of provisions to address pedestrian safety and accessibility for certain types of developments	To ensure alignment with proposed residential zone provisions.	Yes			
Consequential and related amendments to address qualifying matters.	To give effect to the qualifying matters that relates to the combined wastewater network and the Special Character Areas Overlay – Residential and Business	Yes, but modified to recognise the values of the qualifying matter.			
Incorporation of provisions to manage the function and capacity of infrastructure, and to ensure developments can be adequately serviced.	To manage adverse effects from development on the function and capacity of water supply, wastewater and stormwater networks, while ensuring that development is able to	Yes			

Summary of Key Changes		Relevant RMA sections addressed			
Proposal	Reason(s)	Meet the requirements in Schedule 3C, Clause 4	Give effect to Policy 3(c) to provide building heights of at least 6 storeys within a walkable catchment	Give effect to Policy 3(d)	Give effect to the RPS (s75(3)(c))
	be adequately serviced by these networks.				
G: Rural Urban Boundary (RUB					
Consequential and related amendments based on AUP(OP) and PC120 provisions to provide for Walkable Catchments and Height Variation Controls	To give effect to related methods that enable greater building heights in walkable catchments	Yes	Yes	Yes	Yes

2.7 An Overview of Proposed Changes to Residential and Business Zones.

2.7.1 Introduction

19. The following sections provide an overview of how:

- Schedule 3C, Clause 4(1)(a)[3], (b) and (c) have been met;
- NPS-UD Policy 3(c) and 3(d) have been given effect to, as per the mandatory direction of Schedule 3C, Clause 4(1)(d); and
- Amendments have been made to enable less development than that required by Schedule 3C, Clause 4(1)(b), (c) and (d) (as per Schedule 3C, Clauses 4 and 8, and ss74(1)(ea) and 75(3)(a) and (c) of the RMA).

2.7.2 Residential Zones

20. Amendments to zone chapters apply to four zones.

H3: Residential - Single House Zone

21. The SHZ is proposed to be applied to residential areas that necessitate a lower intensity of development than that provided for in the MHS, MHU and THAB zones. It is applied one or more of the following circumstances:

[3] Regarding the extent to which PC120 requirements specified in Schedule 3C, Clause 4(1)(a) are met refer to PC120 Section 32 – Economy Matters and ongoing capacity modelling that has been developed to determine the level plan enabled capacity that PC120 provides for.

- In certain precincts.
- To some residential areas in settlements outside the urban area.
- In areas where it is necessary to limit development in order to support the protection of significant ecological values, cultural heritage, areas of high or outstanding natural character.
- To prevent development intensifying in areas that are known to be exposed to coastal and flood hazards.
- To maintain and enhance the amenity values of special character residential areas.
- To manage development to ensure that it can be adequately serviced by the water supply, wastewater and stormwater networks.
- To manage development in areas where there are known infrastructure capacity constraints.

22. The SHZ anticipates low levels of residential development, generally providing for 1 residential unit per site.[4] Residential activities such as boarding houses, visitor accommodation and supported residential care are provided for as permitted activities where they accommodate up to 10 people per site. The zone also provides for limited small scale non-residential activities such as care centres, dairies and healthcare facilities.[5] The demolition and construction of buildings, and additions / alterations to existing buildings, are all provided for as permitted activities (noting that overlay provisions may impose greater levels of control on development e.g. the Special Character Overlay).

23. The Combined Wastewater Network applies across the isthmus to multiple zones, and the QM applies to new dwellings and activities in the Residential - Single House Zone that through connection to the network increase pressure on the capacity of the network. The impact of a permitted activity is less where stormwater on the site is separated from wastewater and is connected to or is able to connect to the public stormwater network, as this reduces the capacity issues that result in overflows, especially at times where there are heavy rain events.

H4: Residential - Mixed Housing Suburban and H5: Residential - Mixed Housing Urban Zones

24. Under the AUP(OP), the MHU zone provides for a higher intensity medium density residential development, providing for up to 3 storeys in a range of residential building types. The MHS zone provides for a lower intensity medium density residential

[4] There are some exceptions to this general presumption around density – conversion of an existing dwelling into two units; or establishing a minor dwelling on a site.
[5] Dairies are a restricted discretionary activity provided the GFA per site does not exceed 100m^2. Health care facilities are a restricted discretionary activity provided the GFA does not exceed 200m^2 per site.

development than the MHU, providing for up to two storeys and a range of attached and detached residential building types. Both the MHU and MHS enable a range of complementary non-residential and other residential uses in building forms, and at a scale and intensity consistent with the planned urban character of these respective zones.

25. As detailed in other s32 reports, it is proposed that the MHS zone is located in areas with lower levels of access by public transport network and are not within walking distances to centres, community amenities, social facilities and open space. It is intended that the MHS zone is confined in its application to these areas of established suburbs and some greenfield areas where access is limited and proximity to services and amenities is reduced. Conversely, it is proposed that the MHU zone has widespread application covering much of the residential zoned land of Auckland.

26. This approach has resulted in a change in the extent of MHS (as applied through the AUP(OP)), changing this to MHU thereby increasing the extent of land area where 3 storey dwellings are enabled. In addition, in the MHU zone it is proposed to increase the built form enabled on sites with changes proposed to the permitted height in relation to boundary standard to the application of the operative alternative height in relation to boundary standard and removing the restriction to the front 20 metres of a site and expanding it to the full length of a site. This amendment will allow greater flexibility on a range of sites to achieve, across the whole site, the full 11m (3 storey) zone height standard that is achievable under the AUP(OP) provisions. The change in zoning pattern and standards will contribute to achieving the housing capacity enabled under PC78. This proposed change is discussed in more detail in **Appendix 2** – Options Analysis: Mixed Housing Urban Zone.

27. Consequential changes are proposed to address well-functioning urban environment outcomes, including higher-quality built environments and climate change resilience. A summary of those consequential changes is provided in Section 2.7.4 and Table 3 below. **Appendix 3** - Well Functioning Urban Environment Outcomes: Targeted Evaluation provides more detailed analysis on the development of the relevant provisions including findings from s35 monitoring and from modelling options, as well as discussion on anticipated benefits.

28. The Combined Wastewater Network applies across the isthmus to multiple zones, and the QM applies to new dwellings and activities in the MHS and MHU to manage connection to the network and control activities that may increase pressure on the capacity of the network. The impact of a permitted activity is less where stormwater on the site is separated from wastewater and is connected to or is able to connect to the public stormwater network, as this reduces the capacity issues that result in overflows, especially at times where there are heavy rain events.

29. There are also some sites and wider areas in the region where these residential zones are applied that have infrastructure capacity constraints that will be addressed in time but may be present when redevelopment or in some instances a change in use(s) is proposed. The existing water and wastewater networks in Auckland's urban areas and their planned upgrades are sized based on expected capacity requirements for the

zoning applied under the AUP(OP) when it was made operative in 2016. The cumulative effects of increases in demands related to the zone changes will place some catchments under pressure as the capacity is taken up. Accordingly, assessment is required for relevant restricted discretionary activities of the effect of development of the function and capacity of the network and effects on the environment of any lack of capacity.

H6: Residential: Terraced Housing and Apartment Zone

30. It is proposed to retain the THAB zone as a high intensity residential zone which is primarily located around metropolitan, town and local centres, along Frequent Transit Network corridors and public transport networks to support intensification. The zone provides for a range of urban dwelling typologies including terraced housing and apartments. As detailed in other s32 reports, it is proposed that the THAB zone will apply within walkable catchments except where land is already zoned as a business zone. In walkable catchments, in some instances, the land may be subject to certain qualifying matters and less enabling provisions are applied. Planning provisions that manage and protect environmental, cultural and other values that apply to THAB zoned land outside Policy 3(c) walkable catchments and Policy 3(d) areas are generally managed through the application of overlays. The presence of qualifying matters may also require that the affected land in the walkable catchment is zoned SHZ, such as Special Character Areas Residential overlay applies.

31. Some sites that have been zoned THAB due to their proximity to urban centres and public transport networks are part of catchments that have infrastructure capacity constraints. As the timing of a site's development is not able to be sequenced to align with infrastructure upgrades through this plan change, the impact of proposals will require consideration when development or in some instances a change in use(s) of the site is proposed. The cumulative effects of commercial activities and dwellings in the catchment, especially when 34.5m (10 storeys) and 50m (15 storeys) are proposed, will need to be assessed in terms of the potential impact of development(s) on the capacity of water supply and wastewater networks that the sites are connected to. The cumulative effects of increases in demand related to the intensification enabled by the combination of zone changes and increase in height in the THAB zone will place some catchments under pressure as the capacity is taken up.

32. Key proposed characteristics of the amended zone include:

    - Where the zone is within a walkable catchment additional standards apply that support a greater level of built form intensity, creating two key geographic sub areas within the THAB zone of inside and outside walkable catchments.

    - Within walkable catchments, in giving effect to Policy 3(c) of the NPSUD, and meeting the requirements in Clause 4(1), Schedule 3C of the Amendment Act the height standard for consented activities is increased to enable 6, 10 or 15 storey buildings (depending on the location of the walkable catchment) along with other consequential and enabling amendments. Proposed changes to enable 10 or 15 storey buildings is provided through Height Variation Controls identified on planning maps. A more detailed analysis on this proposed height strategy is

provided in **Appendix 1** –Terraced Housing and Apartment Buildings and Business Zones: Targeted Evaluation.

- Outside walkable catchments, 22m heights to enable 6 storey buildings is proposed. This gives effect to Policy 3(d) of the NPSUD and assists in meeting the requirement in Schedule 3C, Clause 4(1)(a) of the Amendment Act.

- Increasing the range and scale of commercial and community activities enabled. This includes office, dairy, restaurant and cafes on the ground floor of developments and community and healthcare facilities up to 200m^2. Constraints are necessary to ensure these small scale non-residential activities, contribute to and are compatible with the wellbeing of residents, integrate into new developments and are of a scale that does not detract from the vitality and viability of commercial development in Centres.

- Additional consequential and related amendments are proposed to address well-functioning urban environment outcomes, including higher-quality built environments and climate change resilience.

2.7.3 Business Zones

33. This s32 report includes within its scope five business zones including the Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park zones. These are either existing or planned locations of growth and intensification.

34. Policy 3(c) and 3(d) of the NPSUD is to be given effect in urban environments within and adjacent to specific centres which are relevant to the five business zones listed above. Schedule 3C, Clause 4(1) also impacts upon the identified business zones.

35. Key proposed characteristics of the zones include:

- Within walkable catchments in the relevant business zones, the height standard for consented activities is amended to enable 22m heigh (6 storey) buildings along with other consequential and enabling amendments. This gives effect to Policy 3(c) NPSUD. It is also proposed to provide for a Height Variation Control in relevant business zones, providing for 10 and 15 storeys height limit which meets the requirements in Clause 4(1), Schedule 3C. A more detailed analysis on this proposed height strategy is provided in **Appendix 1** – Terraced Housing and Apartment Buildings and Business Zones: Target Evaluation.

- In the relevant business zones, relatively limited number of consequential and related amendments (including additions and deletions) to the description, objectives, policies, standards and assessment criteria are proposed. These changes give effect to Policy 3 of the NPSUD, Schedule 3C, respond to qualifying matters and deliver higher-quality built environment outcomes as directed by the RPS.

- All other operative provisions are retained, with a clarification made to the height variation control policy[6]. The clarification relates to where heights greater than the zone standard are being considered and along with other matters in the policy, clause (c) is proposed to be amended so that the size and depth of the 'zoned' area is taken into account when evaluating potential effects on adjacent residential zones. This change is consistent with changes to Business Metropolitan Centre zone proposed under PC78 and provides clearer guidance on the spatial extent to be analysed when considering whether heights greater than the zone standard are appropriate.

2.7.4 Provisions

Standards

36. Table 3 below provides a high level summary of proposed changes to zone standards (including new standards and amendments) and a summary of the rationale/benefits. More detailed analysis of the rationale for and anticipated benefits of proposed changes relating to height and well-functioning urban environments can be found in the evaluation papers contained in **Appendix 1**, **Appendix 2 and Appendix 3** of this s32 report.

37. Amendments are proposed to require the following standards to apply to all residential activities:

- Maximum impervious area (retained from AUP(OP));
- Daylight (retained from AUP(OP));
- Front, side and rear fences and walls (retained from AUP(OP));
- Deep soil area and canopy tree;
- Safety and privacy buffer from private pedestrian and vehicle accessways; and
- On-site waste management.

38. Where an activity does not comply with one or more of the above standards, the activity shall be assessed as a restricted discretionary activity (as per Chapter C General rules, C1.9(2) of the AUP(OP)) and will be assessed against the objectives and policies, purpose statements and relevant matters of discretion and assessment criteria, as well as any other matters identified under C1.9(3) of the AUP(OP).

[6] The change is made to H10.3(13)(c), H11.3(13)(c), H12.3(13)(c), H13.3(13)(c) and H15.3(13)(c). This is a general policy applying across the relevant business zones which have consistent text. The change is (addition underlined):

> *"(13) Enable greater building height than the standard height in locations identified within the Height Variation Control, having regard to whether the greater height:…(c) considering the size and depth of the zoned area, can be accommodated without significant adverse effects on adjacent residential zones;…"*

39. A summary of the rationale behind these amendments is provided in Table 3 below. However, the primary driver of this approach is to give effect to contributing to a well-functioning urban environment while enabling greater density through the other amendments to give effect to NPSUD Policy 3(c) and 3(d), and the requirements of the RMA and therefore also giving effect to the RPS by achieving higher-quality built environment outcomes (including responding to qualifying matters) and building resilience to climate change

Table 3: High level summary of the proposed changes with the rationale and benefit for the change.

Standard and Zones Affected	Summary of Proposed Changes /Standards	Rationale/Benefits
Offices outside the Centre Fringe Office Control THAB	- Standard amended to enable offices up to 200m^2 GFA on the ground floor that contribute to residents' wellbeing.	- The proposed standards enable the location of services in proximity to residential development. Managing GFA ensures provision of services remains at a level which is compatible to the surrounding residential environment and does not compromise the residential yield of a development.
Commercial activities THAB	- New standard enabling commercial activities up to 600m^2 GFA on the ground floor that contribute to, and are compatible with, residential wellbeing.	
Height Standard THAB, Town Centre, Local Centre, Neighbourhood Centre, Mixed Use, Business Park	- In THAB, increased building height of 22m (6 storeys) is proposed across the zone. Height Variation Controls as identified on planning maps enable 34.5m (10 storeys) and 50m (15 storeys) within certain walkable catchments. - Within walkable catchments of business zones, the 22m (6 storeys) height control is introduced, as well as a 34.5m (10 storeys) and 50m (15 storeys) height where Height Variation Control applies.	- The 22m, 34.5m and 50m height controls have been proposed to enable 6, 10 and 15 storey buildings (respectively) based on evidence and research of a range of height standards to incentivise the delivery of quality internal amenity. - The proposed height controls provide for the additional height, density and housing capacity as required under the RMA but do not excessively increase dominance and shading to streets (when coupled with additional proposed standards such as Height in Relation to Boundary (HIRB). - The proposed height controls are consistent with the proposed anticipated urban built character of the relevant zones. - The variation in the structure of the height controls between business and residential zones (i.e. retaining the occupiable height limit in Business zones) manages the visual and character effects of the built form environments anticipated in different zones.

Standard and Zones Affected	Summary of Proposed Changes /Standards	Rationale/Benefits
		- Increasing height controls as proposed is one of the key development controls to stimulate investment and enable growth. - Taller buildings may be appropriate in certain locations and are provided for through the height variation control and through the consenting process to manage potential visual impact/dominance, landscape and, shading effects.
Height in relation to boundary Standard MHU, THAB, Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park	- In the MHU zone, the operative Alternative Height in Relation to Boundary control is amended to be the primary control. A height of 3.6m height control is proposed at side and rear boundaries. Thereafter a setback of 1m and then 0.3m for every metre in height (73.3^{o}) up to 6.9m and then 1m for every metre in height (45^{o}). This standard applies for the full length of the side and rear boundaries of all sites. - In THAB unless a Height Variation Control applies which enables more than 22m, then 21.5m + 60^{o} is proposed for the first 21.5m of site from frontage with 8m + 60^{o} proposed to apply to parts of sites more than 21.5m from the frontage and to rear sites. - In THAB, where a Height Variation Control enables more than 22m, then 20m + 60^{o} is applied to side and rear boundaries. - In THAB, outside walkable catchments a 2.5m + 45^{o} is proposed where a boundary adjoins open space zoned land less than 2000m^{2} or the SHZ or MHS. - In THAB, height in relation to boundary adjoining lower intensity zones applies only on the edge of a walkable catchment to the lower zone outside the walkable catchments. - In business zones the height in relation to boundary standard is amended consequentially where	- For MHU, the proposed amendments are more enabling than operative standards. - The MHU operative height in relation to boundary was identified as a key constraint in meeting the intensification objectives of relevant residential zones. Proposed amendments enable standard zone height controls to be achieved. - The HIRB standard proposed for THAB in walkable catchments enables 6 storey buildings, encouraging built form towards the street and reducing the building envelope toward the rear to assist in managing dominance and shading effects and provide benefits of passive surveillance and consistent street frontages. - Where a Height Variation Control enables building heights above 22m, the proposed amendments enable 10 and 15-storey buildings on land parcels large enough to absorb significant adverse shadowing and dominance effects. Amalgamation is the anticipated mechanism to achieve sufficient land area, where existing individual sites are not large enough. - The proposed amendments continue to enable transition in scale and built form of areas within walkable catchments and provide for greater scales of activity and intensity of built form in centres and at rapid transit stops. This is then stepped down

Standard and Zones Affected	Summary of Proposed Changes /Standards	Rationale/Benefits
	buildings in walkable catchments are adjacent to other zones.	through the residential zones in recognition of planned urban character. - Amendments in THAB outside walkable catchments recognises those areas which are located within the Frequent Transit corridor intensification areas and adjacent to centres have a moderately high degree of accessibility and levels of commercial activity and community service which can support an increase in density.
Building setback at upper floors standard THAB, Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park	- For THAB in walkable catchments buildings over 22m in height, a 6m setback is applied from 22m to front, side and rear boundaries. - In THAB walkable catchments buildings greater than 22m where at the walkable catchment edge and adjoining SHZ, MHS or MHU, an 18m setback is applied above 22m to side and rear boundaries (this is considered a built form standard qualifying matter clause 8(1)(b) “any other matter” category). - In the Town Centre and Mixed Use Zone, amend operative standard to apply only to buildings outside walkable catchments. - In Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park Zones, propose building setbacks in walkable catchments for Height Variation Control enabling 10 and 15 storeys. For buildings greater than 22m where at the walkable catchment edge and adjoining SHZ, MHS of MHU, an 18m setback is applied above 22m to side and rear boundaries.	- The standard manages height and bulk of buildings to maintain streetscape amenity and manage visual dominance and privacy effects and contributes to ensuring higher-quality built environment outcomes in response to increased height. - On sites at the interface of walkable catchment edge and adjoining SHZ, MHS or MHU, the 18m setback will ensure that space is provided to step built form down and provide separation of building mass on sites where redevelopment is limited. The standard will reduce potential visual dominance, and effects on residential amenity where change in the plan is limited in scale and intensity. Where this standard applies in walkable catchments identified in Schedule 3C Clause 4(1)(b) and (ba), they will constrain the ability to achieve the heights required in the Act and a qualifying matter is recognised as necessary to manage urban built form at these sensitive interfaces and amenity values of the residents on land zoned for lower intensity residential purposes.
Maximum tower dimension THAB, Town Centre, Local Centre, Neighbourhood Centre, Mixed	- In THAB, the maximum plan dimension of that part of the building above 22m must not exceed 38m. - In business zones, outside walkable catchments the maximum plan dimensions of that part of the building above 27m must not exceed 55m. In walkable catchments the maximum	- Manages visual dominance, sunlight and daylight access and wind effects of taller buildings. Contributes to quality building environment outcomes while providing for increased height.

Standard and Zones Affected	Summary of Proposed Changes /Standards	Rationale/Benefits
Use and Business Park	plan dimension of that part of the building above 34.5m must not exceed 55m. Over 27m and 34.5m respectively, the building must be at least 6m from any side or rear boundary of the site.	
Outlook Space MHS, MHU and THAB Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park	- In THAB, principal living room: • between 12.5m and 22m must have a minimum dimension of 8m depth and 4m width • above 22m must have a minimum dimension of 20m depth and 4m width - In MHS, MHU and THAB outlook may be reduced to 5m where principal living room outlook on the ground floor is defined by a boundary fence - In the business zones, for development less than 22m in height the principal living room must have an outlook space with a minimum dimension of 6m in depth and 4m in width. For development more than 22m in height, an outlook space of at least 4m in width is required.	- The proposed amendments are required to manage the additional intensity, bulk and scale of development enabled by proposed height and height in relation to boundary amendments. - Standard developed to work with height in relation to boundary to encourage outlook from principal living room areas being focused on the street frontage with positive streetscape and amenity outcomes.
Outdoor Living Space MHS, MHU and THAB	- Amended to require private outdoor living spaces to be directly accessible from the principal living room, dining room or kitchen. - Propose for developments of 20 or more dwellings (including integrated residential development of 20 or more dwellings) to provide communal living space ($10m^2$ per 5 dwellings) in addition to private outdoor living.	- The amendment to require the outdoor living space to be accessed from principal living room, dining room or kitchen addresses the disconnection between primary indoor and outdoor living spaces that reduces the functionality and amenity of both spaces. - The application of the communal outdoor living space for 20 or more dwellings ensures that communal areas to ensure efficient use of the site and ensure those communal areas are of a sufficient space to provide for daily needs of residents.
Window to Street (and private pedestrian and vehicle accesses) MHS, MHU and THAB	- A minimum of 20% glazing on facades facing onto private pedestrian and vehicle accessways, in addition to street facing facades.	- This standard addresses safety on the street by providing opportunities for surveillance. It enhances streetscape with the building elevation designed as a frontage. - In MHU and THAB zones, given the intensity of development anticipated

Standard and Zones Affected	Summary of Proposed Changes /Standards	Rationale/Benefits
		on-site, the standard is proposed to be applied to vehicle and pedestrian accessways to provide the same measures of safety and active frontages.
Safety and privacy buffer to private pedestrian and vehicle accesses MHS, MHU and THAB	- Proposed new standard requiring a minimum 1m buffer distance between a dwelling and a private accessway which is required to contain vegetation.	- As discussed in **Appendix 3**, the s35 monitoring report identified a lack of control around on-site circulation for pedestrians and vehicles was resulting in reduced privacy and safety for residents and had negative visual amenity effects. - The proposed 1m buffer between access ways and dwellings addresses safety and privacy issues. The vegetation requirement provides for a suitable amenity outcome and ensures the integrity of the purpose of the buffer. - It is not intended for the vegetation to form part of the landscaped area. Nor is it required that the buffer must be entirely vegetated. - The standard has been developed to integrate with access requirements where developments require clear width / height requirements associated with emergency responder access.
Deep soil area and canopy tree MHS, MHU and THAB	- Proposed new standard applied to sites prior to development, or re-development (i.e. either vacant or proposed new buildings in addition to existing development). - A minimum 10% of the site is to be provided as deep soil area. - Differing canopy tree specifications calculated on the site m^2 area.	- Standard develops resilience to climate change at the time of development through either retention of existing trees, or provision of the appropriate space and resources for new tree growth. - This standard also responds to the anticipated increase of impervious area across urban residential areas. The increase in impervious areas will have implications in terms of stormwater management and urban-heat effects. - The proposed standard is able to overlap with required landscaped areas. This enables efficient use of

Standard and Zones Affected	Summary of Proposed Changes /Standards	Rationale/Benefits
		the site while encouraging high quality landscaped areas.
On-site waste management MHS, MHU and THAB	- Proposed new standard to apply to 4 or more dwellings, including integrated residential development. - Range of controls regarding requirements for on-site storage of bins and arrangements for collection either on-site or from the kerb.	- Unmanaged waste bins have the potential to generate adverse effects on amenity and to detract from the health and safety of people. - Increased density is anticipated to increase demand for waste collection. The proposed standard to provide on-site storage space and efficient collection access is necessary to ensure that development continues to achieve higher-quality built environment outcomes. - Having controls also addresses current issues in relation to the adverse effects on access and visual amenity provided under operative controls.
Development within the Infrastructure – Combined Wastewater Network Control SHZ, MHS, MHU, THAB	- Proposed new standard to apply to development within the Combined Wastewater Network Control area shown on the Planning maps. The standard requires development to demonstrate that it is able to connect to an existing separated local stormwater pipe that is part of the public stormwater network, and that the wastewater network service provider has confirmed that there is sufficient capacity available in the network to service the proposed development.	- Standard seeks to restrict development in any area serviced by a Combined Wastewater Network where public sewer separation has not occurred while enabling new development where separation is in progress and the new development can connect to a separated local stormwater network.

Other key changes to provisions:

<u>Improved management of natural hazards</u>

40. New objectives and policies in Chapter H3 and H5 are proposed to support a strengthened natural hazards risk management framework and to respond to significant risks from natural hazards in a timely manner. These provisions, in combination with residential zoning, some of which has immediate legal effect, and operative zonal rules manage the risk from natural hazards to people, property, infrastructure and the environment so risk from natural hazards is tolerable or acceptable in the short to long term.

41. Amendments to Chapter H3 and H5 are proposed to align with the revised natural hazard risk management approach proposed to be introduced through significant revisions to chapter E36. This includes a strengthened and more explicit risk management approach where significant natural hazard risks are to be avoided, greater differentiation is made between areas with different levels of exposure to natural hazards and greater consideration is given of the sensitivity of proposed land uses. See the Section 32 report for chapter E36 for more details

The extent to which the transport network provides safe, convenient and efficient access:

42. Enabling higher densities, mixed-use activities and a more compact urban form within residential urban areas where intensification is enabled will necessitate measures to improve access for pedestrians, cyclists and other road users to access passenger transport stops, and for cyclists to be able to move safely and conveniently within adjoining streets and local networks. In some areas existing local networks do not provide this which also results in a greater reliance on travel by private vehicle.

43. A package of provisions (amending objectives, policies, matters of discretion and assessment criteria) are proposed within the MHU and THAB zones to require an assessment of the adjacent network and for development to provide or contribute towards improvements to this network if required.

44. In addition, changes are proposed to the THAB zone provisions to introduce provisions for larger developments to consider the need for improvement to the local network for pedestrian, cyclists and users of passenger transport stops. These are equivalent to those introduced by PC79 which apply to other larger residential developments within the city.

Infrastructure – Combined Wastewater Network Control:

45. As discuss in section 2.7.2 above, the Infrastructure – Combined Wastewater Network Control is identified as a qualifying matter in PC120 and is applied to relevant sites within the SHZ, MHS, MHU and THAB zones. To assist in managing the qualifying matter, a permitted activity standard is proposed (outlined in Table 3 above) in all four zones where development on sites subject to the control are required to be able to connect to an existing public separated local stormwater pipe and the wastewater service provider has confirmed there is sufficient capacity.

46. For activities which do not meet the permitted standard or are listed as restricted discretionary activities in the zone activity tables, effects on the function and capacity of the network and on the environment from any lack of capacity are the relevant matters of discretion and assessment criteria.

Building intensity:

47. The MHS (H4.8.1), MHU (H5.8.1) and THAB (H6.8.1)) zones contain the following as a matter of discretion:

The Council will restrict its discretion to all of the following matters when assessing a restricted discretionary activity resource consent application:……

(b) the effects on the neighbourhood character, residential amenity, safety, and the surrounding residential area from all of the following:

(i) *building intensity, scale, location, form and appearance;*

48. Similar references to building intensity are also found in the relevant assessment criteria (H4.8.2, H5.8.2 and H6.8.2).

49. It is proposed to delete reference to building "intensity" in the relevant matters of discretion in the MHU and THAB zones.

50. The intent of the operative criterion is to manage effects of bulk and mass on character, amenity, safety and surrounds. However, PC120 anticipates higher levels of building intensity as a key part of the planned urban built forms of the MHU and THAB zones. Accordingly, in these zones, "scale, location, form and appearance" are considered the key elements controlling character and amenity.

51. With regard to the MHS zone, this amendment is not made, as intensity remains an important matter to consider in assessing the effects of development proposals and whether development is in keeping with the planned suburban built form that is anticipated in the MHS zone.

Matters of discretion and assessment criteria:

52. A number of amendments are proposed to the matters of discretion and assessment criteria to support intensification and well-functioning urban environment outcomes. Generally, these amendments (including new and amended provisions) provide greater clarification on the types of design elements that will be assessed, and which are considered as contributing to management of effects and achieving higher-quality built environment outcomes. Specific provision for qualifying matters recognises that access to three water networks is a fundamental part of delivering a well -functioning urban environment.

Definitions:

53. New definitions and amended definitions are proposed to provide clarity to plan users and support the implementation of the PC120. In summary, the following changes are proposed:

- New definition – Deep soil area
- New definition – Canopy tree
- Amended definition – Landscaped area
- New definition – Urban heat island
- Amended definition – Dwelling

54. In particular, the proposed amendments to the definition of “Dwelling” include reference to “residential units” which has the same meaning as s2 of the RMA. It is acknowledged that the operative definition of “Dwelling” is similar in nature to the definition of “Residential unit” in the Act. However, to amend the operative definition would require a plan-wide change which is not considered necessary noting the established approach of the AUP(OP) at Chapter J1.1(3) that establishes that words and phrases that are defined in the RMA have the same meaning in the AUP(OP).

2.8 An overview of Proposed Changes to Chapter E38 Subdivision – Urban

55. Chapter E38 Subdivision – Urban (‘Chapter E38’) deals with subdivision as an Auckland-wide matter and applies to urban residential zones.

56. The Chapter E38 provisions need to support all the urban zones across the region, allowing for the creation of new titles for land that assists in enabling development of the land envisaged by the relevant zone. Aside from the zone chapters, Chapter E38 is influenced by a number of other Auckland-wide chapters (i.e. E27 Transport and E36 Natural hazards and flood) and needs to complement all the other chapters.

57. Chapter E38 contains a number of existing qualifying matters that apply more restrictive controls than provided for under Schedule 3C. The qualifying matters relate to:

- creation of esplanade reserves and strips;
- subdivisions seeking to reduce or waiver esplanade reserves or strips;
- subdivision within identified natural hazard areas; and
- subdivision involving indigenous vegetation scheduled in any Significant Ecological Area Overlay.

58. It is considered necessary to retain provisions to continue to protect and provide for the values associated with the relevant qualifying matters. Particularly given the likely increase in risk of adverse effects on those values as a result of giving effect to Policy 3(c) and 3(d) of the NPSUD.

59. Key proposed amendments to the chapter include changes to:

- provide for the combined wastewater network as a new qualifying matter;
- address the function and capacity of water supply, wastewater and stormwater networks (refer also the Section 32 report that has been prepared for this new qualifying matter (Infrastructure – Combined Wastewater Network Control).;
- address significant risk from natural hazards to align with the approach in Chapter E36;

- to the subdivision of land subject to existing Special Character Areas Overlay – Residential and Business qualifying matter; and
- provisions to address pedestrian safety and well-functioning urban environment outcomes.

Water supply, wastewater and stormwater networks

60. The Infrastructure – Combined Wastewater Network Control is proposed pursuant to Schedule 3C Clause 8(1)(b), being "any other matter that makes higher density as specified by clause 4(1)(b) or (c) or policy 3 inappropriate in an area". It is considered necessary to justify limiting further residential intensification than anticipated by NPSUD Policy 3 and in areas subject to clause 4(1)(b) or (c) for some sites in Auckland. Inclusion of such a provision in Chapter E38 will enable the effects of a proposal on the capacity of the network to be assessed at the time of subdivision, as it is expected that during the life of the Auckland Unitary Plan new public stormwater networks will be constructed and on site stormwater separation will occur.

61. New objectives, policies, activity rules, standards, matters of discretion and assessment criteria are proposed to ensure subdivision in areas subject to the Infrastructure - Combined Wastewater Network Control can demonstrate the relevant infrastructure and servicing can be achieved.

62. A separate Section 32 report has been prepared for this new qualifying matter (Infrastructure – Combined Wastewater Network Control). Subdivision has been considered in that report, which sets out the changes to Chapter E38 after taking into account the purpose of the qualifying matter and the impact of the qualifying matter on level of development enabled by NPSUD Policy 3 and in areas subject to clause 4(1)(b) or (c). It is proposed to incorporate the proposed changes to the subdivision provisions in Chapter E38.

63. A new objective E38.2(10) (d) and a new standard E38.6.3 (3) (this standard is relevant to all subdivision listed in Activity Tables E38.4.1 to E38.4.5) have been included. The new provisions recognise that when considering subdivision proposals, that sites need to be serviced by water supply, stormwater and wastewater. It also recognises that subdivision in some areas may have adverse effects on the function and capacity of water supply, wastewater and stormwater networks in the short to medium term. This recognises that where there are existing servicing constraints servicing strategies and long-term plans may need time need to adjust to enable the capacity provided for in the proposed plan change to ensure safe and efficient stormwater, water supply and wastewater services are provided to the communities of Tāmaki Makaurau Auckland.

64. A new controlled activity assessment matter and a new criterion related to network capacity have been included in the proposed plan change. While being a controlled activity means that consent is not able to be declined, this will allow any impacts with changes to site arrangements to be considered and mitigated as they will be minor in nature.

Improved management of natural hazards

65. A package of provisions (objectives, policies, activity rules, standards, matters of discretion and assessment criteria) are proposed to introduce a strengthened natural hazards risk management framework and to respond to significant risks from natural hazards in a timely manner.

66. Amendments to chapter E38 are proposed to align with the revised natural hazard risk management approach proposed to be introduced through significant revisions to chapter E36. This includes a strengthened and more explicit risk management approach where significant natural hazard risks are to be avoided, greater differentiation between areas with different levels of exposure to natural hazards and greater consideration of the sensitivity of proposed land uses. See the Section 32 report for chapter E36 for more details.

Subdivision in the Special Character Areas Overlay

67. Chapter E38 provides for the subdivision of sites within the Special Character Areas Overlay – Residential and Business. The intent of the provisions is to maintain the distinctive pattern of subdivision as identified in the character statements for special character areas. Subdivision of sites that comply with the relevant standard (E38.8.2.6 which specific minimum net site areas) are a restricted discretionary activity and subdivision of sites that do not comply with the standard is a non-complying activity.

68. PC120 does not change the approach set out in the operative AUP but identifies Rules (A24) and (A25) and Standard E38.8.2.6 as a qualifying matter, as these provisions manage density.

69. PC120 proposes to make two other amendments to the Chapter E38 provisions that relate to the Special Character Areas Overlay – Residential and Business:

- A minor amendment is proposed to the text following Table E38.8.2.6.1 Special Character Areas Overlay – Residential and Business to advise plan users where to find information about the sub-areas included in Table E38.8.2.6.1. Currently, the text only advises plan users where to find this information for the North Shore sub-areas.

- Amend Figure E38.8.2.6 Isthmus C2a sites. This figure identifies which sites are subject to sub area Isthmus C2a. it needs to be amended to reflect a change (reduction) in the extent of the Special Character Areas Overlay – Residential and Business in the Mount St John area. The figure has been amended based on the site-specific analysis of the Special Character Areas Overlay – Residential and Business that was undertaken for PC78. For more information about the Special Character Areas Overlay – Residential and Business as a qualifying matter, including the site-specific analysis, see the PC120 section 32 report for the Special Character Areas Overlay – Residential.

Safe, convenient and efficient access to the transport network

70. Amendments to chapter E38 (assessment criteria and matters of discretion) are proposed to align with the approach proposed to be introduced through to the MHU and THAB zones as outlined further above in this report.

2.9 Higher Level Planning Documents and Legislation

71. *Table 4* below summarises the strategic matters and provisions that have been specifically given effect, or had regard, to in the development of PC120. These documents broadly identify the resource management issues for the district and provide the higher-level policy direction to resolve these issues.

Table 4: Higher order and guiding documents

Document (Statutory obligation in italics)	Relevant provisions which PC120 is required to take into account/give effect to:
Local Government Act 2002	Provides a framework for the function and role of local authorities. Local authorities are directed to adopt a sustainable approach to development and play a broad role in promoting the social, economic, and cultural well-being of their communities.
Health Act 1956, the Building Act 2004, and the Civil Defence Emergency Management Act 2002	The LGA 2002 requires the decision making of the Council as a unitary authority to consider in addition to the Resource Management Act 1991, the Health Act 1956, the Building Act 2004, and the Civil Defence Emergency Management Act 2002. Intensifying areas by rezoning them to respond to transport and access objectives does not directly consider the impact of low water pressure for firefighting in new buildings and for occupants and does not remove the potential for wastewater networks to overflow. The Council must consider in the process of drafting the planning framework the cumulative effects of increases in demands related to the zone changes on 3 Water related networks and catchments that may be placed under pressure as the capacity is taken up over time that may in turn generate conditions that the Council will need to address under the Health Act 1956, the Building Act 2004, and the Civil Defence Emergency Management Act 2002.
Hauraki Gulf Marine Park Act, 2000	Manages land uses which impact on the catchment of the Hauraki Gulf.
Resource Management Act 1991 *Part 2 ss5, 6, 7, s74, s75* *Schedule 3C*	PC120 seeks to respond to the RPS in achieving a well-functioning urban environment which includes a quality, compact built urban environment where development is integrated and responds to the characteristics of the site and neighbourhood. Provisions specifically respond to: • the maintenance and enhancement of amenity values (ss7(c) RMA): • the efficient use and development of natural and physical resources: Build resilience to climate change (ss7(b) RMA):

Document (Statutory obligation in italics)	Relevant provisions which PC120 is required to take into account/give effect to:
	• the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development (ss6(a) RMA): • the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna (ss6(c) RMA: • the management of significant risks from natural hazards. (ss6(h) RMA. PC120 must meet the requirements in clause (4) of Schedule 3C of the RMA, and less development than required by Schedule 3C clause (4)(1)(b), (c) or NPSUD Policy 3 may be enabled if authorised by Schedule 3C Clause 8. Pursuant to Schedule 3C, clause 8(1)(b) of the RMA, PC120 restricts the height and density of development in the walkable catchments where either 10 or 15-storeys is required to be enabled under Schedule 3C clauses 4(1)(c) and 4(1)(b) respectively.
National Policy Statement for Urban Development 2020 • *Objectives 1-8* • *Policies 1, 2, 3, 4, 6, 11*	As a Tier 1 council, the AUP(OP) is required to give effect to Policies 3 and 4 of the RMA within 2 years from the commencement of the NPS. Policy 1 assists in defining the overall objective of the NSPUD, being to achieve well-functioning urban environments. Policy 2 requires council to provide at least sufficient development capacity to meet expected demand for housing and business land over the short, medium, and long terms. As detailed in section 6.3.4 of this report, PC120 will provide development capacity for the short, medium, and long term. Policy 3 directs that plans enable: building heights of at least 6 storeys within at least a walkable catchment of rapid transit stops, the edge of the City Centre zone and Metropolitan Centre zones; and, within and adjacent to Town, Local and Neighbourhood Centre zones building heights and densities of urban form that is commensurate with the levels of commercial activity and community services. Policy 4 enables plans to modify the building height and density requirements required by Policy 3 where there is a need to accommodate a qualifying matter. Policy 6 directs that when making planning decisions, decision makers have regard to the planned urban built form anticipated by a plan that have given effect to the NPSUD and that the planned urban built form in those plans may involve significant changes to an area. Policy 6(a)(i) and (ii) qualifies those changes, as follows: Policy 6(a)(i) *may detract from amenity values appreciated by some people but improve amenity values appreciated by other people, communities, and future generations, including by*

Document (Statutory obligation in italics)	Relevant provisions which PC120 is required to take into account/give effect to:
	providing increased and varied housing densities and types; and Policy 6(a)(ii) *are not, of themselves, an adverse effect*
New Zealand Coastal Policy Statement • *Objectives 2, 5 and 6* • *Policy 6 – Activities in the coastal environment* • *Policy 15(b), (d) and (e)* • *Policy 25(a).*	The AUP(OP) is required to give effect to the NZCPS. Relevant to PC120, the NZCPS manages activities by protecting natural features and landscape values and recognising that some development of the coastal environment may be appropriate. The following are key components that address the NZCPS: • retaining the AUP(OP) standards relating to riparian, lakeside, and riparian margin yards, • including provisions to address coastal hazard areas in the SHZ.
Auckland Plan 2050 • *Outcome: Māori Identity and Wellbeing* - *Direction 1: Advance Māori Wellbeing* - *Focus area 5: Advance mana whenua rangatiratanga in leadership and decision-making and provide for customary rights* • *Outcome: Homes and Places:* – *Direction 1: Develop a quality compact urban form to accommodate Auckland's growth.* – *Direction 2: Accelerate the construction of homes that meet Aucklanders'*	<u>Māori Identity and Wellbeing:</u> Papakāinga development within the THAB and MHU zones has not been specifically provided for. However, papakāinga type development could occur under activities relating to development of up to three dwellings, four or more dwellings, or as integrated residential development depending on the scale of the papakāinga development. The anticipated increases in yield and typology, coupled with focusing development within walkable catchments of business and community services, will contribute to addressing issues of displacement that arise from housing unaffordability and limited access to education, employment, services, and facilities. The addition of height in certain locations has the potential to effect the health and wellbeing of maunga viewshafts, and recognition of these viewshafts is made in Chapter G and the addition of explanatory text for the Height Variation Control which notes the specific importance of the Maunga Viewshafts that may reduce the buildings heights achievable given the values of this qualifying matter that needs to be accommodated in the affected locations. <u>Homes and Places:</u> Proposed changes to the subject zones provide positively for growth in Auckland's urban environments. The changes notably include provisions that would set clear objectives to achieve high-higher-quality built environment while giving effect to NPSUD Policy 3 including: • enable building heights of at least 6 storeys within designated walkable catchments of rapid transit stops and 10 to 15 storeys in identified walkable catchments;

Document (Statutory obligation in italics)	Relevant provisions which PC120 is required to take into account/give effect to:
changing needs and preferences. – *Direction 3: Shift to a housing system that ensures secure and affordable homes for all.* – *Focus area 1: Accelerate quality development at scale that improves housing choices.* • *Outcome: Transport and Access:* – *Direction 1: Better connect people, places, good and services.* – *Focus 5: Better integrate land-use and transport*	• enable development of scale elsewhere in the THAB (up to 22m), MHU (up to 11m and four or more dwellings), MHS (up to 8m and four or more dwellings); • include additional standards to achieve higher-quality built environment and climate change resilience; • providing new and amended objectives, policies and matters of discretion and assessment criteria where necessary to support additional standards and implementation of Policy 3. The PC120 provides a framework which supports growth across these identified areas and focuses the greatest intensity and scale of development in the most well connected, integrated and sustainable locations. The framework is structured to provide for that growth while achieving quality built outcomes. The proposed provisions enable residential development of scale and density that supports a greater range of typologies. The proposed provisions and notification framework provide greater certainty and encouragement to developers. PC120 is anticipated to provide sufficient yield and typologies of residential development. This will assist in addressing current and future housing quality and supply matters identified to effect affordability issues in Auckland. <u>Transport and access:</u> PC120 includes the changes to focus and support development of at least 6 storeys high within the walkable catchments of key urban locations and up to 10 to 15 storeys in walkable catchments with a strategic location and high accessibility. This supports the co-location of where people live with these key nodes which are generally best served by social, cultural, educational and transport infrastructure.
Auckland Unitary Plan Regional Policy Statement <u>*B2.2 Urban Growth and Form*</u> • *Objectives B2.2.1(1A), (1)(a), (c), (e), (g), (3)* • *Policies B2.2.2(5)(a) and (c).*	PC120 responds to these objectives and policies in the following ways: • Enabling for a higher density and scale of development of at least 6 storeys within walkable catchments and up to 10 to 15 storeys of identified key locations which are served by social, cultural and transport infrastructure. • Inclusion of specific standards to support this higher density and growth plan context covering matters related to design quality, amenity, and environmental effects.
<u>*B2.3 A higher-quality built environment*</u>	PC120 aligns with these objectives and policies in the following ways: • Enables an appropriate building scale and height within walkable catchments of identified centres and rapid transit

Document (Statutory obligation in italics)	Relevant provisions which PC120 is required to take into account/give effect to:
• *Objectives B2.3.1(1) (a), (b), (c), (d), (e), (f)* • *Policies B2.3.1 (1)(a), (b), (d), (e), (f) and (3)*	stops. Aligning the areas of greatest development capacity with key infrastructure. • Enable the delivery of additional and a greater choice of housing typologies to support choice and through supply have a positive effect on affordability levels. • Include specific standards responsive to climate change, outlook, landscape, amenity and safety. • Responds to the intrinsic qualities and characteristics of a site and area through the provision of qualifying matters.
B2.4 Residential Growth • *Objectives B2.3.1(1), (2), (3), (4) and (5)* • *Policies B2.4.2(2), (3)*	The PC120 responds to these objectives and policies in the following ways: • Proposed standards to enable quality higher residential intensification and achieve residential areas that are attractive, healthy and safe with improved resilience to climate change. • Enabling at least 6 storeys within walkable catchments and 10 to 15 storeys in identified walkable catchments, of identified centres and rapid transit stops to support compact development and increased access to employment, community, and transport services. • An anticipated increase in housing yield and typologies over the short, medium, and long terms.
B2.5 Commercial and industrial growth • *Objective B2.5.1(1) and (2)* • *Policies B2.5.2(1), (2)(a), (e), (f), (g)*	The proposed amendments enable at least 6, 10 and 15 storeys within walkable catchments of identified centres and rapid transit stops to support compact urban form and higher yields for commercial development and employment opportunities.
Other sections of the RPS relevant to values of Qualifying matters	Refer to the relevant evaluation for the individual qualifying matter for the specific sections of the RPS they give effect to.

3 Issues

72. The Regional Policy Statement (RPS) contained in the AUP(OP), provides direction for the management of subdivision, use and development for Auckland. The RPS sets out the issues of regional significance, and the associated objectives and policies and other methods which seek to achieve integrated management of the natural and physical resources of the whole region.

73. Pursuant to s74 of the RMA, a territorial authority shall have regard to any regional policy statement in preparing a plan change. PC120 has been developed in response to the obligation to prepare and change a district plan in accordance with a national

policy statement (refer section 74(1)(ea)) and in the NPSUD and the RMA an overarching issue was identified as follows:

"How to give effect to mandatory intensification requirements of:

- *enabling at least 6 storeys in walkable catchments;*
- *increasing heights and densities in identified locations, including:*
  - *at least 15 storeys in the walkable catchments of rapid transit stops at Maungawhau (Mount Eden), Kingsland, and Morningside Stations;*
  - *at least 10 storeys in the walkable catchments of rapid transit stops at Baldwin Avenue and Mount Albert; and*
- *providing at least the same amount of housing capacity that would have been enabled if Plan Change 78 (as notified) were made operative;*

whilst achieving a higher-quality built environment and without compromising the relevant Qualifying Matters in the: Residential – Single House Zone, Residential – Mixed Housing Suburban Zone, Residential – Mixed Housing Urban Zone, Residential – Terrace Housing and Apartment Buildings Zone, Business – Neighbourhood Centre Zone, Business – Local Centre Zone, Business – Town Centre Zone, Business – Mixed Use Zone and Business – Business Park Zone."

74. The overarching issue contains four key components:

- Giving effect to NPSUD Policy 3
- Meeting the requirements of Schedule 3C
- Providing for qualifying matters
- Achieving a well-functioning urban environment.

3.3 S35 monitoring report

75. The 2022 AUP(OP) s35 Monitoring: B2.3 Quality Built Environment Monitoring Report (s35 report) (**Attachment 1**), undertook a sample and review of primarily residential development to ascertain the performance of the operative framework in delivering on quality built environment outcomes in the RPS. The following provides a high-level overview of key matters relevant to this plan change.

Planned urban character / compact urban form:

76. The AUP(OP) sets out the planned urban characters anticipated within different zones in order to achieve the RPS objectives relating to Part B2.2 Urban growth and form, particularly as it relates to a compact urban form.

77. With regards to the ability of the AUP(OP) in delivering on planned urban character / compact urban form, the following key findings were identified in the s35 monitoring report:

- the AUP(OP) is delivering a pattern of increasing intensity, with the most significant and dense development focusing in and around centres.

- whilst intensities are increasing there is a lack of similar clear delineation of built form, especially in terms of height, with heights of development in many cases falling below the objective enabled by the zones. In particular:

    - the MHU zone, where 95 per cent of sampled development were two storey or less; and

    - the THAB zone, where of the sampled development were:

        - 25 per cent two storeys,

        - 60 per cent three storeys and

        - 10 per cent four – six storeys.

Attractive, healthy and safe:

78. Objective B2.4.1(2) of the RPS seeks to achieve residential areas that are attractive, healthy and safe. The relationship between space and buildings (within the site, to adjoining sites and to streets), and the external and internal design of buildings have implications on high-quality amenity as well as health and safety within urban environments.

79. With regards to the ability of the AUP(OP) in delivering on this objective, the key findings of the s35 monitoring report noted that while the AUP(OP) provisions can achieve good quality development, it is not consistent in its delivery. In particular:

- Provisions to manage privacy, dominance and amenity are not always effective.

- The AUP(OP) does not sufficiently manage residential waste management and collection. The report identified that there are space, hygiene, safety, amenity and operational aspects of waste management that affect the quality and functionality of residential developments and urban environments.

- Outlook spaces were an effective and efficient method for securing quality living outcomes. However compliance with the AUP(OP) standard did not necessarily achieve quality outlook spaces.

- Outdoor living spaces were underperforming in terms of providing for health and wellbeing of residents.

- Conflict was identified in respect to pedestrian safety arising from the design and management of vehicular movements on sites, with findings identifying that the width and design of accessways, and in particular the provision and design of pedestrian accessways varied significantly.

3.4 The scale and significance of this issue

80. Section 32(1)(c) of the RMA states that the level of detail contained in a section 32 evaluation report is required to correspond to the scale and significance of the effects that are anticipated from the implementation of the proposal.

81. For the purposes of section 32(1)(c):

    (a) Scale refers to the scale or reach of the issue (for example, geographical area), the anticipated size or magnitude of the expected effects from the proposal, or both; and

    (b) Significance relates to the importance or impact of the issue (on the environment and/or on the community) that the proposal is intended to respond to, or the significance of the response itself (on the environment and community) i.e., whether it is at a regional or local.

82. The PC120 includes a relatively large proportion of the Auckland region. Accordingly, the scale and significance is considered to be high.

4 Evaluation of objectives and provisions

4.1 Evaluation of objectives

83. Section 32(1)(a) of the RMA requires this evaluation report to examine the extent to which the objectives of the proposal are the most appropriate way to achieve the purpose of the RMA.

84. The following tables provide an evaluation of whether the objectives achieve the purpose of the RMA.

85. The objectives for the Residential zones MHS, MHU and THAB are evaluated together (refer Table 6), while the objectives for the SHZ are evaluated in a separate table (refer Table 5).

86. The objectives for the Business Zones (Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park zones) are evaluated together in Table 7. The objectives for Chapter E38 – Subdivision are also evaluated within Table 8.

Table 5: Single House Zone

Objective(s)	(1A) Development maintains and is in keeping with the identified values within the area and its low intensity residential development relative to development enabled in some other residential zones in urban Auckland; being limited to predominantly one or two storey buildings. (3A) Development provides high quality amenity: (a) on-site for residents (b) to adjoining sites; and (c) to the street. (4) ~~Non-residential~~ A limited range of non-residential activities provide for the community's social, economic and cultural well-being, while being ~~in keeping~~ being compatible with the scale and intensity of development anticipated by the zone so as to contribute to the amenity of the neighbourhood. (5) Development does not adversely affect the values of adjoining water bodies including riparian, lakeside and coastal protection areas; nor increases natural hazard risks. (6) Development maintains and is in keeping with the amenity values of established residential neighbourhoods including those based on special character values or areas with a coastal edge. (7) Development provides for the protection of, and enhances, the values of scheduled sites or places of significance and the relationship of Mana Whenua with their taonga, commensurate with the scale of the proposal. (8) Development provides for the protection and management of significant ecological areas; areas of outstanding and high natural character; and historic heritage. (9) Development, including redevelopment, only occurs when the risk from natural hazards to people, property, infrastructure and the environment is tolerable or acceptable in the short to long term. (10) Development is enabled where it can be adequately serviced by the water supply, wastewater and stormwater networks to avoid adverse effects on the function and capacity of the networks.
RMA evaluation	The above objectives set out the planned suburban built character for the SHZ. In particular, the SHZ objectives seek a suburban form that responds to the qualities and characteristics of associated qualifying matters which render intensification inappropriate. An urban form that responds to a qualifying matter enables people and communities to provide for their social, cultural, and economic wellbeing (s5(2)) while recognising and providing for matters of national importance such as outstanding natural features and landscapes, significant indigenous vegetation and habitats of indigenous fauna, the relationship of Māori and their culture and traditions, historic heritage, significant risks from natural hazards and preservation of the natural character of the coastal environment (s6).

	Height is a crucial component to achieving distinct urban forms. It also contributes to the management of the character and amenity of residential areas as a means to avoid, remedy or mitigate adverse effects of development on the environment (s5(2)(c)). Restricting intensification in areas subject to historic network capacity constraints enables people and communities to provide for their health and wellbeing (s5(2)). It is necessary to have some regulatory control, compared to other methods, to provide direction and certainty in achieving distinct urban form. Overall, the objectives are considered to be the most appropriate means to achieve sustainable management of natural and physical resources and therefore achieve the purpose of the RMA.

Table 6: Residential - Mixed Housing Suburban, Mixed Housing Urban, and Terraced Housing and Apartment Buildings Zones

Objective(s)	**H4 - Residential – Mixed Housing Suburban** (A1) Land that is located in urban areas with lower levels of access by public transport and is not within walking distance to centres, community amenities, social facilities and open space is efficiently used for medium density residential living. (1) Housing capacity, intensity and choice in the zone is enabled ~~increased~~. (3) Development provides quality environments for on-site residents, adjoining sites and the street that are attractive, healthy and safe. ~~quality~~ (a) ~~on-site residential amenity for residents;~~ (b) ~~and to adjoining sites; and~~ (c) ~~to the street.~~ (5) Development contributes to a built environment that is resilient to the effects of climate change with areas of deep soil and canopy tree planting, and landscape treatment that comprises natural grass, shrubs and trees that reduce urban heat island effects. (6) Development addresses the functional and operational requirements of the water supply, wastewater and stormwater networks to avoid adverse effects on the function and capacity of those networks. (7) Development does not adversely affect the values of adjoining water bodies including riparian, lakeside and coastal protection areas; nor increases natural hazard risks. **H5 - Residential – Mixed Housing Urban** (1) Land in close proximity to Business – Metropolitan Centre Zone and the Business – Town Centre Zone, high-density residential areas and close to the public transport network is efficiently used for higher density residential living and to provide urban living that increases housing capacity and choice and access to public transport. (2) Development is in keeping with the neighbourhood's planned urban built medium density residential character of predominantly three-storey buildings, in a variety of forms and surrounded by open space.

(3) Development provides quality environments for on-site residents, adjoining sites and the street that are attractive, healthy and safe. ~~quality~~

(a) ~~on-site residential amenity for residents;~~
(b) ~~and to adjoining sites; and~~
(c) ~~to the street.~~

(5) Development contributes to a built environment that is resilient to the effects of climate change with areas of deep soil and canopy tree planting, and landscape treatment that comprises natural grass, shrubs and trees that reduce urban heat island effects.

(6) Development addresses the functional and operational requirements of the water supply, wastewater and stormwater networks to avoid adverse effects on the function and capacity of those networks.

(7) Development addresses the functional and operational requirements of the local transport network for pedestrians, passenger transport, road users and cyclists.

(8) Development does not adversely affect the values of adjoining water bodies including riparian, lakeside and coastal protection areas; nor increases natural hazard risks.

Residential – Terraced Housing and Apartment Buildings Zone

(2) Development achieves a quality built environment in a variety of forms while ~~is~~ being in keeping with the areas planned urban built character of multi-unit residential development, with building heights enabled in accordance with an areas: strategic importance including proximity to a centre and the role and function of that centre; accessibility including access to the rapid transit network; concentration of amenities; and, residential demand. Building heights in the zone are aligned with these features and are predominantly ~~five, six or seven storey buildings~~:

(a) six storey buildings; and
(b) through the height variation controls, in identified walkable catchments, up to ten or fifteen storey buildings; or
(c) as specified in the height variation controls in other identified areas~~, in a variety of forms~~.

(3) Development provides quality built environments on site for residents, for residents on adjoining sites and to the street that are attractive, healthy and safe and meet the functional and operational needs of residents and emergency responders, recognising that with increased building height and intensities of development differing levels of character and amenity of areas will develop in the respective areas over time. ~~on-site residential amenity for residents and adjoining sites and the street.~~

(5) Development contributes to a built environment that is resilient to the effects of climate change with areas of deep soil and canopy tree planting, and landscape treatment that comprises natural grass, shrubs and trees that reduce urban heat island effects.

	(6) Development addresses the functional and operational requirements of the water supply, wastewater and stormwater networks to avoid adverse effects on the function and capacity of those networks. (7) Development addresses the functional and operational requirements of the local transport network for pedestrians, passenger transport, road users and cyclists. (8) Development does not adversely affect the values of adjoining water bodies including riparian, lakeside and coastal protection areas; nor increases natural hazard risks.
RMA evaluation	The above objectives seek to achieve a well-functioning urban environment, particularly with regards to: • achieving quality compact urban environments; and • requiring development to include design solutions for a sustainable response to climate change issues. Achieving a compact urban form promotes efficient use of land and achieves integrated development for residential, commercial and community activities: • Reduced reliance on private vehicles for transport and increased access to commercial and social services enables people and communities to provide for their social, economic and cultural wellbeing and for their health and safety (s5(2)(a)). • It also achieves environmental outcomes which contribute to safeguarding the life supporting capacity of air, water, soil and ecosystems (s5(2)(b)). • Requiring development to support safe and convenient local transport networks contributes to ensuring an effective compact urban form and supports communities in reduced reliance on private vehicles. Achieving quality urban environments which are “attractive, healthy and safe” relates to ensuring dwellings and residential sites are functional, minimising visual dominance effects to adjoining sites and street / private accessways, maintaining adequate daylight and sunlight access and providing for privacy, safety, and outlook. In requiring development to achieve high quality amenity the objectives achieve s5(2)(b)(a) and (c). Promoting climate resilience at the design phase, enables people to continue providing for their social, cultural and economic wellbeing while sustaining natural and physical resources to meet the needs of future generations and avoiding, remedying and mitigating adverse effects of urban development on the natural environment (s5(2)). The cumulative effects of increases in demand related to the zone changes will place some water supply and wastewater network catchments under pressure as the design capacity is exceeded. This may result in some sites, in an increased risk of low water pressure in new buildings for firefighting and increase the likelihood that existing wastewater networks will overflow. This would not be consistent with s5 in terms of enabling people and communities to provide for their health and safety. It is necessary to have some regulatory control, rather than other methods, to provide direction, guidance and certainty around achieving a high-quality climate resilient built environment, and the management of significant risks from natural hazards. Overall, the objectives are considered to be the most appropriate way of achieving sustainable management of resources and therefore the purpose of the RMA.

Table 7: Business Zones - Town Centre, Local Centre, Neighbourhood Centre, Business Park, Mixed Use Zones

Business Zones	Town Centre Zone	Local Centre Zone	Neighbourhood Centre Zone	Mixed Use Zone	Business Park Zone
Objectives(s)	**Town Centre Zone** (7A) Development achieves a quality built environment and, unless a qualifying matter applies that reduces building heights, the urban built character of town centres is a compatible mix of commercial and intensive residential development with building heights enabled in accordance with an areas: strategic importance and significant transport investment; accessibility including access to the rapid transit network; the proximity to a centre, the role and function of that centre and the concentration of amenities within it; and, demand. Building heights in the zone are aligned with these features and are predominantly: (a) outside walkable catchments as specified in the height variation control; (b) six storey buildings within walkable catchments; and (c) through the height variation controls, in some identified walkable catchments up to ten or fifteen storey buildings. **Local Centre Zone** (7A) Development achieves a quality built environment and, unless a qualifying matter applies that reduces building heights, the urban built character of local centres is a compatible mix of commercial and intensive residential development with building heights enabled in accordance with an areas: strategic importance and significant transport investment; accessibility including access to the rapid transit network; the proximity to a centre, the role and function of that centre and the concentration of amenities within it; and, demand. Building heights in the zone are aligned with these features and are predominantly: (a) four storeys buildings outside walkable catchments; (b) six storey buildings within walkable catchments; and (c) through the height variation controls, in some identified walkable catchments up to ten or fifteen storey buildings; or (d) as specified in the height variation control in other identified areas. **Neighbourhood Centre Zone** (8) Development achieves a quality built environment and, unless a qualifying matter applies that reduces building heights, the urban built character of local centres is a compatible mix of commercial and intensive residential development with building heights enabled in accordance with an areas: strategic importance and significant transport investment; accessibility including access to the rapid transit network; the proximity to a centre, the role and function of that centre and the concentration of amenities within it; and, demand. Building heights in the zone are aligned with these features and are predominantly: (a) three storey buildings outside walkable catchments; (b) six storey buildings within walkable catchments; and (c) through the height variation controls, in some identified walkable catchments up to ten or fifteen storey buildings; or (d) as specified in the height variation control in other identified areas. **Mixed Use Zone**				

	(7A) Development achieves a quality built environment and, unless a qualifying matter applies that reduces building heights, the urban built character of the Business – Mixed Use zone is a compatible mix of commercial and intensive residential development with building heights enabled in accordance with an areas: strategic importance including proximity to a centre and the role and function of that centre; accessibility including access to the rapid transit network; concentration of amenities; and, residential demand. Building heights in the zone are aligned with these features and are predominantly: (a) four storey buildings outside walkable catchments; (b) six storey buildings within walkable catchments; and (c) through the height variation controls, in identified walkable catchments up to ten or fifteen storey buildings; or (d) as specified in the height variation control in other identified areas. **Business Park Zone** (7A) Development achieves a quality built environment and, unless a qualifying matter applies that reduces building heights, the urban built character of local centres is a compatible mix of commercial and intensive residential development with building heights enabled in accordance with an areas: strategic importance and significant transport investment; accessibility including access to the rapid transit network; the proximity to a centre, the role and function of that centre and the concentration of amenities within it; and, demand. Building heights in the zone are aligned with these features and are predominantly: (a) six storey buildings; and (b) through the height variation controls, in some identified walkable catchments up to ten storey buildings; or (c) as specified in the height variation control in other identified areas.
RMA evaluation	The objective to be added to the above mentioned business zones, sets out the anticipated urban built character for areas outside and within walkable catchments. Additional height is anticipated in identified walkable catchments with height variation controls. The objective recognises and provides for qualifying matters, which reinforces that development should provide well-functioning urban environments, and its scale, form and distribution accommodating qualifying matters as they may exist within or adjacent to the zone. The objective is considered to be the most appropriate means to achieve sustainable management of natural and physical resources and therefore achieve the purpose of the RMA. This objective in focusing development and investment into these connected centres has a key role in promoting and delivering a compact urban form providing services and facilities to residents while continuing to achieve high-quality built environment outcomes. • In promoting and providing for development in these centres for a range of employment, commerce, social and residential uses the objectives directly provide for the social, cultural and economic wellbeing of persons and communities. (s5(2)) • In enabling and focusing development into these typically well connected centres, persons are provided with more sustainable and increased access to commercial, cultural, and social services ensuring development is delivered in a way which makes efficient use and best protects natural and physical resources (s5(2)(a)).

	The exemption for a qualifying matter recognises and supports matters of national importance (s6).

Table 8: Subdivision objectives

Objective(s)	(10) Subdivision: (a) ~~within urban and serviced areas, does not increase the risks of adverse effects to people, property, infrastructure and the environment from natural hazards~~ only occurs when the risk from natural hazards, including the potential effects of climate change, to people, property, infrastructure and the environment is tolerable or acceptable; (b) avoid, where possible, and otherwise mitigates, adverse effects associated with subdivision for infrastructure or existing urban land uses; and (c) maintains the function of flood plains and overland flow paths to safely convey flood waters, and of natural features and buffers in the coastal environment, as natural defenses against coastal hazards, while taking into account the ~~likely~~ long term effects of climate change~~.~~; (d) is enabled where the sites can be adequately serviced by the water supply, wastewater and stormwater networks to avoid adverse effects on the function and capacity of the networks; and (e) is only enabled in areas serviced by the combined wastewater network where it is confirmed that there is sufficient capacity in the network to service the subdivision and resulting development.
RMA evaluation	The objectives proposed to be added to the urban subdivision chapter: • recognises and provides for qualifying matters; • manages adverse effects on the function and capacity of water supply, wastewater and stormwater networks; and • introduces a new risk management framework for significant risk from natural hazards, while building resilience to climate change. The objectives seek to ensure subdivision: • takes into account the longevity of development, thereby providing for wellbeing people and communities, supporting the efficient use and development of natural and physical resources (s7) and specifically addresses health and safety (s5(2)) and reinforces the need to build resilience to climate change; • provides for an urban form that responds to a qualifying matter and ensures development is appropriate to the level of planned or existing infrastructure; • addresses matters of national importance (s6), which thereby enable development to provide for the matters listed in s5(2)(a) – (c);

	• is appropriate to the values associated with qualifying matters (s6 and s7). Overall, the proposed objectives seek to provide direction, guidance and certainty around achieving a high-quality climate resilient built environment and urban form, in order to support greater housing capacity across the city and across different housing types. Qualifying matters are applied to the extent necessary to accommodate them where the level of development provided for by Policy 3 of the NPS-UD and also in Schedule 3C clause 4(1)(b) and (c) areas incompatible with the relevant qualifying matter. The proposed objectives are considered to be the most appropriate way of achieving sustainable management of resources and therefore the purpose of the Act.

4.2 Evaluation of provisions

87. Section 32(1)(b) of the RMA requires this evaluation report to examine the extent to which the provisions in the proposal are the most appropriate way to achieve objectives by:

- Identifying other reasonably practicable options for achieving the objectives.
- Assessing the efficiency and effectiveness of the provisions in achieving the objectives including the benefits and costs of the environmental, economic, social and cultural effects of the provisions and the risk of acting or not acting; and
- Summarising the reasons for deciding on the provisions.

88. In this case as the proposal relates to amending a plan which already exists this evaluation is limited to the amended provisions.

4.3 Development and evaluation of options

89. In the development of the preferred approach set out in the PC120, a number of options were identified. This followed a review of the AUP(OP), and identification of the changes required in order to achieve the requirements of the RMA namely to give effect to Policy 3(c) (enabling buildings of at least 6 storeys in walkable catchments) and Policy 3(d) (increase heights and densities in appropriate locations) of the NPSUD, and to Schedule 3C.

90. The broad options are:

(1) Amend to remove conflicts and retain status quo i.e. rely on the existing provisions within residential and business zones that are not in conflict with NPSUD Policy 3(c) and 3(d) and Clause 4 of Schedule 3C.

(2) Amend the existing zones where giving effect to NPSUD Policy 3(c) and 3(d) and Clause 4 of Schedule 3C with no consequential changes to the existing zone activities and standards to achieve a higher-quality built environment and build resilience to climate change.

(3) (The preferred option) Amend the existing zones to incorporate NPSUD Policy 3(c) and 3(d) and Clause 4 of Schedule 3C, making consequential changes for

activities and standards to achieve a quality-built environment and build resilience to climate change.

91. The options of 'Do nothing' (relying on the AUP(OP) with no amendments) and 'Non-regulatory methods' have not been considered in the development of PC120. Due to the requirement to give effect to Policies 3(c) and (d) of the NPSUD and meet the requirements in Clause 4 of Schedule 3C, an assessment of these options was considered to be immaterial.

92. Option 3 has been chosen as the preferred option as it will enable the building heights and densities required by Schedule 3C Clause 4(1)(b) and (c) and NPSUD policy 3, increase height and density in appropriate locations where necessary, and provide for the same amount of housing capacity as PC78 as notified, achieve a well-functioning urban environment (including providing for a higher-quality built environment and building climate change resilience) and enable less development than is required by Schedule 3C Clause 4(1)(b) and (c) and NPSUD policy 3 where there are qualifying matters (as authorised by Schedule 3C Clause 8).

93. The following tables (Table 9 – Table 13) provide the evaluation of amended provisions in response to objectives for the relevant zones and for urban subdivision. This includes an evaluation of amended provisions within the:

- SHZ, MHS, MHU and THAB zones;
- Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park Business zones; and
- Urban subdivision.

Table 9: Single House Zone

Related SHZ Policies (Additions underlined and deletions ~~strikethrough~~)	**Related Standards**	**Related Matters of Discretion and Assessment Criteria**
H3 Residential – Single House Zone		
(5) Require ~~accommodation~~ residential activities to have useable and accessible outdoor living space. (7) Provide for limited non-residential activities that: (a) support the social and economic well-being of the community; (b) are in keeping with the scale and intensity of development anticipated within the zone; (c) avoid, remedy or mitigate adverse effects on residential amenity; and (d) will not detract from the vitality of the Business – City Centre	Table H3.4.1 Activity table H3.6.3A. Development within the Infrastructure – Combined Wastewater Network Control H3.6.6 Building height	**H3.8.1 Matters of discretion** H3.8.1(3) For developments in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control that does not comply with H3.6.3A. **H3.8.2 Assessment criteria** H3.8.2(4) Yards H3.8.2(9) For developments in areas identified on the planning maps as being subject to the Infrastructure –

Zone, Business – Metro Centre Zone and the Business – Town Centre Zone. (9) Require development to be in keeping with the neighbourhoods' identified values including special character. (10) Require buildings to be setback from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards. (11) Restrict development in high hazard areas, and manage development in medium or low hazard areas to ensure natural hazard risk is tolerable or acceptable. (12) Require development to protect and enhance the values of scheduled sites or places of significance to Mana Whenua and the relationship of Mana Whenua with their taonga, commensurate with the scale of the proposal. (13) Require development in areas identified on the planning maps as subject to stormwater infrastructure constraints to be provided with appropriate infrastructure. (14) Require development to remedy or mitigate adverse effects which may compromise the function and capacity of the water supply network. (15) Require development on sites connected to the combined wastewater network as identified on the planning maps to demonstrate that there is sufficient capacity available in the combined wastewater network to enable servicing of the development, and that any adverse effects which may compromise the function and capacity of the combined wastewater network are able to be managed.		Combined Wastewater Network Control that does not comply with H3.6.3A

Environmental	The proposed package of provisions ensure that development occurs at the densities anticipated in the zone and is managed as part of the overall delivery of a well-functioning urban environment through all of the residential zones. **Benefits**: • Retention and protection of key values or areas associated with matters of national importance, where the levels of intensification enabled in other zones would otherwise have significant adverse effects on those values / areas. • Ensuring that development on sites that are serviced by combined wastewater networks is only enabled where it can connect to separated public stormwater networks; and where there is sufficient capacity in the wastewater network – thus minimising additional overflow effects to the wider environment (including the marine environment). • Managing development in areas subject to natural hazards commensurate with the level of risk in those areas, thereby minimising the impacts on the environment that can arise from natural hazard risk that is exacerbated by un-managed development.
	Costs: It is considered that there will be no environmental costs arising from the proposed amendments as they are all proposed to improve environmental outcomes.
Economic	Benefits: Managing development in a way that better recognises the infrastructure constraints associated with the combined wastewater network results in economic benefits due to reduced costs associated with unplanned discharges. Managing development in a way that better recognises the presence of natural hazards results in economic benefits due to reduced costs associated with the impacts arising from natural hazard events on land, property and life. Protecting, maintaining and enhancing values associated with relevant qualifying matters may generate some economic benefit through enhancing desirability of those areas subject to qualifying matters
	Costs: Unrealised development potential, however, these costs are considered to be outweighed by the benefits arising from better managing development in relation to relevant qualifying matters.
Social	Benefits: The provisions will ensure that residents, neighbours and communities will benefit from development that responds appropriately to natural hazard risk and infrastructure constraints, while appropriate management of values associated with other qualifying matters will reinforce the sense of place and relationships between those qualifying matters and communities and individuals thereby contributing to social wellbeing.
	Costs: N/A
Cultural	Benefits: The proposed provisions will ensure the values of relevant qualifying matters are protected as so tangata whenua can continue to provide for their cultural wellbeing.
	Costs: N/A
Options less or not as appropriate to achieve the objectives.	Option 1 – Delete conflicts and retain status quo: The operative plan does not provide a framework specific to the relevant qualifying matters. Therefore, this option would conflict with the purpose of the RMA as there would be inadequate management of the effects of increased intensification on specified qualifying matters.

	Option 2 – Give effect to Schedule 3C and Policy 3 with no consequential amendments: This option would conflict with the purpose of the RMA as there would be inadequate management of the effects of increased intensification on specified qualifying matters. Option 3 - Give effect to Schedule 3C and Policy 3 with consequential amendments **(preferred option)**: This option provides a framework to ensure development and use is enabled at a level where adverse effects on values of national importance can be appropriately managed.
Opportunities for Economic Growth and Employment	The effect of the provisions and amendments is considered negligible.
Risk of Acting or Not Acting	It is considered that there is sufficient information to determine that the risk of not acting is considered high given the poor outcomes for environmental quality and natural hazard risk for residents and communities within those areas.
Efficiency and Effectiveness	The cascade of policies, standards, matters of discretion and assessment criteria provide clear direction on how the objectives are anticipated to be achieved. The clarity of direction will ensure the provisions are effective in achieving development that responds appropriately to infrastructure constraints and natural hazards.

Table 10: Mixed Housing Suburban and Mixed Housing Urban

Relevant Policies (Additions underlined and deletions ~~strikethrough~~)	**Relevant Standards**	**Matters of Discretion and Assessment Criteria**
H5 Residential – Mixed Housing Suburban Zone		
H4.3(1) Enable a variety of housing types including integrated residential development such as retirement villages subject to achieving the planned built character and taking into account the existing environment. H4.3(10) Recognise the functional and operational requirements of activities and development, including functional access for emergency responders. H4.3(3A) Require development to achieve a built form that contributes to high-quality built environment outcomes by: (a) maintaining privacy, outlook, daylight and sunlight access and reducing over-heating to	Table H4.4.1 Activity table H4.6.7 Yards (Note 1) H4.6.10 Landscaped area H4.6.11 Outlook H4.6.13 Outdoor living space H4.6.17 Windows to street and private vehicle and pedestrian accessways H4.6.18 Deep soil area and canopy tree H4.6.19 Safety and privacy buffer from private pedestrian and vehicle accessways H4.6.20 Residential waste management H4.6.21 Development within the Infrastructure – Combined Wastewater Network	Matters of discretion (H4.8.1) H4.8.1(1) for supported residential care etc….. H4.8.1(2) for four or more dwellings H4.8.1(3) for integrated residential development H4.8.1(4) for buildings that do not comply with….. H4.8.1(6) For development in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control that do not comply with Standard H4.6.21…… Assessment criteria H4.8.2(1) for supporting residential care….. H4.8.2(2) for four or more dwellings

Relevant Policies (Additions underlined and deletions ~~strikethrough~~)	Relevant Standards	Matters of Discretion and Assessment Criteria
provide for the health and safety of residents on-site; (b) providing for residents' safety and privacy while enabling passive surveillance on the street and private vehicle access and pedestrian access; (c) minimising visual dominance effects to adjoining sites; (d) maintaining a level of privacy, and sunlight and daylight access for adjoining sites; (e) minimising visual dominance effects of carparking and garage doors to streets and private accessways; (f) minimising adverse effects on the natural environment, including restricting maximum impervious area on a site to reduce the amount of stormwater runoff generated by a development and ensure that adverse effects on water quality, quantity and amenity values are avoided or mitigated; (g) requiring development to reduce the urban heat island effects of development and respond to climate change, by providing deep soil areas that enable the growth of canopy trees; (h) requiring adequate landscaped areas that comprise natural grass, plants or trees to provide for quality living environments and create vegetated urban streetscape character; (i) requiring outdoor living spaces that are functional in size,		H4.8.2(3) for integrated residential development H4.8.2(4) for building height H4.8.2(5) for building in relation to boundary H4.8.2(6) for alternative building in relation to boundary H4.8.2(7) for yards H4.8.2(8) For maximum impervious areas H4.8.2(9) For building coverage H4.8.2(10) For landscaped area H4.8.2(11) For outlook space H4.8.2(12) For daylight H4.8.2(13) For outdoor living space H4.8.2(14) For windows to street and private vehicle and pedestrian accessways H4.8.2(15) For front, side, and rear fences and walls H4.8.2(16) For minimum dwelling size H4.8.2(17) For deep soil area and canopy tree infringements H4.8.2(18) For safety and privacy buffer from private pedestrian and vehicle accessways H4.8.2(19) For residential waste management infringements H4.8.2(20) For Development within the Infrastructure – Combined Wastewater Network Control infringements

Relevant Policies (Additions underlined and deletions ~~strikethrough~~)	Relevant Standards	Matters of Discretion and Assessment Criteria
have access to sunlight, and are directly and conveniently accessible. (j) designing practical and sufficient space for residential waste management; (k) designing practical, functional and sufficient space for internal storage and living areas. H4.3(3B) Encourage development of four or more dwellings per site and non-residential activities to contributes to a safe and convenient local transport network for pedestrians, passenger transport users and cyclists. H4.3(3C) Require buildings to be setback from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards. H4.3(3D) Restrict development in high hazard areas, and manage development in medium or low hazard areas to ensure natural hazard risk is tolerable or acceptable. H4.3(9) Provide for non-residential activities that: (a) support the social, cultural and economic well-being of the community;…… H4.3(11) Require development to remedy or mitigate adverse effects which may compromise the function and capacity of the water supply, wastewater and stormwater networks.		H4.9 Special information requirements

Relevant Policies (Additions underlined and deletions ~~strikethrough~~)	Relevant Standards	Matters of Discretion and Assessment Criteria
H4.3(12) Require development on sites connected to the combined wastewater network as identified on the planning maps to demonstrate that there is sufficient capacity available in the combined wastewater network to enable servicing of the development with adverse effects which may compromise the function and capacity of the water supply network able to be managed.		
H3A Residential – Mixed Housing Urban Zone		
H5.3(1) Enable a variety of medium density housing types ~~higher densities~~, including low-rise apartments and integrated residential development such as retirement villages. H5.3(10) Recognise the functional and operational requirements of activities and development, including functional access for emergency responders. H5.3(3A) Require development to achieve a built form that contributes to high-quality built environment outcomes by: (a) maintaining privacy, outlook, daylight and sunlight access and reducing over-heating to provide for the health and safety of residents on-site; (b) providing for residents' safety and privacy while enabling passive surveillance on the street and private vehicle access and pedestrian access; (c) minimising visual dominance effects to adjoining sites;	H5.4.1 Activity table H5.6.6 Height in relation to boundary H5.6.8 Yards (Note 1) H5.6.11 Landscaped area H5.6.12 Outlook space H5.6.14 Outdoor living area H5.6.18 Windows to street and private vehicle and pedestrian accessways H5.6.19 Deep soil area and canopy tree H5.6.20 Safety and privacy buffer from private pedestrian and vehicle accessways H5.6.21 Residential waste management H5.6.22 Development within the Infrastructure – Combined Wastewater Network	H5.8.1 Matters of discretion H5.8.1(A1) For all restricted discretionary activities… H5.8.1(1) for supported residential care etc….. H5.8.1(2) for four or more dwellings H5.8.1(3) for integrated residential development H5.8.1(4) for buildings that do not comply with….. H5.8.1(6) For developments in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control that do not comply with Standard H5.6.22. Assessment criteria H5.8.1(A1) for all restricted discretionary activities H5.8.2(1) for supporting residential care….. H5.8.2(2) for four or more dwellings H5.8.2(3) for integrated residential development

Relevant Policies (Additions underlined and deletions ~~strikethrough~~)	Relevant Standards	Matters of Discretion and Assessment Criteria
(d) maintaining a level of privacy, and sunlight and daylight access for adjoining sites; (e) minimising visual dominance effects of carparking and garage doors to streets and private accessways; (f) minimising adverse effects on the natural environment, including restricting maximum impervious area on a site to reduce the amount of stormwater runoff generated by a development and ensure that adverse effects on water quality, quantity and amenity values are avoided or mitigated; (g) requiring development to reduce the urban heat island effects of development and respond to climate change, by providing a deep soil area that enable the growth of canopy trees; (h) requiring adequate landscaped areas that comprise natural grass, plants or trees to provide for quality living environments and create vegetated urban streetscape character; (i) requiring outdoor living spaces that are functional in size, have access to sunlight, and are directly and conveniently accessible. (j) designing practical and sufficient space for residential waste management; (k) designing practical, functional and sufficient space for internal storage and living areas; and		H5.8.2(4) for building height H5.8.2(6) for building in relation to boundary H5.8.2(8) for alternative building in relation to boundary adjoining lower intensity zones H5.8.2(9) for yards H5.8.2(10) For maximum impervious areas H5.8.2(11) For building coverage H5.8.2(12) For landscaped area H5.8.2(13) For outlook space H5.8.2(14) For daylight H5.8.2(15) For outdoor living space H5.8.2(15A) For windows to street and private vehicle and pedestrian accessways H5.8.2(16) For front, side, and rear fences and walls H5.8.2(17) For minimum dwelling size H5.8.2(18) For deep soil area and canopy tree infringements H5.8.2(19) For safety and privacy buffer from private pedestrian and vehicle accessways H5.8.2(20) For residential waste management infringements H5.8.2(21) For development within the Infrastructure – Combined Wastewater Network Control infringements H5.9 Special information requirements

Relevant Policies (Additions underlined and deletions ~~strikethrough~~)	Relevant Standards	Matters of Discretion and Assessment Criteria
(l) designing attractive buildings when viewed from public open spaces and the street. H5.3(3B) Encourage development of four or more dwellings per site and non-residential activities to contributes to a safe and convenient local transport network for pedestrians, passenger transport users and cyclists. H5.3(3C) Require buildings to be setback from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards. H5.3(3D) Restrict development in high hazard areas, and manage development in medium or low hazard areas to ensure natural hazard risk is tolerable or acceptable. H5.3(8) Provide for non-residential activities that: (a) support the social, cultural and economic well-being of the community; H5.3(11) Require development to remedy or mitigate adverse effects which may compromise the function and capacity of the water supply, wastewater and stormwater networks. H5.3(12) Require development on sites connected to the combined wastewater network as identified on the planning maps to demonstrate that there is sufficient capacity available in the combined wastewater network to enable servicing of the development with		

Relevant Policies (Additions underlined and deletions ~~strikethrough~~)	Relevant Standards	Matters of Discretion and Assessment Criteria
adverse effects which may compromise the function and capacity of the water supply network able to be managed.		
Environmental	The proposed package of provisions ensure that development occurs at the densities anticipated in the zones and is managed to deliver a well-functioning urban environment, particularly with regards to a higher-quality built environment and climate change resilience. Detailed analysis of the anticipated benefits associated with proposed provisions is provided in **Appendix 2** – Options Analysis: Mixed Housing Urban Zone and **Appendix 3** –Well Functioning Urban Environment Outcomes: Targeted Evaluation. In summary, the key benefits include: • Amendments to height in relation to boundary in MHU improve ability to enable anticipated heights (compared to the operative provisions); • Maintaining the operative planned urban character assists in reinforcing hierarchies between centres, corridors and less accessible areas; • Bulk and mass are appropriate to manage shadowing and dominance effects; • Infringements for taller buildings are enabled where appropriate and where design provides high-quality outcomes; • Ensuring functional internal and outdoor living spaces • Increased quality of landscaped areas to contribute to overall improved amenity outcomes both on and off-site; • Increased passive surveillance to the street and shared accessways to improve safety on the street; • encourage the retention of existing trees where possible; • enable sufficient depth and area of land be provided to support tree growth to maturity; • assist in maintaining and enhancing biodiversity values; • providing shade with anticipated increasing temperatures; and • provide areas for stormwater infiltration. In MHU managing development in areas subject to natural hazards commensurate with the level of risk in those areas, thereby minimising the impacts on the environment that can arise from natural hazard risk that is exacerbated by un-managed development. Furthermore, provisions seek to ensure safety and convenience for pedestrians and cyclists and manage the cumulative effects of increased demand on constraint 3 water networks to ensure sufficient supply of water for emergency responders and minimise the risk of wastewater overflow.	
	Costs: It is considered there will be no environmental costs as the proposed provisions does not alter the scale, height or bulk of development from the operative planned urban built character anticipated in the zones and overall results in an improved environmental outcome.	

Relevant Policies (Additions underlined and deletions ~~strikethrough~~)	Relevant Standards	Matters of Discretion and Assessment Criteria
Economic	Benefits: While improved amenity, and health and safety outcomes contribute to the vitality of neighbourhoods, overall, there are likely to be minimal economic benefits as intensity of development remains currently provided for under the operative plan.	
	Costs: The proposed provisions may result in a moderate increase in design and development costs. However, the environmental and social benefits are considered to outweigh the economic costs.	
Social	Benefits: The provisions will ensure residents, neighbours and communities will benefit through development of quality living environments, increased safety of and convenience to transport networks and long-term benefits associated with climate change resilience.	
	Costs: N/A	
Cultural	Benefits: N/A	
	Costs: N/A	
Options less or not as appropriate to achieve the objective	Option 1 – Delete conflicts and retain status quo: The operative framework does not provide sufficient clarity around the application of the zones to provide a quality compact urban environment. Additionally, the operative framework does not provide for urban tree growth and building resilience to climate change. As outlined in Section 3 of this report, the s35 monitoring report identified inconsistencies in the AUP(OP) in achieving high-quality amenity and gaps in the framework for addressing health and safety. Accordingly, Option 1 is not considered the most appropriate option as it would not achieve the objectives. Option 2 – Give effect to Schedule 3C and Policy 3 with no consequential amendments: This option would not fulfil the identified objectives as without consequential changes there is a compromised ability to achieve "quality" outcomes or to promote building resilience to climate change. Option 3 - Give effect to Schedule 3C and Policy 3 with consequential amendments **(preferred option)**: This option will achieve all the objectives ensuring clarity on the application of the zones to achieve quality compact urban environments and clarity on the anticipated built form. The package of provisions provide a greater level of certainty around the ability to achieve a well-functioning urban environment (including higher-quality built environments, compact urban environments and building resilience to climate change).	
Opportunities for Economic Growth and Employment	The effect of the provisions and amendments is considered negligible.	
Risk of Acting or Not Acting	Research and modelling outcomes have provided sufficient information to determine that if the preferred option is not applied, there is a moderate to high risk of poor outcomes for quality living conditions and long-term climate resilience for residents and communities within areas of intensification.	
Efficiency and Effectiveness	The cascade of policies, standards, matters of discretion and assessment criteria provide clear direction on how the objectives are anticipated to be achieved. The clarity of direction will ensure the provisions are effective in achieving higher-quality built environments and building climate change resilience.	

Table 11: Residential – Terraced Housing and Apartment Building Zone (THAB)

Relevant Policies to Objectives (Additions underlined and deletions ~~strikethrough~~)	Relevant Standards (New or modified standards italics)	Matters of Discretion and Assessment Criteria
H6.3(2) Require the height, bulk, form and appearance of multi-unit residential development ~~and the provision of setbacks and landscaped areas~~ to achieve a quality built environment ~~high-density urban built character of predominantly five, six or seven storey buildings in identified areas, in a variety of forms.~~ with a high-density urban built character differentiated by building height in identified areas by; (a) building and site design which locates development with bulk and mass towards the street and provides for setbacks, outlook spaces, outdoor living spaces and landscaped areas; (b) for developments more than six storeys: (i) encourage well-designed, human scale podiums with slender towers above with adequate separation between buildings; and; (ii) at the edge of walkable catchments set buildings back from boundaries where adjacent to lower intensity residential zones; (c) on all sites encourage well-designed buildings, create human scaled street-edges which complement the area's streetscape and skyline and maintain adequate sunlight and daylight access. H6.3(3A) Enable building height of at least six storeys in the zone unless a qualifying matter applies that reduces height. **Within Identified Mapped Walkable Catchments** H6.3(3B) Enable in areas with the highest factors of strategic importance,	H6.4.1 Activity table H6.5 Notification H6.6.4A Offices outside the Centre Fringe Office Control as identified on the planning maps H6.6.4B Small scale office, dairy, restaurant and cafes activities H6.6.5 Building height H6.6.6 Height in relation to boundary H6.6.8 Height in relation to boundary adjoining lower intensity zones for development outside walkable catchments H6.6.8A Building setback at upper floors in walkable catchments H6.6.8B Building setback at upper floors from lower intensity residential zones in walkable catchments H6.6.8C Maximum tower dimension H6.6.9 Yards H6.6.12 Landscaped area H6.6.13 Outlook space H6.6.15 Outdoor living space H6.6.19 Windows to street public open spaces, public pedestrian accessways, cycleways or private vehicle accessway H6.6.20 Deep soil area and canopy tree H6.6.21 Safety and privacy buffer from private pedestrian and vehicle accessways H6.6.22 Residential waste management H6.6.23 Development within the Infrastructure – Combined Wastewater Network Control	H6.8.1 Matters of discretion H6.8.1(A1) For all restricted discretionary activities H6.8.1(1) for supported residential care etc….. H6.8.1(2) for four or more dwellings H6.8.1(3) for integrated residential development H6.8.1(4) for buildings that do not comply with….. H6.8.1(6) For development in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control that do not comply with Standard H6.6.23. Assessment criteria H6.8.2(A1) for all restricted discretionary activities H6.8.2(1) for supporting residential care….. H6.8.2(2) for four or more dwellings H6.8.2(3) for integrated residential development H6.8.2(5) for building height H6.8.2(8) for heigh in boundary to building in relation to boundary adjoining lower density zones outside walkable catchments H6.8.2(8A) for setback at upper floors H6.8.2(8B) for maximum tower dimension H6.8.2(9) For yards

accessibility, concentration of amenities and residential demand, building heights up to fifteen storeys within the walkable catchments (identified in Chapter G) of: (a) the edge of the City Centre zone; (b) the edge of the Metropolitan Centre zones; (c) the legislated locations at rapid transit stops; (d) other rapid transit stops. H5.3(3C) Enable in areas with, relative to other areas, high factors of strategic importance, accessibility, concentration of amenities and residential demand, building heights up to ten storeys within the walkable catchments (listed in Chapter G) of: (a) the edge of the Metropolitan Centre zones; (b) the legislated locations at rapid transit stops; (c) other rapid transit stops. **Height Variation Control** H6.3(4) In identified locations adjacent to centres, enable greater building height through the application of the Height Variation Control where the additional development potential enabled: Enable greater building height than the standard height in locations identified within the Height Variation Control, having regard to whether the greater height: (za) is commensurate with the level of commercial activities and community services; (zb) is compatible with a qualifying matter that requires reduced height and/or density; (zc) is an efficient use of land; (a) provides an appropriate transition in building scale from the adjoining higher density business zone to neighbouring lower intensity residential zones, and;		H6.8.2(10) For maximum impervious areas H6.8.2(11) for building coverage H6.8.2(12) For landscaped area H6.8.2(13) For outlook space H6.8.2(14) For daylight H6.8.2(15) For outdoor living space H6.8.2(14) For windows to street and private vehicle and pedestrian accessways H6.8.2(15) Outdoor living space H6.8.2(15A) For windows to street and private vehicle and pedestrian accessways H6.8.2(16) Front, side and rear fences and walls H6.8.2(17) For minimum dwelling size H6.8.2(18) For deep soil area and canopy tree infringements H6.8.2(19) For safety and privacy buffer from private pedestrian and vehicle accessways H6.8.2(20) For residential waste management infringements H6.8.2(21) for development within the Infrastructure – Combined Wastewater Network Control H6.9 Special information requirements

(b) supports public transport, social infrastructure and the vitality of the adjoining centre. H6.3(4A) Reduce building height below the standard zone height in locations identified within the Height Variation Control, where the standard zone height would have significant adverse effects on identified special character, identified landscape features, amenity or other qualifying matters. H6.3(10) Recognise the functional and operational requirements of activities and development, including functional access for emergency responders. H6.3(A9) Require development to achieve a built form that contributes to quality built environment outcomes by: (a) maintaining privacy, outlook, daylight and sunlight access and reducing over-heating to provide for the health and safety of residents on-site; (b) providing for residents' safety and privacy while enabling passive surveillance on the street and for vehicle access and primary pedestrian access; (c) managing visual dominance effects to adjoining sites; (d) maintaining a good level of privacy, and sunlight and daylight access for adjoining sites; (e) minimising visual dominance effects of carparking and garage doors to streets and private accessways; (f) minimising adverse effects on the natural environment, including restricting maximum impervious area on a site to reduce the amount of stormwater runoff generated by a development and ensure that adverse effects on water quality, quantity and amenity values are avoided or mitigated;		

(g) requiring development to reduce the urban heat island effects of development and respond to climate change, by providing deep soil area that enable the growth of canopy trees; (h) requiring adequate landscaped areas that comprise natural grass, plants or trees to provide for quality living environments and create vegetated urban streetscape character; (i) requiring outdoor living spaces that are functional in size, have access to sunlight, and are directly and conveniently accessible. (j) designing practical and sufficient space for residential waste management; (k) designing practical, functional and sufficient space for internal storage and living areas; and (l) designing attractive buildings when viewed from public open spaces and the street. H6.3(B9) Encourage development of four or more dwellings per site and non-residential activities to provide a safe and convenient local transport network for pedestrians, passenger transport, road users and cyclists. H6.3(C9) Require buildings to be setback from water bodies to maintain and protect environmental, open space, amenity values of riparian margins of lakes, streams and coastal areas and water quality and to provide protection from natural hazards. H6.3(D9) Restrict development in high hazard areas, and manage development in medium or low hazard areas to ensure natural hazard risk is tolerable or acceptable.		

H6.3(9) Provide for non-residential activities that: (a) support the social, cultural and economic well-being of the community; ……. H6.3(11) Require development to remedy or mitigate adverse effects which may compromise the function and capacity of the water supply, wastewater and stormwater networks. H6.3(12) Require development on sites connected to the combined wastewater network as identified on the planning maps to demonstrate that there is sufficient capacity available in the combined wastewater network to enable servicing of the development with adverse effects which may compromise the function and capacity of the combined wastewater network able to be managed.		

Environmental	The policies, standards and assessment criteria work as a package to ensure that development occurs at the densities anticipated in the zone and is managed to deliver a well-functioning urban environment, particularly with regards to enabling a compact urban environment, a higher higher-quality built environment and climate change resilience. Detailed analysis on anticipated benefits as a result of proposed provisions is provided in **Appendix 3** – Well Functioning Urban Environment Outcomes: Targeted Evaluation and **Appendix 1** – Options Analysis: Terraced Housing and Apartment Buildings and Business Zones. In summary, the key benefits include: • Achieves 6 storeys in walkable catchments and 10 and 15 storeys in those walkable catchments identified as having high strategic importance, accessibility, concentration of amenities and residential demand relative to other locations. • Amendments to height in relation to boundary standard to improve ability to enable anticipated heights (compared to the operative provisions). • Clear transition in scale and built form between different centre categories and corridors reinforces hierarchies to support compact urban form. • Bulk and mass are appropriate to manage shadowing and dominance, particularly at the rear of the site and including: to enable light and air between buildings; enable adequate daylight; and sunlight to dwellings and public spaces. • Bulk and mass are encouraged to locate at the front of the site which assists in activating the street frontage. • Infringements for taller buildings are enabled where appropriate and where design provides high-quality outcomes.

	Maintaining privacy, shadowing and visual dominance effects. • Ensuring functional internal and outdoor living spaces. • Increased quality of landscaped areas to contribute to overall improved amenity outcomes both on and off-site. • Increased passive surveillance to the street and shared accessways to improve safety on the street. • Encouraging the retention of existing trees where possible. • Enabling sufficient depth and area of land be provided to support tree growth to maturity. • Assisting in maintaining and enhancing biodiversity values. • Providing shade with anticipated increasing temperatures. • Providing areas for stormwater infiltration. Furthermore, provisions seek to ensure safety and convenience for pedestrians and cyclists and manage the cumulative effects of increased demand on constrained 3 water networks to ensure sufficient supply of water for emergency responders and minimise the risk of wastewater overflow. Policy H6.3(2)(b)(ii) is considered a qualifying matter under Schedule 3C, clause 8(1)(b) of the RMA, on sites where either 10 or 15-storeys is required to be enabled pursuant to clauses 4(1)(c) and 4(1)(b) of Schedule 3C. This policy and the methods to implement it will have the benefit of providing a sense of space and release to lower intensity residential adjoining and at the edge of walkable catchments.
	Cost: The increase in scale, height and bulk has the potential to increase adverse effects on amenity, health and safety values including but not limited to dominance, shadowing, daylight, privacy, passive surveillance, and outlook. Policy H6.3(2)(b)(ii) and the method to implement it as a qualifying matter under Schedule 3C, clause 8(1)(b) of the RMA, will reduce heights in certain circumstances for sites where heights of 10 or 15-storeys. The circumstances relate to sites where the zone transitions and walkable catchment boundary are located mid-block. The cost of reduction in development for each one these sites is either a loss of 4 storeys for walkable catchments subject to clause 4(1)(c) or 9 storeys for walkable catchments subject to clause 4(1)(b) for a horizontal depth of 18m. The proposed package of provisions (including new, amended and retained provisions, and including the qualifying matter) is considered sufficient to ensure the high density character delivers higher-quality built environment outcomes such that overall environmental costs are minimised. Increased development generates adverse environmental effects, particularly in terms of tree removal and stormwater run-off. These costs are anticipated to be balance through the proposed provisions which will assist in building resilience to climate change effects, thereby providing long-term environmental benefits.
Economic	Benefits: Increased development potential within walkable catchments is anticipated to have a positive economic effect. Improved amenity, and health and safety outcomes contribute to the vitality of neighbourhoods and centres which can correlate with increased investment and economic benefits. Particularly in THAB walkable catchments, encouraging bulk and mass towards the street assists in activating street frontages which is a key indicator of vitality.

	The assessment criteria for the Deep soil and canopy tree standard allows for flexibility to fit site constraints. The provisions therefore allow for intensification but in a way which ensures climate resilience.
	Costs: The proposed package of provisions is likely to generate more expensive design and development costs. However, the environmental and social benefits are considered to outweigh the economic costs.
Social	Benefits: The package of provisions will ensure residents, neighbours and communities will benefit through increased housing supply, development of quality living environments and long-term benefits associated with climate change resilience.
	Costs: Residents and neighbours are likely to experience a change in amenity and character from increased density and intensity (particularly in walkable catchments), however the proposed provisions will assist in ensuring critical amenity, health and safety values are provided for. No social costs are associated with the deep soil and tree canopy standard.
Cultural	Benefits: N/A
	Costs: N/A
Options less or not as appropriate to achieve the objective	Option 1 – Delete conflicts and retain status quo: The operative framework does not provide for walkable catchments, development up to 10 to 15 storeys in height or the ability to retain or provide urban tree growth and building resilience to climate change. As outlined in Section 3 of this report, the s35 monitoring report identified inconsistencies in the AUP(OP) in achieving high-quality amenity and gaps in the framework for addressing health and safety. Accordingly, Option 1 is not considered the most appropriate option as it would not achieve the objectives. Option 2 – Give effect to Schedule 3C and Policy 3 with no consequential amendments: This option would not adequately respond to the impacts of increased intensification and is likely to result in poor living conditions and development outcomes and does not provide for building resilience to climate change. Therefore, Option 2 is not considered the most appropriate option as it would not achieve the objectives. Option 3 – Give effect to Schedule 3C and Policy 3 with consequential amendments including a qualifying matter under Schedule 3C, clause 8(1)(b): This is the preferred option as it enables intensification required under Policy 3C and Schedule 3C while achieving quality living environments and providing for climate change resilience.
Opportunities for Economic Growth and Employment	Increased development capacity, particularly within walkable catchments, will have a directly beneficial role in encouraging highest density residential development in the locations which are typically most accessible to public transport business and employment centres.
Risk of Acting or Not Acting	There is sufficient information to understand the outcomes of the preferred option. The THAB zone that does not enable the identified intensification requirements of the RMA (Schedule 3C and policy 3). Therefore, there is a requirement to implement these intensification provisions whilst ensuring that consequential amendments are made so that the package of provisions in the AUP(OP) will deliver a higher-quality built environment which is resilient to climate change.
Efficiency and Effectiveness	The provisions provide a clear and efficient way to achieve the objectives by enabling the highest density living and development in walkable catchments while ensuring quality design outcomes. The provisions are the most effective and efficient means of responding to Schedule 3C, policy 3 of the NPSUD and Part B2 of the RPS.

Table 10: Business Zones – Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Business Park.

Relevant Policies to Objectives (Additions underlined and deletions ~~strikethrough~~)	Relevant Standards	Matters of Discretion and Assessment Criteria
H10:Town Centre Zone		
(23) Enable in areas with the highest factors of strategic importance, accessibility, concentration of amenities and residential demand, building heights up to fifteen storeys within the walkable catchments (identified in Chapter G) of: (a) the edge of the City Centre zone; (b) the edge of the Metropolitan Centre zones; (c) the legislated locations at rapid transit stops; (d) other rapid transit stops. (24) Enable in areas with, relative to other areas, high factors of strategic importance, accessibility, concentration of amenities and residential demand, building heights up to ten storeys within the walkable catchments (listed in Chapter G) of: (a) the edge of the Metropolitan Centre zones; (b) the legislated locations at rapid transit stops; (c) other rapid transit stops. (25) Enable building height of at least six storeys within mapped walkable catchments unless a qualifying matter applies that reduces height. (26) In walkable catchments require development more than ten storeys to achieve adequate separation between buildings, set back upper floors from the street and set towers, above six storeys, back from boundaries where adjacent to lower intensity residential zones.	H10.6.1 Building height H10.6.2 Height in relation to boundary H10.6.3 Building setback at upper floors for sites outside walkable catchments H10.6.3A Building setback at upper floors for sites in walkable catchments H10.6.4 Maximum tower dimension and tower separation H10.6.10 Outlook space	H10.8.2 Assessment criteria (2) new buildings and alterations and additions to buildings not otherwise provided for (6) Buildings that do not comply with the standards (a)(i) – height, height in relation to boundary, building setbacks at upper floors, maximum tower dimension and tower separation. (f)(i) – outlook space, minimum dwelling size. (g)(i) – Building setback at upper floors for sites in walkable catchments.
H11: Local Centre Zone		
In Mapped Walkable Catchments (22) Enable in areas with the highest factors of strategic importance, accessibility, concentration of	H11.6.1 Building height H11.6.2 Height in relation to boundary	H11.8.2 Assessment criteria (4) New buildings and alterations and additions to buildings not otherwise provided for

amenities and residential demand, building heights up to fifteen storeys within the walkable catchments (identified in Chapter G) of: (a) the edge of the City Centre zone; (b) the edge of the Metropolitan Centre zones; (c) the legislated locations at rapid transit stops; (d) other rapid transit stops. (23) Enable in areas with, relative to other areas, high factors of strategic importance, accessibility, concentration of amenities and residential demand, building heights up to ten storeys within the walkable catchments (listed in Chapter G) of: (a) the edge of the Metropolitan Centre zones; (b) the legislated locations at rapid transit stops; (c) other rapid transit stops. (24) Enable building height of at least six storeys within mapped walkable catchments unless a qualifying matter applies that reduces height. (25) In walkable catchments require development greater than ten storeys to achieve adequate separation between buildings, set back upper floors from the street and set towers back, above six storeys, from boundaries where adjacent to lower intensity residential zones.	H11.6.2A Building setback at upper floors for sites in walkable catchments H11.6.2B Maximum tower dimension and tower separation H11.6.8 Outlook space	(8) Buildings that do not comply with the standards (a)(i) height and height in relation to boundary, maximum tower dimension and water separation. (f)(i) outlook space, minimum dwelling size (g)(i) building setback at uppers floors for sites in walkable catchments.
H12: Neighbourhood Centre Zone		
In Mapped Walkable Catchments (19) Enable in areas with the highest factors of strategic importance, accessibility, concentration of amenities and residential demand, building heights up to fifteen storeys within the walkable catchments (identified in Chapter G) of: (a) the edge of the City Centre zone; (b) the edge of the Metropolitan Centre zones;	H12.6.1 Building height H12.6.2 Height in relation to boundary H12.6.2A Building setback at upper floors for sites in walkable catchments H12.6.2B Maximum tower dimension and tower separation	H12.8.2 Assessment criteria (3) new buildings and alterations and additions to buildings not otherwise provided for (7) buildings that do not comply with the standards (a)(i) height and height in relation to boundary, maximum tower dimension and tower separation (f)(i) outlook space, minimum dwelling size and outdoor living space

(c) the legislated locations at rapid transit stops; (d) other rapid transit stops. (20) Enable in areas with, relative to other areas, high factors of strategic importance, accessibility, concentration of amenities and residential demand, building heights up to ten storeys within the walkable catchments (listed in Chapter G) of: (a) the edge of the Metropolitan Centre zones; (b) the legislated locations at rapid transit stops; (c) other rapid transit stops. (21) Enable building height of at least six storeys within mapped walkable catchments unless a qualifying matter applies that reduces height. (22) In walkable catchments require development greater than ten storeys to achieve adequate separation between buildings, set back upper floors from the street and set towers, above six storeys, back from boundaries where adjacent to lower intensity residential zones.	H12.6.8 Outlook space	(g)(i) building setback at upper floors for sites in walkable catchments.
H13: Mixed Use Zone		
In Mapped Walkable Catchments (23) Enable in areas with the highest factors of strategic importance, accessibility, concentration of amenities and residential demand, building heights up to fifteen storeys within the walkable catchments (identified in Chapter G) of: (a) the edge of the City Centre zone; (b) the edge of the Metropolitan Centre zones; (c) the legislated locations at rapid transit stops; (d) other rapid transit stops. (24) Enable in areas with, relative to other areas, high factors of strategic importance, accessibility, concentration of amenities and residential demand,	H13.6.1 Building height H13.6.2 Height in relation to boundary H13.6.3 Building setback at upper floors for sites outside walkable catchments H13.6.3A Building setback at upper floors for sites in walkable catchments H13.6.4 Maximum tower dimension and tower separation H13.6.9 Outlook space	H13.8.2 Assessment criteria (3) new buildings and alterations and additions to buildings not otherwise provided for (7) buildings that do not comply with the standards (a)(i) height, height in relation to boundary, buildings setbacks at upper floors, maximum tower dimension and tower separation (e)(i) outlook space, minimum dwelling size (f)(i) building setback at upper floors for sites in walkable catchments.

building heights up to ten storeys within the walkable catchments (listed in Chapter G) of: (a) the edge of the Metropolitan Centre zones; (b) the legislated locations at rapid transit stops; (c) other rapid transit stops. (25) Enable building height of at least six storeys within mapped walkable catchments unless a qualifying matter applies that reduces height. (26) In walkable catchments require development more than ten storeys to achieve adequate separation between buildings, set back upper floors from the street and set towers, above six storeys, back from boundaries where adjacent to lower intensity residential zones.		
H15: Business Park Zone		
In Mapped Walkable Catchments (22) Enable in areas with the highest factors of strategic importance, accessibility, concentration of amenities and residential demand, building heights up to fifteen storeys within the walkable catchments (identified in Chapter G) of: (a) the edge of the City Centre zone; (b) the edge of the Metropolitan Centre zones; (c) the legislated locations at rapid transit stops; (d) other rapid transit stops. (23) Enable in areas with, relative to other areas, high factors of strategic importance, accessibility, concentration of amenities and residential demand, building heights up to ten storeys within the walkable catchments (listed in Chapter G) of: (a) the edge of the Metropolitan Centre zones; (b) the legislated locations at rapid transit stops; (c) other rapid transit stops.	H15.6.1 Building height H15.6.2 Height in relation to boundary H15.6.2A Building setback at upper floors for sites in walkable catchments H15.6.2B Maximum tower dimension and tower separation H15.6.7 Outlook space	H15.8.2 Assessment criteria (3) new buildings and alterations and additions to building not otherwise provided for (4) activities that do not comply with the standards (a)(i) height and height in relation to boundary, maximum tower dimensions and tower separation (e)(i) outlook space (f)(i) building setback at upper floors for sites in walkable catchments.

(24) Enable building height of at least six storeys within mapped walkable catchments unless a qualifying matter applies that reduces height. (25) In walkable catchments require development greater than ten storeys to achieve adequate separation between buildings, set back upper floors from the street and set towers, above six storeys, back from boundaries where adjacent to lower intensity residential zones.		

Environmental	Detailed analysis on anticipated benefits as a result of proposed provisions is provided in **Appendix 3** - Well Functioning Urban Environment Outcomes: Targeted Evaluation and **Appendix 1** – Options Analysis: Terraced Housing and Apartment Buildings and Business Zones. In summary, the key benefits: • Achieve 22m building height within a walkable catchment where there are no qualifying matters present; • Achieve 34.5m or 50m building height within walkable catchments with Height Variable Control where there are no qualifying matters present; • Clear transition in scale and built form between different centres and corridors reinforces hierarchies to support compact urban form; • Infringements for taller buildings are enabled where appropriate and where design provides high-quality outcomes; • Height restrictions avoid and manage adverse effects on values of qualifying matters. Policies H10.3(26), H11.3(25), H12.3(22), H13.3(26), H15.3(25) and the methods to implement them are a qualifying matter under Schedule 3C, clause 8(1)(b) of the RMA, will reduce heights in certain circumstances for sites where heights of 10 or 15-storeys. The circumstances relate to sites where the zone transitions and walkable catchment boundary are located mid-block. The reduction in development for each one these sites is either a loss of 4 storeys for walkable catchments subject to clause 4(1)(c) or 9 storeys for walkable catchments subject to clause 4(1)(b) for a horizontal depth of 18m.
	Costs: The environmental costs of the proposed changes are limited. Whilst additional height may be enabled in specific walkable catchment locations this is unlikely to lead to significant adverse effects given the focus of the zone and activities. Policies H10.3(26), H11.3(25), H12.3(22), H13.3(26), H15.3(25) and the methods to implement them as a qualifying matter under Schedule 3C, clause 8(1)(b) of the RMA, will reduce heights in certain circumstances for sites where heights of 10 or 15-storeys. The circumstances relate to sites where the zone transitions and walkable catchment boundary are located mid-block. The cost of reduction in development for each one these sites is either a loss of 4 storeys for walkable catchments subject to clause 4(1)(c) or 9 storeys for walkable catchments subject to clause 4(1)(b) for a horizontal depth of 18m.

	Amendments including the inclusion of the qualifying matter have been undertaken to ensure development transitions to the scale and densities of adjoining zones and accommodates qualifying matters.
Economic	Benefits: The changes within the zones as identified in certain locations will enable a greater height and envelope which will provide opportunity to deliver additional development capacity. The centres that are within these zones have an important role in delivering the compact urban form and growth sought in these locations, providing employment, social and leisure facilities for the community.
	Costs: No significant economic costs from the proposed changes are noted.
Social	Benefits: The provisions maintain and further enable the zones as important growth locations and centres for persons to access facilities, employment, commerce and services. The provisions as amended continue to recognise and deliver the planned character for the area of the zones providing a package of policies and standards to manage the appearance and form of this new development, including as it relates to qualifying matters.
	Costs: There are expected to be negligible social costs as the given the extent of the effect of the amended provisions on the management of development within these zones.
Cultural	Benefits: N/A
	Costs: N/A
Options less or not as appropriate to achieve the objective	Option 1 – Delete conflicts and retain status quo: This option would mean that the Business zones are retained, but all provisions in conflict with achieving Policy 3 would be removed (such as removing height and height in relation to boundary standards completely). This could result in adverse effects as there would be insufficient control of development to ensure a higher-quality built environment and ensure values of qualifying matters are protected. Option 2 – Give effect to Schedule 3C and Policy 3 with no consequential amendments: While this would give effect to Policy 3 and Clause 4 of Schedule 3C, without consequential changes, this would generate inconsistent development outcomes and would fail to achieve objectives relating to accommodation of qualifying matters. Option 3 - Give effect to Schedule 3C and Policy 3 and make consequential changes: This is the preferred option which would achieve Policy 3, as well as Clause 4 of Schedule 3C. Consequential amendments also help with plan effectiveness and efficiency in giving effect to the objectives.
Opportunities for Economic Growth and Employment	Providing opportunity for additional development potential within walkable catchments is likely to generate increased employment and have an effect on economic growth through construction and/or operation.
Risk of Acting or Not Acting	There is sufficient information on the preferred option to determine that the risk of acting in the form of implementing the proposed provisions is considered low given the requirement to align with the objectives for the zone and NPS-UD direction on intensification. The risk of not acting would not give effect to the NPSUD or Schedule 3C, Clause 4 of the RMA.
Efficiency and Effectiveness	The proposed provisions are effective as they recognise the need to address the intensification requirements of policy 3 of the NPS-UD and provide limited proposed additions and amendments to the objective, policy and standards to deliver this in a consolidated manner which considers firstly building height and the opportunities for greater scale in these locations. The provisions are also comprehensive including supporting changes which will effectively manage the transition of scale and management of effects on adjoining zones, and qualifying matters.

	The provisions are efficient in achieving the identified objectives including maintaining a well functioning urban environment.

Table 13: Urban Subdivision

Relevant Policies to Objectives (Additions underlined and deletions ~~strikethrough~~)	Relevant Standards/rules	Matters of Discretion and Assessment Criteria
E38: Urban Subdivision		
(2) Require subdivision to manage ~~the risk of adverse effects resulting from~~ natural hazard~~s~~ risks in accordance with the objectives and policies in E36 Natural hazards and flooding~~, and to provide safe and stable building platforms and vehicle access~~. (21)(b)(i) an on-site wastewater treatment system that does not lead to adverse off-site effects including degraded water quality, erosion, land instability, creation or exacerbation of flooding, or (23) ~~Manage~~ Require subdivision and development to avoid, remedy or mitigate adverse effects on infrastructure including reverse sensitivity effects, which may compromise the operation and capacity of existing or authorised infrastructure. (25)(f) it can be demonstrated that the reduced width of the esplanade reserve or strip is sufficient to manage the risk of adverse effects resulting from natural hazards, taking into account the ~~likely~~ potential long term effects of climate change; (26)(e) land is subject to natural hazards or stability issues taking into account the ~~likely~~ potential long term effects of climate change; or (31) Avoid subdivision in areas identified on the planning maps as being subject to combined wastewater infrastructure constraints unless the proposed subdivisions is able to demonstrate that	Table E38.4.1 Activity Table – Subdivision for specific purposes Table E38.4.2 Activity Table – Subdivision in residential zones E38.6 General Standards for subdivision E38.7.3.3. Subdivision of land within a natural hazard area, excluding overland flow paths ~~of a site within the one per cent annual exceedance probability floodplain~~ E38.8.1 General standards in residential zones E38.8.2.6.1 Special Character Areas Overlay – Residential and Business subdivision controls E38.8.2.7 Subdivision of sites in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control E38.9.1 General standards for business zones	**Matters of Discretion** E38.11.1 (1) (ca) the effects on water supply, wastewater and stormwater networks required to support the subdivision; and E38.12.1 (1) subdivision of a site within a natural hazard area, excluding overland flow paths ~~subdivision of a site within the 1 per cent annual exceedance probability floodplain~~: E38.12.1 (7) (ca) the effect on function of natural buffers and features in the coastal environment as protections from coastal hazards and provision for their continued performance; E38.12.1 (7) (ia) the effect of wildfire risk from any forestry vegetation within 20 meters of a building platform enabled in a subdivision. E38.12.1 (10) subdivision of sites in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control: E38.12.1 (11) any application for subdivision associated with a resource consent application for the construction and use of 4 or more dwellings, or where a vacant sites subdivision application proposes the establishment of 4 or more vacant sites in the Residential – Mixed Housing Urban zone: E38.12.1 (12) any application for subdivision in in the

there is sufficient capacity available in the combined wastewater network to enable servicing of the proposed subdivision, and this is confirmed by the wastewater services provider.			Residential – Terraced Housing and Apartment Building zone: **Assessment Criteria** E38.11.2 (1) (ca) the effects on the infrastructure networks required to support the subdivision: E38.12.2 (1) subdivision of a site within a natural hazard area ~~the one per cent annual exceedance probability floodplain~~: E38.12.2 (7) (l) The extent to which the subdivision needs to provide or contribute towards improvements to the adjacent transport network to enable safe and convenient movement of pedestrians, for any application for subdivision associated with a resource consent application for the construction and use of 4 or more dwellings, or where a vacant sites subdivision application proposes the establishment of 4 or more vacant sites in the Residential – Mixed Housing Urban zone. E38.12.2 (7) (m) The extent to which the subdivision needs to provide or contribute towards improvements to the local transport network to enable safe and convenient movement of pedestrians, public transport users and cyclists, for any subdivision within the Residential – Terraced Housing and Apartment Building zone. E38.12.2 (10) subdivision of sites in areas identified on the planning maps as being subject to the Infrastructure – Combined Wastewater Network Control:
Environmental	Detailed analysis of the proposed standards is provided is the relevant qualifying matter s32 reports. The following is a high-level summary as it relates to Chapter E38: Urban Subdivision.		

	Benefits: • It is recognised that the varying level of intensification enabled by Policy 3 and supported by Chapter E38: Subdivision – Urban (Chapter E38 has a generally enabling development framework), has the potential to generate environmental effects on water bodies, exacerbate existing infrastructure capacity constraints and potentially expose people, property and the environment to natural hazards. As such, the proposed package of provisions provides the necessary direction for ensuring development responds appropriately to these qualifying matters where applicable and effectively avoids or manages adverse effects on relevant values. • The infrastructure qualifying matter (Combined Wastewater Network Control) manages the risk of significant adverse effects on the environment and public health as a result of over-development in areas of where there are constraints on the existing combined network capacity. There is a reduced risk of overflows of untreated wastewater from the combined wastewater network to freshwater and coastal water, and onto private and public property, during wet and dry weather. Other changes recognise that subdivision of sites in specific locations may result in adverse effects on the environment and public health due to impacting on the function and capacity of water supply, wastewater and stormwater networks by connecting the site and development on the site to the network. • There are several natural hazards (such as flooding, coastal inundation and coastal erosion) that have been identified as qualifying matters, which already exist in the AUP. While the AUP contains a number of methods to reduce the potential risks associated with natural hazards (for example, zoning, site by site assessment of hazards and stormwater discharge consent requirements to manage flooding risk), recent experience has called into question the adequacy of these tools, particularly given the intensification required by Policy 3 and the impacts of climate change. A strengthened natural hazards risk management framework is proposed to address this issue. • The package of provisions proposed for natural hazards are considered important in achieving sustainable development through mitigating potential adverse environmental effects associated with intensification and building resilience to climate change. • Ensures adequate infrastructure to support safe pedestrian movement and identifies any constraints in the local transport network in supporting the ongoing development and redevelopment of the city. The provisions will ensure residents, neighbours and communities will benefit through the development of high-quality living environments that are well support by active and public modes of transport. The proposed matters of discretion and assessment criteria seek to provide clarity to plan users on the anticipated outcomes (such as safe and convenient pedestrian access and local networks that can support increased densities) while also ensuring the health and safety of people and communities.
	Costs: • It is considered there will be minimal environmental costs as the proposed package of provisions only enables development to the extent it is able to be accommodated without compromising the values associated with relevant qualifying matters
Economic	Benefits: • The proposed provisions provide for long-term economic benefits through ensuring development is only enabled where adequate infrastructure can be

	provided and allows for significant risks from natural hazards on people and property to be better identified and managed. • The changes proposed are anticipated to accommodate growth, enable design solutions and ensures more certainty in consenting outcomes. There is also the benefit of more efficient land use by ensuring the adequacy of infrastructure required to support development is addressed in the design stage. • The scale of up-zoning required by Policy 3 means that works to upgrade infrastructure to cope with expected housing demands are much more complex to plan and execute than under the status quo. Some of this extra growth can be absorbed by spare infrastructure capacity, while current upgrade programmes will address constraints. In other cases the additional growth will bring forward timing of necessary replacements and upgrades. The infrastructure qualifying matter allows the provision of a good level of certainty to infrastructure providers, developers (in terms of infrastructure planning and investment) and the public. • There is a benefit to occupiers, landowners and ratepayers and if risks of combined network and wastewater network overflows are reduced, in terms of the clean-up process and the reduction in contaminated material being sent to landfill.
	Costs: • Infrastructure constraints come with the cost of possible slower housing supply responses in the relevant area, restraining development in some locations until planned or future upgrades are delivered and some displacement of growth pressures to nearby areas. However, the higher order goals of a well-functioning urban area (including the health and safety of residents) and a quality compact urban area support infrastructure-based constraints as significant adverse environmental effects may otherwise be generated that will affect the natural environment and people's health and safety. Moreover, the infrastructure capacity constraints are temporal; they will be reduced and/or removed overtime as infrastructure capacity is upgraded. • The implementation of the proposed approach to natural hazards means that individual sites may not be able to fully realise the development enabled under either the AUP or Policy 3. Development constraints that may arise from the management of natural hazards is outweighed by the potential impact on people, property and the environment.
Social	Benefits: • The proposed provisions ensure adequate capacity and efficiency of infrastructure to support high quality health and safety outcomes. • Houses are not constructed on sites where there is no or inadequate services until those services are available. • The proposed provisions will ensure the values of relevant qualifying matters are protected which will reinforce the sense of place and relationships between those qualifying matters and communities and individuals thereby contributing to social wellbeing.

	• The proposed process for addressing natural hazards reduces the exposure of people, property and the environment to risks arising from development in places identified as being subject to significant risks from natural hazards. • The proposed matters of discretion and assessment criteria relating to safe, efficient and convenient modes of active and public transport requires development to address gaps in provision of adjacent and local transport infrastructure.
	Costs: • There are expected to be negligible social costs as the provisions are in direct response to protecting and managing the effects of development on people, property and the environment.
Cultural	Benefits: N/A
	Costs: N/A
Options less or not as appropriate to achieve the objective	<u>Option 1 – retain status quo:</u> The operative framework does not provide for infrastructure as a qualifying matter, a risk management framework for significant risk from natural hazards or strengthen assessments of accessibility. This is likely to lead to gaps in high quality amenities, health and safety and insufficient control of development effects. This option is also considered to lead to significant adverse effects in terms of the protection and management of values attached to the relevant qualifying matters and there would be insufficient control of development in terms of provisions to ensure a quality level of amenity, health and safety is provided from development. Accordingly, Option 1 is not considered the most appropriate option as it would not achieve the objectives. <u>Option 2 – impose amendments as proposed in Chapter E38:</u> Given the level of intensity enabled by Policy 3, it is considered that the current AUP framework would be insufficient in managing the potential effects of increased density as there is a compromised ability to achieve “quality” outcomes and promote development that responds to the characteristics of qualifying matters. The proposed amendments to Chapter E38 would assist in providing for amenity, health and safety, and providing for qualifying matters. As such, Option 2 is the preferred option as it enables intensification required under Policy 3 while achieving quality living environments, maintaining and enhancing values associated with qualifying matters, and providing for climate change resilience from the increased scale of development.
Opportunities for Economic Growth and Employment	Chapter E38: Urban Subdivision provides an enabling framework when it comes to development and will support the varying level of intensification enabled by Policy 3. The anticipated density increase is likely to generate increased employment and have an effect on economic growth through construction.
Risk of Acting or Not Acting	<u>Risk of Not Acting</u> • The risk of not acting is considered high in terms of the potential for over-intensification of urban areas with limited capacity or efficiency of infrastructure and potential significant adverse effects the environment and the health and safety of people and communities

	• The risk of not acting is that overloading of stormwater/wastewater infrastructure will generate adverse effects on the natural environment such as stormwater impacts and wastewater overflows. These have the potential to directly adversely affect the health and wellbeing of the community. Wastewater and stormwater effects ultimately affect coastal waters and therefore also link to national direction around the importance of coastal environments. • The risk of not acting is that people, property and the environment will be exposed to greater natural hazard risks. • Higher intensity development has the potential to generate significant adverse effects on values associated with relevant qualifying matters which would risk Council not meeting obligations and duties under the RMA (particularly s5, s6, s7 and s31). <u>Risk of Acting</u> • The risk of acting in the form of implementing the proposed provisions is considered low given that they directly address the potential significant adverse effects on people, property and the environment as a result of increased intensification.
Efficiency and Effectiveness	The proposed provisions are effective as they recognise the need to provide for infrastructure to support the increased level of development within Auckland's urban environment and provides a strong policy direction in terms of ensuring that supporting infrastructure is considered at an early stage. The proposed provisions are effective as they provide an improved natural management framework for Auckland and set out an appropriate level of control in terms of addressing significant risks from natural hazards, which addresses a current gap in the AUP. The provisions are efficient in achieving the proposed objectives. The short-term costs associated with providing for infrastructure and addressing natural hazards and the costs of restrained development are reasonable and proportionate to the potential longer term environmental, social and cultural effects that may be generated from the overall benefit to the wider community by ensuring the health and wellbeing of residents is not impacted by development. The cascade of policies, standards, matters of discretion and assessment criteria provide clear direction on how the objectives are anticipated to be achieved. The clarity of direction, particularly for specified qualifying matters, will ensure the provisions are effective in achieving a level of amenity, health and safety to protect the values of relevant qualifying matters. Overall, including the package of provisions is considered to be the most efficient and effective means of preventing or minimising the potential adverse effects on the environment from realising the development enabled under policy 3 and plays an important role in ensuring developments provide a high standard of living that is desirable, attractive and safe for people and communities, thereby supporting Auckland's growing population

5 Development of Plan Change

131. This section provides an overview of the process undertaken to develop the PC78 provisions.

5.3 Methodology

132. PC120 was developed through the Quality Built Environment workstream (formed by planners, urban designers, architects and specialists on specific topics). The key matters relevant to the scope and focus of the workstream were defined as follows:

- To apply the intensification provisions of Schedule 3C and the NPSUD while achieving a higher-quality built environment through the lens of the following outcomes:
    - Outcome 1: Enable at least six storeys on a typical site within walkable catchments and in the Frequent Transit Network corridor intensification areas.
    - Outcome 2: Enable at least ten and fifteen storeys on a typical site within certain walkable catchments.
    - Outcome 3: Ensure good on-site amenity for residents.
    - Outcome 4: Manage dominance and shading effects on the street.
    - Outcome 5: Manage privacy, building dominance and shading effects on adjoining sites.
    - Outcome 6: Respond to climate change.
- Implement policy 3(c) and 3(d) of the NPSUD and make consequential changes related to provisions related to this.
- Incorporate relevant key findings from the s35 Monitoring Report for Residential zones where these do not contradict the Schedule 3C, Clause 4 requirements.

134. An additional consideration for the workstream was to consider the implications of any proposed changes on development yield.

135. In order to rationalise the modelling approach and to evaluate the implications of the proposed standards in terms of achieving Policy 3 of the NPSUD and Schedule 3C, Clause 4, Council determined to identify a ‘typical site’ which would act as the baseline environment.

5.3.1 Identifying a ‘typical site’

136. As set out in the Auckland Council Urban Design Research paper[7] (**Attachment 2**) a methodology was developed, and research undertaken to assist with the definition of a

[7] Auckland Council. *Width of an average of ‘typical’ residential site within walkable catchment in Auckland.* UDU Research, October 2021.

'typical site' within the walkable catchments of Rapid Transit Network (RTN) stations in Auckland. Walkable catchments were chosen for this research given the AUP(OP) already gives effect to Policy 3(d) (being the proposed THAB outside walkable catchments as discussed in paragraph 32 above).

137. This research paper sets out in detail the objectives, methodology, assumptions and limitations, and findings of the report. Key summarised points of note before identifying the findings include:

- 44 walkable catchments, including the eight Metropolitan Centres, were included in this research.
- The research looked at establishing three key attributes, these being site width (at frontage), length (dividing width by area) and area.
- Sites that were analysed were all sites that were zoned residential in the AUP(OP) (SH, MHS, MHU and THAB).
- Sites were excluded for various stated reasons as set out in the research paper.

138. Key findings from the report (focused on mode reporting) were as follows:

- Site Width – Very dominant dimension grouping, with 82% of sites being between 15m and 20m wide at their road frontage.
- Area – More even spread, 38% of sites having an area of 600m^2 and 700m^2 ,22% less than 400m^2 and 24% 1000m^2 +.
- Site Length – Between 40m and 50m site length most common at 42%, with 30-40m accounting for 25% of sites.

139. To assist with the modelling of the effects of the proposed standards, this data was used to identify the following metrics as a typical site:

- 18m wide
- 44.5m long
- Therefore, 801m^2 in area

140. The dimension for site width and length were identified as an approximate mid-point in the clearly most common average for these two dimensions. It was determined to utilise the width and length dimensions as the basis of the typical site, rather than the other site sizes to provide a standard unit of measurement as other alternatives presented too many variables in configuration and site width and length. Additionally, the site areas presented much greater variety / spread and less concentration around a specific dimension in the findings than site length and width. Overall, the use of a typical site assisted in rationalising the modelling to test standards. It should be acknowledged that there is a range of site sizes across Auckland and these sizes will enable different levels of realisable development under the PC120 provisions.

5.3.2 Testing:

141. The operative provisions were tested, to ascertain the ability to achieve at least six, ten and fifteen storeys in identified locations and planned intensification levels beyond walkable catchments. Multiple models were generated to demonstrate effects from various typologies and different site configurations.

142. The following tests were applied to ascertain:

- The degree to which operative provisions achieved and enabled at least six storeys and planned character outside of walkable catchments in specific locations.
- What changes were necessary to achieve at least six, ten and fifteen storeys in walkable catchments and intensification levels while also achieving higher-quality built environment outcomes.
- What changes were necessary to achieve anticipated intensification and the effects of those changes on achieving higher-quality built environment outcomes.

143. Key findings from these tests demonstrated that:

- in the THAB and in certain locations within the identified business zones the operative provisions did not adequately provide for at least six, ten or fifteen storeys, with key constraints being the permitted height thresholds and / or height in relation to boundary controls; and
- applying the operative framework to development of at least six, ten or fifteen storeys, would not adequately achieve the objectives and policies of the RPS relating to higher-quality built environment outcomes.

144. For further information on testing and results, refer to **Appendix 1 –** Terraced Housing and Apartment Buildings and Business Zones Evaluation, **Appendix 2** –Mixed Housing Urban Zone Evaluation, **and Appendix 3** - Well Functioning Urban Environment Outcomes: Targeted Evaluation.

5.3.3 Provision development and selection:

145. Various options for potential standards to address the RPS higher-quality built environment outcomes were identified using national and international case studies, evidence and research; data from consented developments under the AUP(OP); and relevant data from the s35 monitoring report.

146. The options were then modelled testing the effects of different typologies and site sizes (as described above). Testing was also undertaken on how various options collectively impacted development yield in a relevant zone.

147. Options were then selected based on their ability to achieve higher-quality built environment outcomes and overall implications on development yield.

5.3.4 Yield Study Results

148. The analysis contained in **Appendices 1 and 2** provide more detailed discussion of the yield studies from modelling results in MHU and THAB.

149. In summary, the results of the terraced housing capacity testing demonstrate that in all the scenarios cumulatively, the proposed standards see an increase in the plan enabled capacity in the zone from the relevant operative position and exceed the capacity as could have been achieved under PC78 if that had been made operative. This is consistent with giving effect to NPSUD Policy 3(c) and 3(d) enabling at least six storey development in specified locations and enabling densities and heights commensurate to the level of commercial activities and services, and aligns with the AUP RPS and Future Development Strategy.

150. The results of the zone capacity testing demonstrate that the THAB zone standards as amended under PC120 will cumulatively see an increase in the capacity and therefore yield from the relevant operative position that could be achieved under PC78.

151. Within the THAB zone the effect of the proposed standards sees an increase in the yield output in comparison to the operative standards. THAB within walkable catchments gives the most significant increase in yield from operative provisions and exceeds that achievable under PC78. This aligns with the identified intensification objectives and policy 3(c) of the NPS-UD and the legislative directions under Schedule 3C, Clause 4(1)(a).

152. The relative increases in intensification retain the effective transition of built form and scale within the walkable catchment in line with Policy 6 of the NPSUD, whilst also aligning with the zone descriptions within the AUP.

5.4 Qualifying Matter – Built Form Standards in the Residential THAB and relevant business zones for walkable catchments that are identified in RMA Schedule 3C clause 4(1)(b) and (c) areas

153. The Council seeks to make the building height and density requirements of clause 4(1)(b) and (c) of Schedule 3C of the RMA less enabling of development in identified areas within the THAB, and relevant business zones. These standards apply to the extent considered necessary to accommodate the qualifying matter that is present and is proposed in the walkable catchments identified in Schedule 3C clause 4(1)(b) and (c) areas.

154. The Schedule 3C clause 4(1)(b) and (c) walkable catchments for the Maungawhau (Mount Eden), Kingsland, Morningside, Baldwin Avenue and Mount Albert stations are depicted in the proposed planning maps with the methodology to determine the walkable catchments from these stops set out in PC120 Section 32 Evaluation – "*Implementation of Intensification Directions from the RMA (2025) and Policy 3 of the NPS-UD*. These areas comprise a range of zones in the AUP(OP) and under PC120 changes will enable a substantial increase in development potential on sites with changes to zoning and increases in building heights above 6-storeys.

155. The characteristics of the Schedule 3C clause 4(1)(b) and (c) walkable catchment areas comprise a relatively settled pattern of residential and business zones. In residential areas built forms are mixed in density but generally one and two storey forms with some more recent three storey development. There are some isolated exceptions where taller buildings have been constructed including at 2 Finch Street, Morningside (6-storeys) and 845 New North Road, Mount Albert (5 storeys) but these are an exception rather than a prevailing pattern. In business zones there is more diversity, however there are few exceptions[8] of development greater than 4-storeys across the area. The exceptions are often singular development sites however there is a cluster of development at Enfield Street, Mount Eden which includes an area of 4, 5 and 6-storey development and includes the 7-storey 1 Enfield Street development, this likely reflects the maturity of the Mixed Use zone in this area which predates the AUP(OP). Also under construction is 10 Morningside Drive, Morningside where a 12-storey development has been approved. These taller / denser developments are an exception and notably of a lower scale and as a consequence there is a significant step change in the development enabled by Schedule 3C clause 4(1)(b) and (c) to enable 10 and 15-storey development on sites where the predominant built form patterns and characteristics of these areas are comprised of developments of considerably less bulk and scale.

156. With taller bulkier multi-storey residential and mixed use developments, if unchecked, will enable development at heights, closer to site boundaries and along street frontages with high proportions of site coverage that will result in adverse shading and visual dominance, and a reduction in residential and streetscape amenity. In these areas the building height and density of form that is considered inappropriate and would enable built form to be introduced that is incompatible with the amenity and built form anticipated in these walkable catchments. Accordingly a package of controls is considered necessary to manage these effects and enable these building heights and densities of form in a way that manages effects on neighbouring sites and on the wider environment that is responsive to the patterns and characteristics of these walkable catchments.

157. This qualifying matter relates to development standards that apply in the THAB zone and relevant business zones (in Table 14 and Table 15) as follows:

Table 14: THAB Zone standards that modify height and density in clause 4(1)(b) and (c) areas

THAB zone standards that modify the height and density required in the areas identified in clause 4(1)(b) and (c)		
Standard	Height	Density
H6.6.6 Height in relation to boundary	Yes, affects the ability to realise 10 or 15 storeys on a typical site.	Yes, reduces the density of development above 6-storeys that could be achieved when

[8] Selected built examples include 45 Mt Eden Road (5-storeys); 11 Fenton Street (6-storeys); 11 Akepiro Street (6-storeys); 401 New North Road (5-storeys); 435 New North Road (5-storeys); 8 Central Road (4-storeys); 39 Sandringham Road (partially 4-storeys); 2 Western Springs Road; 19 Morning Star Place (partially 5-storeys); 4 Wagener Place (4-storeys).

THAB zone standards that modify the height and density required in the areas identified in clause 4(1)(b) and (c)		
Standard	Height	Density
		compared with the 10 or 15 storey enablement.
H6.6.8A Building setback at upper floors in Walkable Catchments	Yes, affects the ability to realise 10 or 15 storeys on a typical site.	Yes, reduces the density of development above 6-storeys that could be achieved when compared with the 10 or 15 storey enablement.
H6.6.8B Maximum tower dimension	Does not directly affect height.	Yes, reduces the density of development above 6-storeys that could be achieved when compared with the 10 or 15 storey enablement.
H6.6.9 Yards	Does not directly affect height.	Yes, reduces the extent of a site that can be used for development.
H6.6.10 Maximum impervious area	Does not directly affect height.	Yes, reduces the extent of a site that can be used for development.
H6.6.11 Building Coverage	Does not directly affect height.	Yes, reduces the extent of a site that can be used for development.
H6.6.12 Landscaped area	Does not directly affect height.	Yes, reduces the extent of a site that can be used for development.
H6.6.13 Outlook space	Does not directly affect height.	Yes, reduces the extent of a site that can be used for development.
H6.6.14 Daylight	Does not directly affect height.	Yes, reduces the extent of a site that can be used for development.
H6.6.15 Outdoor living space	Does not directly affect height.	Yes, reduces the extent of a site that can be used for development.
H6.6.20 Deep soil area and canopy tree	Does not directly affect height.	Yes, reduces the extent of a site that can be used for development.

THAB zone standards that modify the height and density required in the areas identified in clause 4(1)(b) and (c)		
Standard	Height	Density
H6.6.21. Safety and privacy buffer from private vehicle access and primary pedestrian access	Does not directly affect height.	Yes, reduces the extent of a site that can be used for development.

Table 15: Relevant Business Zones that modify height and density in clause 4(1)(b) and (c) areas

Relevant business zone standards that modify the height and density required in the areas identified in clause 4(1)(b) and (c)		
Standard	Height	Density
H10.6.3A, H11.6.2B, H12.2.2A, H13.6.3A, H15.6.2A Building setback at upper floors for sites in walkable catchments	Yes, affects the ability to realise 10 or 15 storeys on a typical site.	Yes, reduces the density of development above 6-storeys that could be achieved when compared with the 10 or 15 storey enablement.

158. The Council may make the relevant building height or density requirements of clause 4(1)(b) and (c) of Schedule 3C of the RMA and policy 3 of the NPS-UD less enabling of development in relation to an area within any zone in an urban environment, under clause 8(1) of Schedule 3C of the RMA only to the extent necessary to accommodate 1 or more of the following qualifying matters that are present:

    a. a matter listed in section 771(a) to (i) of the RMA;

    b. any other matter that makes higher density, as specified by clause 4(1)(b) or (c) of Schedule 3C of the RMA or policy 3 of the NPSUD inappropriate in an area but only if subclause (4) of clause 8 of Schedule 3C is satisfied.

159. In this case, this qualifying matter is considered an "other" qualifying matter in accordance with Clause 8(1)(b) of Schedule 3C of the RMA, as it is not a matter expressly listed in section 771(a) to (i) of the RMA.

160. Under clause 8(2) of Schedule 3C of the RMA, the evaluation report required under section 32 of the RMA must in relation to a proposed amendment to accommodate a qualifying matter under subclause (1)(a) or (1)(b) of clause 8:

    a. demonstrate why the Council considers:

        i. that the area is subject to a qualifying matter; and

ii. that the qualifying matter is incompatible with the level of development provided by clause 4(1)(b) or (c) or policy 3 for that area; and

b. assess the impact that limiting development capacity, building height, or density (as relevant) will have on the provision of development capacity; and

c. assess the costs and broader impacts of imposing those limits.

161. Under clause 8(4) of Schedule 3C of the RMA, the evaluation report required under section 32 of the RMA must, in relation to a proposed amendment to accommodate a qualifying matter under subclause (1)(b) (an "other" qualifying matter) must also:

a. identify the specific characteristic that makes the level of development specified by clause 4(1)(b) or (c) or policy 3 inappropriate in the area: and

b. justify why that characteristic makes that level of development inappropriate in light of the national significance of urban development and the objectives of the NPSUD; and

c. include a site-specific analysis that—

i. identifies the site to which the matter relates; and

ii. evaluates the specific characteristic on a site-specific basis to determine the geographic area where intensification needs to be compatible with the specific matter; and

iii. evaluates an appropriate range of options to achieve the greatest heights and densities specified by clause 4(1)(b) or (c) or policy 3 while managing the specific characteristics.

162. The overlapping requirements of NPSUD Policy 3, limited to NPSUD Policy 3(c) and 3(d) are considered to have been met by the PC120 zoning and amendments made to the THAB and relevant business zones and have been assessed elsewhere in this section 32 evaluation, and are not discussed further.

5.4.1 Integrated evaluation for qualifying matters

163. For the purposes of PC120, the evaluation of the built form standards as a qualifying matter has been undertaken in an integrated way that combines section 32 and Schedule 3C of the RMA requirements. The report follows the evaluation approach described in the Table 16 below. The preparation of this report has involved the following:

a. Assessment of the AUP(OP) to identify any relevant provisions that apply to this qualifying matter

b. Review of the AUP(OP) Maps to assess the spatial application of this qualifying matter

c. Section 32 options analysis for this qualifying matter and related amendments.

164. The scale and significance of the issues is assessed to be medium.

165. This section 32 / Schedule 3C evaluation report will continue to be refined in response to any consultation feedback provided to the council, and in response to any new information received.

Table 16: Integrated approach for any matter specified in section 77I(a) to (i) that is not currently operative in the AUP and any other matter that makes higher density, as specified

Standard RMA section 32 steps	Evaluation steps of Clause 8 Schedule 3C of RMA
Issue / Define the problem – provide overview / summary providing an analysis of the qualifying matter	Identify whether an area is subject to a qualifying matter and describe the existing qualifying matter.
Identify and discuss objectives / outcomes	Identify relevant RPS / district level objectives and policies. Describe why the Council considers that 1 or more qualifying matters apply to the identified areas, and whether the qualifying matter is incompatible with the level of development provided by clause 4(1)(b) or (c) of Schedule 3C of the RMA or policy 3 of the NPSUD for that area. "Other" QM additional requirement: Justify why that characteristic makes that level of development inappropriate in light of the national significance of urban development and the objectives of the NPSUD.
Identify and screen response options	Consider a range of reasonably practicable options for achieving the objectives including alternative standards or methods for these areas having considered the particular requirements in clause 4(1)(b) and (c) of Schedule 3C of the RMA and/or Policy 3 of the NPS-UD and assess the efficiency and effectiveness of the provisions. "Other" QM additional requirement: undertake analysis that evaluates the characteristic of sites in the walkable catchments identified in clause 4(1)(b) and (c) of Schedule 3C to determine the geographic area where intensification needs to be compatible with the specific matter. To analyse the shared characteristics of the sites in the clause 4(1)(b) and (c) walkable catchments, planning and urban design input considered the values and qualities of these areas and this is relied on when developing the options for the different packages of development standards that are evaluated to a mange the effects on qualifying matters that applies to the areas subject to clause 4(1)(b) or (c).
Collect information on the selected option(s)	Assess the impact that limiting development capacity, building heights or density (as relevant) will have on the provision of development capacity. "Other" QM additional requirement: Site-specific analysis that evaluates an appropriate range of options to achieve the greatest heights and densities specified by clause 4(1)(b) and (c) of Schedule 3C of the RMA or policy 3 of the NPSUD while managing the specific characteristics.

Evaluate options – cost for development capacity	Assess the costs and broader impacts of imposing those limits on development capacity. This has been undertaken on an evaluative basis and has taken into account the overall plan enabled development capacity that PC120 provides.
Evaluate options – environmental, social, economic, cultural benefits and costs	Provide an assessment of the benefits and costs of the options in the light of the new objectives introduced by the NPSUD relating to well-functioning urban environments.
Selected method / approach	Describe how the preferred approach to implementing the qualifying manner is limited to only those modifications to the extent necessary to accommodate the qualifying matter; and how the qualifying matter is applied.
Overall judgement as to the better option (taking into account risks of acting or not acting)	Conclusion as to the implications of the qualifying matter for development capacity to be enabled by NPSUD in the areas where the qualifying matter applies.

5.4.2 Issues

166. The requirement to amend the AUP to enable at least 15-storey development within at least a walkable catchment of the Maungawhau (Mount Eden), Kingsland, and Morningside Stations; and to enable at least 10-storey development within at least a walkable catchment of the Baldwin Avenue and Mount Albert Stations is a considerable shift in the level of development that is already enabled within these walkable catchments. In this context given the level of enablement contained within RMA Schedule 3C Clause 4(1)(b) and (c) this will potentially result in significant adverse effects that are neither consistent with AUP(OP) RPS or the NPSUD.

167. For residential zones within these areas built form is characterised by a mixed density of development as a result of the underlying zoning controls and correspondingly low rise development (predominantly one and two storey forms with some more recent three storey development). For business zones these areas are more varied in built form and use. The business zones in these areas are either centres established along the New North Road corridor that feed into the central area or Business – Mixed Use zone areas that were former industrial areas (brownfield sites) or were reidentified from residential zones through the development of Proposed Auckland Unitary Plan. Given this diversity, a range of built form is evident including one and two storey retail units and also large scale industrial developments. There has been redevelopment of business zones sites in various locations enabling multi-storey mixed use developments that are greater than four storeys.

168. The level of built development enabled in the relevant business zones mean that increased heights and densities signalled in RMA Schedule 3C Clause 4(1)(b) and (c) can be accommodated on sites and given the lower levels of sensitivity within these zones, the extent of the qualifying matters to be applied is restricted to only one standard. The standard proposed is only necessary where the relevant business zone adjoins a lower intensity residential zone, at a walkable catchment boundary. At these interfaces it is considered necessary for built development to respond and the height and density of development is proposed to be reduced at these interfaces which are highly sensitive to overspill effects from taller buildings.

169. In the case of the residential zones the level of development enabled will in some cases be a significant increase in height and bulk that will generate adverse effects on the amenity of the area as they transition from low rise residential areas to contain more intensive building forms. This will detract from the ability for people and communities to provide for their social, economic, and cultural wellbeing; will not be consistent with the achievement of a higher-quality urban environment; and development will be less responsive to the intrinsic qualities and physical characteristics of sites and the wider area. The standards proposed provide a degree of protection of the amenity of adjoining sites that will address the effects of taller buildings on dominance, privacy, access to daylight and sunlight and to the wider area. The built form standards seek to maintain an, albeit intensified, high density residential character, and manage effects on streetscape, water bodies and surface flows of rainwater.

5.4.3 Identify and discuss objectives / outcomes

170. In defining the elements that the qualifying matter is seeking to manage in the RMA Schedule 3C Clause 4(1)(b) and (c) areas the relevant AUP(OP) RPS and zone objectives and policies, along with the purpose statements describe the effects to be managed and the outcomes to be achieved. Table 17 and Table 18 below analyse the relationship between these provisions.

171. The general approach to zoning in the walkable catchments of Maungawhau (Mount Eden), Kingsland, Morningside, Baldwin Avenue and Mount Albert Stations is to retain business zones as per the AUP(OP) and rezone residential land to the THAB zone, unless a qualifying matter applies and in order to manage the effects on that qualifying matter a zoning response is required e.g.: presence of the Special Character overlay. As a consequence the analysis of the provisions has focused on the THAB zone standards which have been modified so as to enable 10 and 15-storeys.

Table 17: Summary analysis of THAB standards identified as a Qualifying Matter and AUP(OP) objectives and policies

THAB Standards	Relevant AUP(OP) RPS Objectives and policies	AUP(OP) Objectives and policies (where relevant the linkage to the adverse effects identified in purpose statements are listed in brackets with reference coding identified in Table 18 below
H6.6.6 Height in relation to boundary H6.6.9 Yards H6.6.10 Maximum impervious area H6.6.11 Building Coverage H6.6.12 Landscaped area H6.6.13 Outlook space H6.6.14 Daylight H6.6.15 Outdoor living space	B2.2.1(1A) A well-functioning urban environment that enables all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future. B2.2.1(1) A well-functioning urban environment with a quality compact urban form that enables all of the following: (a) a higher-quality urban environment; (b) greater productivity and economic growth; (c) better use of existing infrastructure and efficient provision of new infrastructure; (d) good accessibility for all people, including by improved and more efficient public or active transport; B2.3.1(1) A well-functioning urban environment with a quality built environment where subdivision, use and development do all of the following: (a) respond to the intrinsic qualities and physical characteristics of the site and area, including its setting; … (c) contribute to a diverse mix of choice and opportunity for people and communities; (d) maximise resource and infrastructure efficiency; (e) are capable of adapting to changing needs;… B2.3.2(1) Manage the form and design of subdivision, use and development so that it contributes to a well-functioning urban environment and does all of the following: (a) supports the planned future environment, including its shape, landform, outlook, location and relationship to its surroundings, including landscape and heritage; (b) contributes to the safety of the site, street and neighbourhood;…(e) meets the functional, and operational needs of the intended use; B2.4.1(1) Residential intensification contributes to a well-functioning urban environment and supports a quality compact urban form.	H6.2(2) Development is in keeping with the areas planned urban built character of predominantly five, six or seven storey buildings in identified areas, in a variety of forms. H6.2(3) Development provides quality on-site residential amenity for residents and the street. H6.3(2) Require the height, bulk, form and appearance of development and the provision of setbacks and landscaped areas to achieve a high-density urban built character… (links to A, B, C, D, I, K, L) H6.3(3) Encourage development to achieve attractive and safe streets and public open spaces (a) providing for passive surveillance (b) optimising front yard landscaping (c) minimising visual dominance of garage doors. (links to C, K, L, M) H6.3(5) Manage the height and bulk of development to maintain daylight access and a reasonable standard of privacy, and to minimise visual dominance effects to adjoining sites and developments. (links to A, B, D, M, N, O, P) H6.3(6) Require accommodation to be designed to meet the day to day needs of residents by: (a) providing privacy and outlook; and (b) providing access to daylight and sunlight, (c) and providing the amenities necessary for those residents. (links to M, N, O, P) H6.3(8) Restrict the maximum impervious area on a site in order to manage the amount of stormwater runoff generated by a development and ensure that adverse effects on

THAB Standards	Relevant AUP(OP) RPS Objectives and policies	AUP(OP) Objectives and policies (where relevant the linkage to the adverse effects identified in purpose statements are listed in brackets with reference coding identified in Table 18 below
	B2.4.1(1A) Residential intensification is limited in some areas to the extent necessary to give effect to identified qualifying matters. B2.4.1(2) Residential areas are attractive, healthy, safe and have improved resilience to the effects of climate change with quality development that is in keeping with the planned built character of the area. B2.4.1(3) Land within and adjacent to centres and corridors or in close proximity to public transport and social facilities (including open space) or employment opportunities is the primary focus for residential intensification. B2.4.2(7) Manage adverse reverse sensitivity effects from urban intensification on land with existing incompatible activities. B2.4.2(9) Manage built form, design and development to achieve an attractive, healthy and safe environment that is in keeping with the descriptions set out in placed-based plan provisions.	water quality, quantity and amenity values are avoided or mitigated. (links to F, G, H, I)

Table 18: Summary analysis of THAB standards identified as a Qualifying Matter and supporting purpose statements with reference coding referred to in Table 17

THAB Standards	Reference coding added*	Adverse effects addressed in AUP(OP) standard purpose statement (summarised)
H6.6.6 Height in relation to boundary	A.	building height on neighbours (i.e. dominance and shading)
	B.	reduce visual dominance at upper levels.
H6.6.9 Yards	C.	sufficient space for landscaping within the front yard
	D.	maintain residential amenity for adjoining sites
	E.	set back buildings from lakes streams and coastal edge
H6.6.10 Maximum impervious area	F.	manage stormwater runoff generated
	G.	support the functioning water body yards, water quality and ecology
	H.	reinforce building coverage and landscape area standards
	I.	improve site appearance and maintain amenity values

THAB Standards	Reference coding added*	Adverse effects addressed in AUP(OP) standard purpose statement (summarised)
H6.6.11 Building Coverage	J.	manage the extent of buildings consistent with planned urban built character
H6.6.12 Landscaped area	K.	provide for quality living environments
	L.	surround buildings with open space consistent with planned urban built character
H6.6.13 Outlook space	M.	visual privacy between habitable rooms
	N.	manage visual dominance effects in combination with the daylight control
H6.6.14 Daylight	O.	daylight for living areas and bedrooms
	P.	manage visual dominance effects in combination with the outlook control
H6.6.15 Outdoor living space	Q.	provide outdoor living space that is of a functional size and dimension, and has access to sunlight

* Reference coding added, purpose statements are not numbered in the AUP(OP)

5.4.4 Development of options

172. Section 32 of the RMA requires an examination of the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of the RMA.

173. The overall objective (purpose of the proposal) of PC120 is set out in the Overall Evaluation Report and in summary PC120 and among other matters, seeks to implement an amended approach to managing housing growth as a result of no longer incorporating the medium density residential standards (MDRS), while providing for intensification in a way that complies with clauses 4 and 8 of Schedule 3C of the RMA

174. As these built form standards are a response to a qualifying matter that is "any other matter that makes higher density, as specified by clause 4(1)(b) or (c) of Schedule 3C of the RMA or policy 3" inappropriate, a site-specific analysis is required that evaluates an appropriate range of options to achieve the greatest heights and densities specified by clause 4(1)(b) or (c) of Schedule 3C of the RMA or policy 3 of the NPS-UD, while managing the specific characteristics.

175. Planning and urban design input informed the review of the different packages of development standards that are proposed to apply to the areas subject to clause 4(1)(b) or (c). It was observed that options with no built form standards or built form standards that enabled the heights as required in the RMA Schedule 3C clause 4 areas without a degree of moderation on boundaries / on sites would result in a built form outcome that is incompatible with other outcomes in the AUP(OP) RPS. These potential built form outcomes would lead to adverse effects that outweigh the benefits of intensification in these locations. It should be noted that given the variation in site sizes and shapes within these walkable catchment areas that not all sites will be affected in the same way and some sites will be able to accommodate development

that achieves the 10 and 15-storey building heights, whilst complying with the built form standards. The standards however in these instances will regardless reduce the density of development on sites.

176. As a result, three options have been evaluated in the section 32 and Schedule 3C assessment of the Qualifying Matter – Built Form Standards, as follows:

    a. Option 1: No standards for bulk and form

    b. Option 2: Regulate bulk and form by floor area ratio 4:1 for 10-storeys and 5:1 for 15-storeys[9]

    c. Option 3: Regulate bulk and form by height in relation to boundary, maximum tower dimension, set back at upper floors.

177. In the case of Options 2 and 3, it was assumed that standards for yards, maximum impervious area, building coverage, landscaped area, outlook space, daylight, outdoor living space, deep soil area and canopy tree, and safety and privacy buffer from private vehicle access and primary pedestrian access would apply.

5.4.5 Consequences for development capacity

178. The application of the development standards in the areas subject to RMA Schedule 3C clause 4(1)(b) and (c) has the potential to reduce development capacity within these areas that could be enabled. However this needs to be considered in the context PC120 enabling six storeys on sites of any size, and includes THAB zoned areas outside walkable catchments. The Qualifying Matter – Built Form Standards are considered appropriate and recognises the potential spillover effects that tall development can have on adjoining sites.

179. The approach of limiting height and density affects all sites in the areas subject to RMA Schedule 3C clause 4(1)(b) and (c). However as noted above this is in differing ways and the loss of capacity to be enabled is offset when considering the wider intensification response of PC120, which enables greater height and density over a broader land area in response to other walkable catchments, along corridors and other in urban areas.

5.4.6 Evaluation of options

180. To determine the most appropriate method to implement the Qualifying Matter – Built Form Standards, each of the options needs to be evaluated in the context of the objectives and policy 3 of the NPSUD.

[9] These floor area ratio standard metrics were developed to enable 10 and 15-storeys building heights to be achieve on a typical site

Table 19: Evaluation of the options to implement the Qualifying Matter – Built Form Standards

Qualifying Matter	Option 1: No standards for bulk and form	Option 2: Regulate bulk and form by floor area ratio	Option 3: Regulate bulk and form by height in relation to boundary,
Costs			
Cost of applying QM – housing supply / capacity	None – buildings can be built over the entirety of the site and maximise the capacity enabled	Low – more flexibility of built form to enable 10 and 15-storeys on sites. May reduce the development capacity on larger sites by capping the overall level of development enabled when compared with Option 3 which only regulates development at the site edges.	High – reduces the ability to accommodate built development greater than six storeys. Reduces development capacity on smaller sites and at the edge of larger sites. To accommodate a 15 storey building a site would need to be approximately at least 54m in width. To accommodate a 10 storey building a site would need to be approximately at least 36m in width.
Costs: Social	High – unrelieved and continuous built form would reduce access to daylight and sunlight, with impacts on health and amenity.	Moderate – unrelieved and continuous built form would reduce access to daylight and sunlight, with impacts on health and amenity. Mitigated to some extent when compared with Option 1 as floor area ratio will introduce a degree of variation in where development is placed on site to maximise potential.	Low – built form in compliance with the standard would allow reasonable levels of light and air in and around buildings with less impacts on health and amenity.
Costs: Economic (not otherwise covered by housing capacity issues)	High – there would be uncertainty about how neighbouring sites would be developed. Potential for reduced quality would impact on feasibility.	Moderate – greater certainty regarding the level of development enabled on sites. Unrelieved and continuous built form across on sites would still have an effect on quality and could impact on feasibility.	Moderate – higher level of certainty would address public understanding of what can be developed on a site and what that enables.
Cost: Environmental	High – proportions of built form and impervious surfaces and no landscape treatment would cover sites leading to increased stormwater runoff, urban heating effects and no opportunities for	Low – standards regulate effects on the environment providing relief from built form and providing areas on sites to manage stormwater and limit effects of development over sites.	Low – standards regulate effects on the environment providing relief from built form and providing areas on sites to manage stormwater and limit effects of development over sites.

Qualifying Matter	Option 1: No standards for bulk and form	Option 2: Regulate bulk and form by floor area ratio	Option 3: Regulate bulk and form by height in relation to boundary,
	stormwater infiltration and interception and evapotranspiration by vegetation.		
Benefits			
Benefits of applying the QM – social	Minimal – would provide for greater housing choice in locations well served by public transport but given unregulated form would undermine the qualities of places and would not detract from the value placed on these areas by communities.	Improves with higher levels of intensification in places that are appropriate but the built form standards do not provide the same level of certainty as to whether the development can be successfully inserted in the existing urban fabric with less spillover effects on adjoining sites.	Supports higher quality intensification in places that are appropriate with the built form standards ensuring that development can be inserted in the existing urban fabric with less spillover effects on adjoining sites.
Benefits – Economic	Reduces burden on consenting requirements with fewer standards to be complied with. Enables sites to maximised for development.	Provides greater flexibility to achieve an optimal form of development with the floor area ratio enabled.	Provides certainty to developer, residents and consenting staff administering the plan.
Benefits – Environmental	Minimal – allows a number of environmental effects that are not regulated, these will have downstream effects, and effects on neighbouring sites.	Supports – better environmental outcomes than option 1.	Supports – better environmental outcomes than option 1.

5.4.7 Analysis of options

181. The three options have been evaluated in Table 19. Whilst Option 1 will enable the greatest development capacity to be enabled in areas subject to RMA Schedule 3C clause 4(1)(b) and (c) it will be the least effective, leading to development that detracts amenity and environmental performance on sites with built development affecting the areas and adjoining sites in a manner that is unpredictable and will lead to uncertainty for residents and developers alike. Option 2 provides a greater degree of control and reduces a number of environmental effects that Option 1 would introduce but would still allow a level of development that would adversely impact on access to daylight and sunlight, with resultant effects on people and communities' wellbeing including health and amenity. Option 3 is the preferred as it best supports the plan's objectives for a well-functioning urban environment.

5.4.8 Risk of acting or not acting

182. Under RMA Section 32(2)(c), the evaluation considers the risks associated with acting or not acting in the face of uncertain and insufficient information. Whilst some

uncertainty exists given the complexity on how the built form standards apply to land in areas subject to RMA Schedule 3C clause 4(1)(b) and (c) and the resultant level of development that is constrained by these standards, the risk of not acting is considered unacceptable. This is in light of the level of development enabled in the walkable catchments of Maungawhau (Mount Eden), Kingsland, Morningside, Baldwin Avenue and Mount Albert Stations and the effects that this would have on the environment including the loss of sunlight and daylight, space and air around potential buildings and the unrelieved built forms that would be enabled.

183. The preferred approach, in Option 3, to moderate development at site boundaries through a height in relation to boundary standard along with other standards mitigates these risks.

5.4.9 Effectiveness and efficiency

184. Option 3 which moderates development at site boundaries along with standards that restrict the density of development on sites seeks to address the potential development outcome enabled by RMA Schedule 3C Clause 4(1)(b) and (c). Option 3 has been assessed as the most effective and efficient method. It delivers the highest net benefit by supporting a well-functioning urban environment, enables higher quality urban development and provides more certainty for communities and developers.

185. While this option may reduce the development capacity enabled within these walkable catchments this is justified by the improved outcomes and the capacity that is released in other appropriate locations.

5.4.10 Description of how the qualifying matter is to implemented

186. The qualifying matter is implemented in the THAB zone and relevant business zone standards (refer Table 14 and Table 15 above). These have been prepared to manage the potential effects to accommodate the qualifying matter, a number of these standards are in the AUP(OP) or have been proposed to manage the specific effects of taller buildings and to support a well-functioning urban environment and quality compact urban form.

5.4.11 Conclusion on the Qualifying Matter – Built Form Standards

187. The application of the Qualifying Matter – Built Form Standards will not enable the level of development in the locations identified in RMA Schedule 3C Clause 4(1)(b) and (c). The package of built form standards are considered necessary to accommodate the qualifying matter that has been identified in these locations and will ensure that PC120 supports the plan's objectives for a well-functioning urban environment. Importantly the built form standards will ensure that the effects of development is moderated at site boundaries and is restricted over sites so as to ensure spillover and downstream effects can be managed.

188. Although this approach reduces development capacity on some sites, it provides greater certainty, environmental resilience, and for the communities' wellbeing including health and amenity. This approach aligns with the objectives of the NPSUD and the AUP(OP) RPS and THAB zone. In addition not all sites will be affected in the same way and some sites will be able to achieve the 10 and 15-storey building

heights, this includes large parcels, corner sites and where amalgamation is able to be undertaken, these standards will enable a considerable lift in the development enabled, particularly when compared with the AUP(OP).

189. The development standards are limited to accommodate the qualifying matter, and is considered consistent with the purpose of the RMA, the objectives of the NPSUD and is assessed to be the most appropriate method to achieve the intended planning outcomes.

5.5 Overall s32 Residential and Relevant business zones conclusion

190. Overall in the context of the package of intensification enabled in PC120 the outcome is considered acceptable and is consistent with the NPSUD and the contribution to a well-functioning urban environment and the RPS enablement of a higher-quality urban environment (B2.2.1(1)(a)).

5.6 Information Used

160. The Council has commissioned technical advice and assistance, as well as relying on existing evidence and research to assist with setting the plan framework for the proposed chapter provisions. Key documents are listed in Table 14 below.

Table 14: List of relevant background assessments and reports.

Name of document, report, plan	**How did it inform the development of the plan change**
Auckland Council. *S35 Monitoring Report, B2.3 Quality Built Environment of the Auckland Regional Policy Statement. July 2022* (Attachment 1)	This report assessed the AUP(OP) provisions in achieving RPS higher-quality built environment outcomes through a sample of schemes in the THAB, MHU, MHS and MUZ zones. The s35 monitoring report assessed a number of standards and issues, identifying the performance of the operative standards and provisions in delivering planned outcomes and giving effect to RPS QBE outcomes. The findings of the report including the recommendation and identification of areas where desired outcomes were not being achieved or matters addressed has been an important reference for the QBE workstream and the testing and development of proposed standards in giving effect to intensification provisions.
Auckland Council. *Width of an average of 'typical' residential site within walkable catchment in Auckland.* UDU Research, October 2021. (Attachment 2)	This report reviewed and presented information on site dimensions within Auckland to assist with the identification of key features of a typical site within a walkable catchment. This information assisted and formed part of the methodology for modelling of proposed provisions individually and collectively to ascertain environmental outcomes and development yield.

Name of document, report, plan	How did it inform the development of the plan change
Boffa Miskell. *6 Storey Apartment Buildings – Auckland Case Studies.* 2022 (Attachment 3)	This document contains case studies in Auckland to gain an understanding of typical heights for six storey apartment buildings. This was utilised to inform drafting of height related provisions for the plan change. Relevant information in each case study that relates to building elements that comprise total building height are recorded and outlined.
Jasmax. *Building Height Memo.* 2022 (Attachment 4)	The memo outlines the key design and market considerations and requirements which inform floor to floor dimension and overall building heights. This was utilised in developing the height standard.
Following documents which formed part of the Auckland Unitary Plan Independent Hearings: 1. *Statement of Evidence Nicholas Jon Roberts on Behalf of Auckland Council – Planning Residential Zones – 9 September 2015.* 2. *Statement of Rebuttal Evidence of Nicholas Jon Roberts on Behalf of Auckland Council – Planning Residential Zones – 6 October 2015* 3. *Statement of Evidence Graeme Robert McIndoe on Behalf of Auckland Council – Architecture and Urban Design – 9 September 2015.* 4. *Statement of Primary Evidence Trevor Stewart Mackie on Behalf of Auckland Council – Urban Design Planning Height Limits – 27 July 2015.* 5. *Statement of Primary Evidence Claudia Hellberg on Behalf of Auckland Council – Stormwater – 8 September 2015* 6. *Auckland Unitary Plan Independent Hearings Panel. (2016) Report to Auckland Council Hearing topics 059 – 063: Residential zones.*	These statements and reports provide understanding and background to the technical consideration given to provisions within the AUP(OP). These were reviewed and provisions amended as a result of giving effect and incorporating the Schedule 3C of the RMA, and NPS-UD.

6 Conclusion

161. As set out in the preceding sections of this report, the proposed package of provisions are considered to be the most effective and efficient option for achieving the overarching issue being: how to give effect to Schedule 3C of the RMA and Policy 3(c) and 3(d) of the NPSUD while achieving well-functioning urban environment outcomes as directed by Parts 2.2 - 2.5 of the RPS, including providing for a compact urban environment, a higher-quality built environment and building resilience to climate change.

APPENDIX 1 – OPTIONS ANALYSIS PAPER: TERRACE HOUSING AND APARTMENT BUILDINGS AND RELEVANT BUSINESS ZONES

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Attachments

Attachment 1: AUP(OP) Regional Policy Statement and zoning strategy

Attachment 2: Overview of storey / height calculations

Attachment 3: Floor Area Ratios Comparison Table

1.0 Introduction

The purpose of this discussion paper is to support the proposed changes to the Auckland Unitary Plan (Operative in Part) (**AUP(OP)**) as part of the Auckland Housing Planning Instrument (**AHPI**) under Proposed Plan Change 120: Housing Intensification and Resilience (**PC120**). The paper outlines the matters and options considered in the development of the building heights proposed in the Residential – Terrace Housing and Apartment Buildings (**THAB**) zone; Business – Town Centre zone (**Town Centre zone);** Business – Local Centre zone (**Local Centre zone**); Business – Neighbourhood Centre zone (**Neighbourhood Centre zone**); Business Mixed Use zone (**Mixed Use zone**); and, Business – Business Park zone (**Business Park zone**) (collectively **Business Zones**).

In particular, the paper provides an overview of the rationale for why the proposed building heights and related design controls are the most appropriate means of giving effect to the National Policy Statement for Urban Development (**NPSUD**) Policy 3(c) and 3(d) and Schedule 3C, Clause 4 of the Resource Management (Consenting and Other System Changes) Amendment Act 2025 (**Amendment Act**). Where intensification is promoted, integrated standards, both site based and boundary controls, control overall scale and transition, so that proximity to transport nodes and commercial and town centres enable higher density, but with managed edge effects for surrounding lower density zones.

This coordinated approach to design standards is consistent with Auckland's strategic planning objectives contained in the AUP(OP), the Auckland Plan and Future Development Strategy. The established direction seeks to provide for growth through intensification and enabling change whilst managing the quality of the urban business and residential built environment including sunlight, streetscape values and visual amenity within the urban environment.

2.0 Background

2.1 Legislative background

New legislation and the NPSUD require that changes are made to the AUP(OP). These changes have superseded and replace an earlier proposal, Plan Change 78: Intensification to the AUP(OP) (**PC78**), and requires the AHPI to achieve certain requirements, being to:

- Provide at least the same amount of housing capacity as would have been enabled if PC78 were made operative (schedule 3C, clause 4(1)(a)).
- Enable within at least the walkable catchment of Maungawhau, Kingsland and Morningside Railway Stations, building heights of at least 15-storeys (schedule 3C, clause 4(1)(b)).
- Enable within at least the walkable catchment of Baldwin Avenue and Mount Albert Railway Stations, building heights of at least 10-storeys (schedule 3C, clause 4(1)(ba)).
- Give effect to NPSUD Policy 3, (schedule 3C, clause 4(1)(c)) noting that decisions have been made on the Business – City Centre zone and are imminent on the Business – Metropolitan Centre zone and therefore the remaining scope of the AHPI to give effect to the remaining requirements of NPSUD Policy 3 to:

- NPSUD Policy 3(c): *building heights of at least 6 storeys within at least a walkable catchment of the following: (i) existing and planned rapid transit stops (ii) the edge of city centre zones (iii) the edge of metropolitan centre zones; and*
- NPSUD Policy 3(d): *within and adjacent to neighbourhood centre zones, local centre zones, and town centre zones (or equivalent), building heights and densities of urban form commensurate with the level of commercial activity and community services.*

2.2 Regional Policy Statement

The AUP(OP) Regional Policy Statement (**RPS**) now explicitly integrates the NPSUD concept of a well-functioning urban environment, along with urban climate resilience and qualifying matters, by amendments to Chapter B (notably B2). These changes became operative in December 2024.

The RPS, following the amendments made under Plan Change 80 integrates the two concepts of quality compact urban form and well-functioning urban environment with one another. The relationship between the two concepts is that a quality compact urban form is a sub-set of a well-functioning urban environment. In this context a well-functioning urban environment seeks to achieve a quality, compact urban form. It directs growth to centres, corridors, and places with good public transport and services, so people can access jobs, education, and daily needs efficiently. It emphasises making best use of existing infrastructure, supporting the centres hierarchy, improving transport choice, and reducing adverse environmental effects, including through climate-responsive development. It also anticipates sufficient development capacity and housing choice in the right locations, generally within the Rural Urban Boundary, while safeguarding rural values and the regions scarce physical resource productive land.

A quality built environment is about how development fits its place and serves people over time. The RPS directs that subdivision, use, and development respond to site and area characteristics; reinforce the planned form of centres and corridors; deliver choice and opportunity; and maximise efficient use of land, energy, and infrastructure. It seeks adaptable, resilient buildings and neighbourhoods with strong relationships to streets and public spaces, good sunlight and daylight outcomes, safe and accessible environments, and design that manages effects such as visual dominance and privacy—so the built form is both context-responsive and durable.

2.3 PC78 Submissions

The topic of height within the AUP(OP) has recently been the subject matter of PC78 which was notified and submissions received. These provide some insights into how height could be managed across the City. Those submissions fall into a number of broad themes listed below:

Requests for Increased Height Across Zones

Submitters seek significant increases in building heights across the Metropolitan, Town, Local, and Neighbourhood Centre zones—ranging from 6 to 12 storeys, with some requesting metrics up to 100m or even unlimited height.

Height Amendments Within Walkable Catchments

Numerous submissions seek for greater building height within walkable catchments of rapid transit stops and centres, with proposals seeking: increases between 8 storeys and up to 18 storeys; request the complete removal or to raise the proposed height metrics to provide 6 storeys. Submitters highlight in response to the 6 storey height, the feasibility of development and the role that increased building heights have to improve feasibility.

Protection of Special Character Areas (SCAs)

Several submitters request amendments to height provisions to better safeguard adjoining or adjacent SCAs, citing concerns about character erosion and urban form transitions.

Height Enablement Outside NPS-UD Catchments

Submissions propose enabling 6 to 8 storey developments outside walkable catchments, challenging the current scope of NPS-UD Policy 3 and seeking broader intensification.

Transitional Considerations

Submitters call for transition zones between high- and low-intensity areas, a review of Plan Change 78's height strategy, and reconsideration of the Rural Urban Boundary to ensure feasibility, flexibility, and alignment with national policy.

Table 1 below is list of selected and summarised submission points that request changes to the building heights proposed in PC78.

Table 1: Selection of submission summaries received on the height topic for PC78

• Amend provisions to provide greater recognition of qualifying matters.
• Increase building height including to:
  – 100m
  – Unlimited
• Increase and/or amend height metric to enable six storey building heights including:
  – 22m
  – 24m
  – Remove height metric
• Amend height provisions to enable greater height within a walkable catchment including:
  – At least 8 storeys
  – At least 10 storeys
  – At least 12 storeys
	• Increase building height of Ponsonby Local Centre zone.
	• Amend height provisions to provide greater protection of adjoining and/or adjacent Special Character Areas.
	• Amend height provisions to enable at least 6 storeys outside a walkable catchment.
	• Introduce a transition zone and/or area between higher and lower intensity zones.
	• Review Plan Change 78 Business zones height strategy including further analysis of height feasibility and flexibility, and giving appropriate effect to NPS-UD policies.

3.0 What building heights are necessary to give effect to the NPSUD, the amendment act and the RPS?

The NPS-UD requires in Policy 3(c) locations at least 6 storeys and in Policy 3(d) locations building heights and densities of urban form commensurate with the level of commercial activity and community services.

Clause 4, Schedule 3C of the RMA Amendment Act requires the AHPI to provide:

- the same housing capacity as the notified PC78 (if made operative);
- 15 storeys in the walkable catchments of the Maungawhau (Mount Eden), Kingsland, and Morningside Stations; and
- 10 storeys in the walkable catchments of the Baldwin Avenue and Mount Albert Stations.

The RPS references a number of policy direction around residential growth, intensification and urban functionality. A selection of relevant extracts are provided below:

Objective Extracts

B2.4. Residential growth

B2.4.1. Objectives

(1) Residential intensification contributes to a well-functioning urban environment and supports a quality compact urban form.

(1A) Residential intensification is limited in some areas to the extent necessary to give effect to identified qualifying matters.

(2) Residential areas are attractive, healthy, safe and have improved resilience to the effects of climate change with quality development that is in keeping with the planned built character of the area.

(3) Land within and adjacent to centres and corridors or in close proximity to public transport and social facilities (including open space) or employment opportunities is the primary focus for residential intensification.

Policy extracts

Residential intensification

(1) Provide a range of residential zones that enable different housing types and intensity that are appropriate to the residential character of the area.

(2) Enable higher residential intensities in areas closest to centres, the public transport network, large social facilities, education facilities, tertiary education facilities,

healthcare facilities and existing or proposed open space, which contribute to a well-functioning urban environment.

(3) Provide for medium residential intensities in area that are within moderate walking distance to centres, public transport, social facilities and open space.

3.1 Providing for 6 storey buildings:

3.1.1 Height standard

PPC120 proposes a height standard of 22m to enable 6 storeys. This metric was proposed following review of design and market considerations and consented case studies and modelling of a range of options on typical and real-world sites. Design considerations included a review of building regulations, other common service allowances, roof form and topography.

In summary, the review identified the following key design elements contributing to building heights:

- Building regulation natural light, impact and airborne sound, ventilation and internal moisture impact requirements for space below floor and in ceilings.
- At ground floor within ceiling voids allowance is often made for additional services from mains switch boards, fibre and data boards. A void of 1m would not be unexpected between the ground level ceiling and first floor level.
- Typical ground floor-to-floor heights ranged from 3m to 5.1m (for commercial use) and were on average 3.5m.
- Typical above ground floor-to-floor heights were on average 3.3m;
- Rooftop allowances ranged from 0.5 to 1.5m.
- Sloping topography is common in Tāmaki Makaurau, with it not being unusual to have a 1.5m fall across a typical site.

Five possible height standards were modelled with a range of ground floor, above ground floor-to-floor and rooftop allowances in the THAB and Business – Mixed Use Zone. The heights modelled included 19m, 19m occupiable + 2m for roof form, 21m, 22m and 22.5m.

Key outputs from the modelling identified:

- Anything less than a 3m floor-to-floor induces additional cost for innovative construction methods and bespoke solutions in the design process and construction.
- In residential modelling work generally assumes a 4m ground floor-to-floor height, additional levels at 3.1 floor-to-floor height as well as a 1.5m roof build up in order to ensure good design outcomes.
- A 2.5m tolerance is considered appropriate for ground level and roof-form due to the topography of Tāmaki Makaurau / Auckland.

Based on these outputs, the notified PC78 proposed 21m for 6 storeys. However, the analysis contained in the s32 attachments deduced that 22m was a more appropriate and realistic metric in order to achieve 6 storeys on a greater range of sites.

The AHPI therefore proposes 22m as the most appropriate metric to achieve 6 storey buildings, with modelling assuming a 4m ground floor-to-floor height, 3.1 floor-to-floor heights and a tolerance of 2.5m to account for ground level and roof-form. **Figure 1** below provides an example of possible floor-to-floor configurations based on this approach to achieve a 22m, 6 storey building.

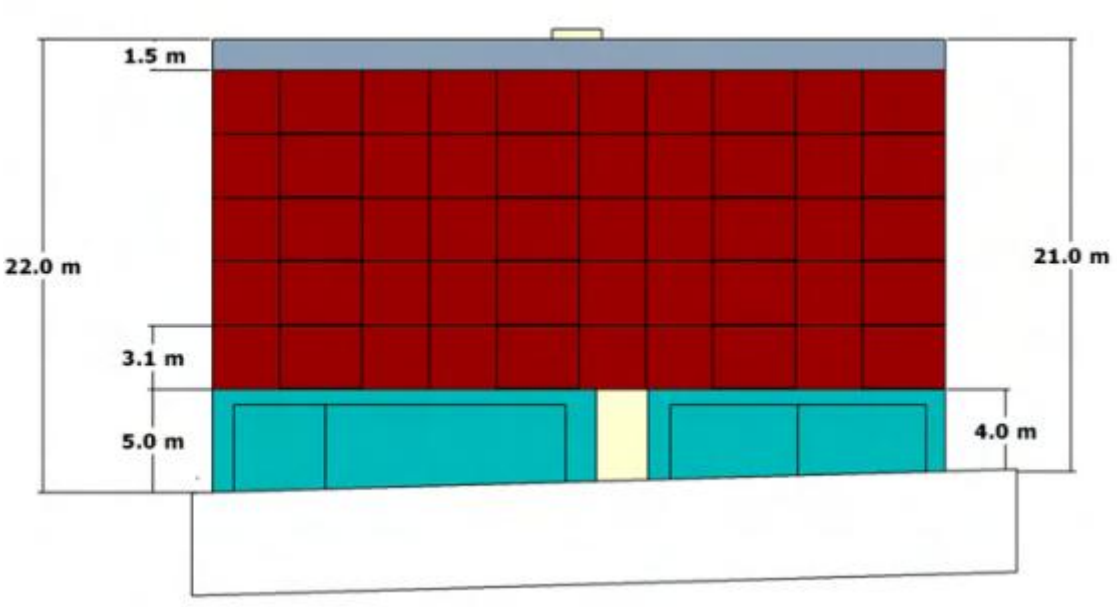


Figure 1: Possible floor to floor configurations for a building measuring 22m in height.

The THAB zone has been increased in all locations to at least 6-storeys, unless a qualifying matter applies, regardless of whether inside or outside a Walkable Catchment, with other locations increased to 10 or 15 storeys depending on the factors evident with Walkable Catchment. Business zones in Walkable Catchments have similarly been amended, and in selected locations (under NPSUD Policy 3(d)) to match the increase in THAB outside Walkable Catchments.

3.1.2 Height in relation to boundary standard

Height in relation to boundary standards involve the application of a recession plane limiting built form at upper levels manages the degree of building dominance and overall offers a greater level of breathing space between buildings whilst enabling sunlight within and beyond the site.

Variations in the application of the standard can be set to protect daylight, outlook and privacy at side/rear boundaries, manage dominance at sensitive interfaces, and reduce abrupt transitions—without being the primary control on overall height or capacity.

In the Tāmaki Makaurau / Auckland context, moderated approaches is necessary to consider for application within the walkable catchments where greater intensity is promoted, and then outside walkable catchments and at sensitive interfaces to less-intense zones.

The following options in Table 2 reflect the possible variations in application of the HIRB standard and are further supported by a range of architectural models in relation to the enablement of 6 storey buildings. Further evaluation is applied later in this document to the set

of standards of most relevance to 10 and 15 storey buildings where the additional height conveys additional and potentially more significant effects.

Table 2: Options Evaluation of HIRB for 6 Storey Buildings

Option	Description	Benefits	Costs	Figure reference where relevant
A - 6	3 m + 45° HIRB (operative AUP)	• Lower height, less change amenity • Low levels of shading and visual dominance to adjoining sites	• Negatively impact on potential yield in strategic locations. Does not enable 6-storeys on a typical site.	Refer Figure 2
B - 6	8 m + 60° Alternative HIRB (operative AUP (requires RD consent)	• Better edge amenity •	• May convey built forms that are irregular and inefficient. • May negatively impact on potential yield in strategic locations. Does not enable 6-storeys on a typical site.	Refer Figure 3
C - 6	No HIRB; height, boundary setback and outlook only	• Maximises yield • Maximisation of strategic located intensification (transit oriented development) • Enables 6-storeys	• Rear effects on neighbouring sites • Negative sunlight and overshadowing effects • More design discretion to manage contextual effects – uncertainty	–
D - 6	20 m + 60° HIRB from all boundaries	• Simple to administer • Predictable • Enables 6-storeys	• Locates bulk mid-site not consistent with locating development to street front, could encourage car parking and vehicle access along street fronts	Refer Figure 4
E - 6	20 m + 60° HIRB for the first 21.5m, 8m + 60° beyond 21.5 m and rear on sites.	• Better street edge amenity • Improved sunlight and overshadowing outcomes • Enables 6-storeys to the street front	• Step in roof form increases complexity. • May convey built forms that are irregular and inefficient. • May negatively impact on potential yield in strategic locations, as only the front part of the site can be developed up to 6-storeys	Refer Figure 5

Selected Images from modelling investigations:

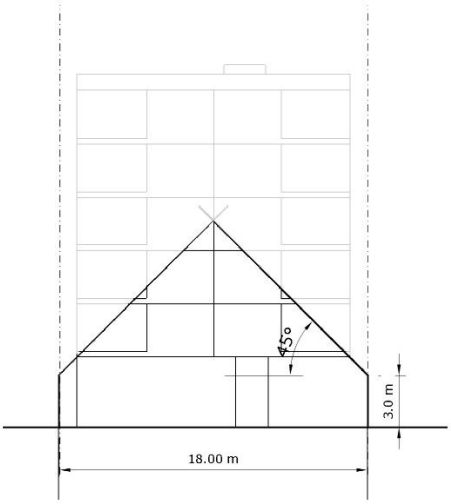


Figure 2: A-6 street elevation view of 6-storey apartment building model with 3m +45° height in relation to boundary recession plane on a typical site width of 18m (shows area of built form enabled (black) against backdrop of 6 storey building form (grey)).

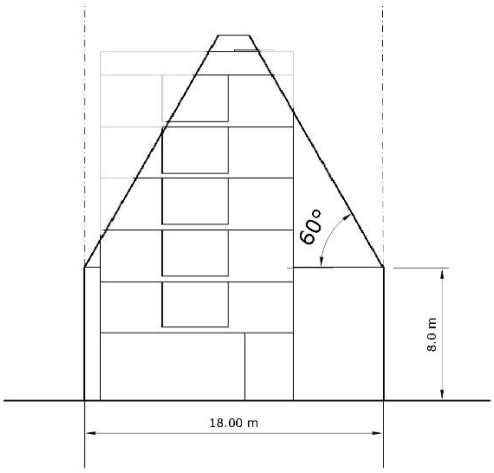


Figure 3: B-6 street elevation view of 6-storey apartment building model with 8m +60° height in relation to boundary recession plane on a typical site width of 18m (shows area of built form enabled (black) against backdrop of 6 storey building form (grey)).

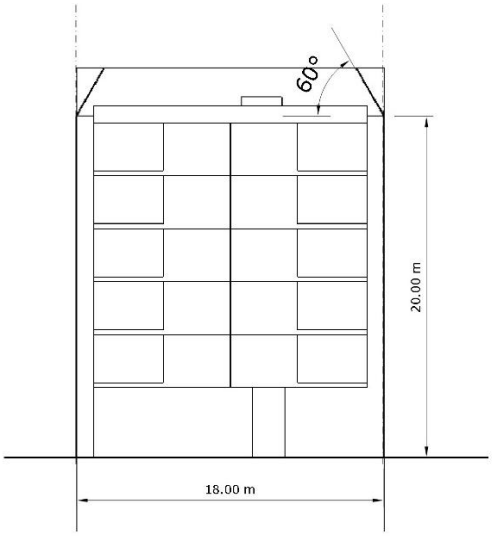


Figure 4 D-6 street elevation view of 6-storey apartment building model complying with 20m +60° height in relation to boundary recession plane on a typical site width of 18m.

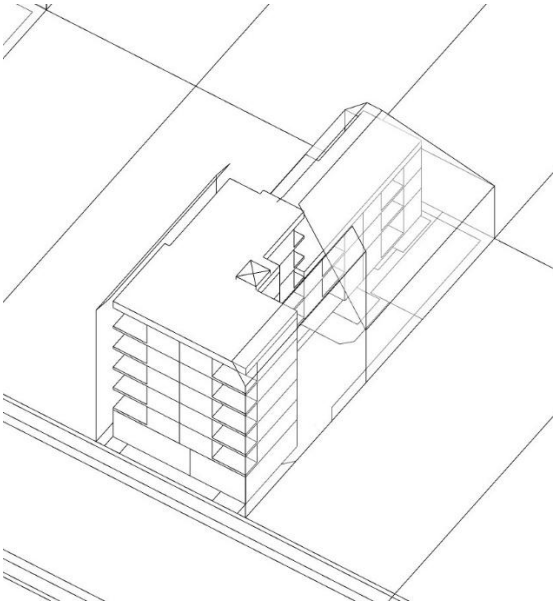


Figure 5: E-6 axonometric view of 6-storey apartment building model complying with 20 m + 60° HIRB for the first 21.5m, 8m + 60° beyond 21.5 m and rear on sites on a typical site width of 18m.

Key Considerations

- Maximising yield in strategic locations such as walkable catchments requires moderation to account for building mass, possible dominance, and sunlight access effects.

- Application of HIRB is a viable standard for managing effects for 6-storey buildings however, building height beyond 6 storeys in these strategic locations may also require other methods to either complement or replace the HIRB methods to deliver better amenity, and more yield.

- Overshadowing improvements are achieved by the application of stepped HIRB at rear yards 20m + 60°,for first 21.5m, moderated to 8m + 60°. Preserving amenity to the rear of sites and quality, albeit be it taller development to street fronts.

- Development yield is improved with larger and corner / double-frontage sites. Singles sites will achieve less.

- To align with NPS-UD Policy 3 and the RMA Schedule 3C capacity requirements, in walkable catchments the recession plane should start from at least 20m to enable at least 6-storeys, with 8m + 60° used to maintain residential amenity beyond 21.5m site depth.

- HIRB should not apply to road/open space boundaries; street-side form is managed by street-wall and step-backs. At business-to-residential interfaces, a step-back performance path may be used where overshadowing equals or improves on a calibrated plane.

Proposed Methods

The following methods (in Table 3) are considered to offer the appropriate blend of intensification in the strategic locations whilst moderating the built environment in transition and sensitive interfaces.

Table 3: Preferred Methods for 6 Storey Buildings

Context	Adjoining boundary	Vertical height	Recession plan Angle	Depth / trigger
Inside and outside walkable catchments	Side boundaries (≤ 21.5 m from frontage)	20 m	60°	Front 21.5 m
	Side & rear (> 21.5 m and rear sites)	8 m	60°	Beyond 21.5 m; rear sites
Outside walkable catchments where adjoining lower intensity residential zones or small open spaces	Adjoining Mixed Housing Suburban	2.5 m	45°	—
	Adjoining small Open Space (<2000 m²)	2.5 m	45°	—
	Adjoining Mixed Housing Urban	2.5 m	45°	—

The Table 4 provides a high-level evaluation of the proposed methods against key legislative criteria.

Table 4: Evaluation against Legislative Criteria

Criterion	Test	Preferred Option ☑/◑/☒/☐	Notes
Schedule 3C cl4(1)(a)	At least PC78 capacity	☑	The methods will contributed greater plan enabled capacity than PC78 in THAB and contributes to the requirements under the Act.
Schedule 3C cl4(1)(b)/(ba)	15/10 storey stations enabled	☐	Not applicable – not applied in 15/10 storey legislated locations
NPS-UD Policy 3(c)/(d)	≥6 storeys & centre-consistent	☑	This method complements the height standard as part of an integrated suite of standards to promote well designed intensification in strategic locations
QMs – extent necessary	Mapped, targeted, proportional	☑	The method contains a range of techniques to minimise the potential effects of the built environment upon sensitive areas and interfaces. Where necessary a QM could reduce height where the values require it.
s32(1)(b)	Efficient & effective	☑	The HIRB method is well established. The moderated methods, including methods at transition and sensitive interfaces will further contribute to the design quality and wellbeing outcomes for communities. The method concentrates capacity in walkable catchments; signals step-downs outside walkable catchments and at sensitive edges.

			The method supports efficient infrastructure use,

3.2 Providing for 10 and 15 storey buildings:

3.2.1 Height standard

PC120 proposes 34.5m as the height standard for 10 storey buildings and 50m as the height standard for 15 storeys.

This applies the same proposed formula outlined above for 6 storey buildings with a 4m ground floor-to-floor height, 3.1 floor-to-floor heights and a tolerance of 2.5m to account for ground level and roof-form. **Appendix 2** provides an overview of storey / height calculations based on this approach.

The AUP(OP) zones provides for a range of building heights extending from unlimited (up to the Sunlight Admission Controls) in parts of the City Centre zone, 72.5m in the Metropolitan Centre zone, between 48.5m and 9m in the City Centre zone, 18m in the Local Centre and Mixed Use zones, 16m in the Terrace Housing and Apartment Buildings zone and 13m in the Neighbourhood Centre zone.

In considering the feedback from PC78 submissions opportunities for additional height were investigated further for consideration in the PC120. Opportunities for more intensive forms were identified from the sample provided that would step up in terms of the AUP(OP) heights from the adjusted base height in a walkable catchment of 22m (6-storeys). Numerically these step ups comprise about 1.5 times the underlying height with rounding. This is set out in Table 5 below. This additional height would provide, at least in terms of the well-established hierarchy of centres, building heights that are anticipated in the AUP RPS, a consistent city form and reinforce that hierarchy through the additional height enabled.

Table 5: Calculation of intermediary building heights stepping up from the THAB zone to the Metropolitan Centre zone

LOCATION	MULTIPLIER	HEIGHT (REFER ROUNDING METHOD IN APPENDIX 2)	ROUNDED HEIGHT	CONVERSION TO STOREYS
THAB OUTSIDE A WALKABLE CATCHMENT	-	-	**16m** (AUP(OP) THAB zone height)	5-storeys
IN WALKABLE CATCHMENT	1.5 x 16m	24m	**22m**	6-storeys
	1.5 x 22m	33m	**34.5m**	10-storeys
	1.5 x 34.5m	49.5m	**50m**	15-storeys
	1.5 x 50m	75m	**72.5m** (AUP(OP) Metropolitan Centre zone height)	circa 22-storeys (Depending on construction)

It should be acknowledged that the areas subject to additional height through PC120 will take to time to redevelop and change and it is likely that development will be sporadic over the lifetime of the AUP. The consequence being that redevelopment of sites up to the scale anticipated in the plan are likely to be gradual and may comprise standalone or clusters for periods of time. This transition will moderate the effects of change over time for areas, and means that standards and design assessment matters need to manage the effects of development on adjoining sites. The outcomes need to recognise that adjoining sites may not ever be developed to the full intensity of the height enabled on it, or at least for some time.

3.2.2 Options considered in the Residential – Terraced Housing and Apartment Building zone

Two key mechanisms were explored in relation to most effective means of delivering 10 and 15-storey buildings while achieving quality built environment outcomes including:

- Height in relation to boundary standards
- Floor area ratio standards

In each instance, the mechanisms are considered most effective in delivering on all outcomes when paired with a tailored set of standards. A summary table (Table 6) below provides an overview of the primary package options considered in the development of height for 10 and 15 storey buildings in the Residential – Terraced Housing and Apartment Buildings Zone for PC120.

Table 6: Overview of options for THAB zone for 10 and 15-storey buildings

Key mechanism	Critical accompanying standards	
Height in relation to boundary	Building setbacks	for greater than 22m height, 6m from front, side, rear
	Building setbacks from lower intensity zones	18m setback from side and rear where greater than 22m
	Maximum tower dimension	38m where above 22m height
Floor area ratio	No height in relation to boundary in walkable catchments (10 and 15 storeys)	
	Building setbacks	for greater than 22m height, 3m from side, rear and 6m from front
	Building setbacks from lower intensity zones	18m setback from side and rear where greater than 22m
	Yards	Max 3m front yard

The following sections provide further analysis on these options and the various configurations that were considered.

3.2.2.1 Floor area ratios

In the Auckland context, pairing FAR with upper-level step-backs (H6.6.8A), interface set-backs (H6.6.8B), with a maximum of 3m street setback provides a degree of effects management in relation to street proportion and neighbour outcomes, but avoids the yield suppression that can occur when HIRB envelope rules alone are used to manage both capacity and amenity. Building coverage is required to be set at level which is complementary to FAR realisation. This approach supports the RPS B2 quality compact form and B2.3 quality built environment by concentrating development in areas well served by public transport while achieving a higher quality built environment that maintains sunlight and daylight access, space around buildings and outlook from habitable rooms. Through front yard controls streetscape character and interfaces is maintained in keeping with a high density residential outcome.

As a single quantitative cap, FAR reduces duplication of standards and makes trade-offs explicit in development applications. Applications can show how their allocated GFA is distributed to meet H6.6.8A and H6.6.8B and other standards (outlook and privacy). This improves efficiency under s32(1)(b) in terms of fewer conflicting controls, and therefore fewer bespoke dispensations. Critically, FAR is scalable: 4:1 in 10-storey areas and 5:1 in 15-storey areas can be assessed in future monitoring and could be refined with the need to review all standards that impact on built form.

Recent FAR testing indicates that 4:1 (10-storey areas) and 5:1 (15-storey areas) align with the calibrated envelopes. Similarly, applying lower FARs risk under realisation of yield, once upper-level step-backs controls are applied in P3(d) locations.

Provided at **Appendix 3** is a snapshot of differing FAR application for a set of site sizes.

Indicative performance from the studies:

- 801 m² @ 10 storeys — FAR ≈ 3.5–4.7; mean ≈ 3.9
- 801 m² @ 15 storeys — FAR ≈ 3.5–5.0; mean ≈ 4.6
- 1,600 m² @ 10 storeys — FAR ≈ 3.5–4.5; mean ≈ 4.1
- 1,600 m² @ 15 storeys — FAR ≈ 4.5–7.0; mean ≈ 5.5

However, as demonstrated in modelling, even when used in conjunction with a package of standards, using FAR tools within residential zones maximises capacity to an extent more aligned with City Centre outcomes. In particular, shadowing effects are likely to extend beyond the boundary of adjacent sites, and over multiple sites. There is also a lack of transition down to lower intensity zones. These outcomes are not as anticipated under the RPS. The FAR approach risks a high-degree of uncertainty for plan users in terms of the planned urban built character and associated built form outcomes anticipated in the Residential – Terraced Housing and Apartment Buildings zone.

3.2.2.2 Height in relation to boundary standard / Siting and Design Standards

Careful calibration of height and other design standards can effectively moderate boundary effects and visual dominance without over-regulating overall building form and achieve the benefits of density sought in strategic locations. At 10 and 15 storeys, HIRB, setbacks provide a level of protection in terms of building separation and daylight and moderate dominance at side and rear edges. Other standards can further enhance management, such as upper-floor step-backs above 22 m (H6.6.8A) and maximum tower dimensions.

A maximum tower dimension (e.g., 32 to 38 m above 22m) is a targeted way to constrain bulky slabs at taller levels, improving sky-view, daylight access, wind conditions, and the encourage a perceived slenderness of 15-storey forms. The control is simple to administer and reads directly on plans/elevations, giving decision-makers high confidence in upper-level bulk management.

Used indiscriminately, a rigid tower-dimension cap can penalise smaller or irregular lots, force awkward plan shapes, or duplicate outcomes already achieved by upper floor step-backs and interface step-backs, hence 38m is considered sufficient to accommodate at least four apartments per floor plus two access cores.

An integrated package of design standards can reduce the risk that any single standard carries too much weight and anchors outcomes in clear urban design objectives for a zone that offers the potential for greatest density, height and scale of development of all the residential zones:

- workable floorplates near transit hubs, town centres and commercial nodes
- consideration of sunlight and sky-view to streets
- moderated interfaces to lower-intensity residential zones.

Such an approach can align with the RPS direction for a quality compact form and quality-built environment and the NPSUD, while keeping sufficient flexibility for varied sites whilst being responsive to the issues raised through PC78 submissions and achieving yield requirements of RMA Schedule 3C.

Ten storeys

The following options (in Table 7) reflect the possible variations in application of the HIRB standards, FARs and targeted setback standards for buildings of 10 storeys and are further supported by a range of architectural models. The Table 4 provides a high-level evaluation of the proposed methods against key legislative criteria.

Table 7: Options Evaluation of Relevant Design Standards for 10 Storey Buildings

Option	Description	Benefits	Costs	Figure reference where relevant
A-10	No HIRB with 6m set back from all boundaries at 22m above ground level	• Provides simple development envelope • 6 m set-back improves high level effects of building on street.	• Higher risk of side/rear dominance. • Development may set full building back 6m from street front enabling carparking along the street front. • More reliance on design to manage interfaces. • On narrow sites will enable 10-storeys	Refer Figure 6 and Figure 7

Option	Description	Benefits	Costs	Figure reference where relevant
B-10	20 m + 60° HIRB for the first 21.5m, 8m + 60° beyond 21.5 m and rear on sites.	• Better street edge amenity • Preserves mid-block mass • Improved sunlight and overshadowing outcomes	• Step in roof form increases complexity. • May convey built forms that are irregular and inefficient. • Negatively impact on potential yield in strategic locations, as only the front part of the site can be developed up to 6-storeys not 10-storeys.	Refer Figure 8
C-10	20 m + 60° HIRB on side and rear boundaries	• Predictable • Easy to assess	• Bulk located more centrally centre of site. • Limits overall yield on typical site i.e.: 10-storeys can't be achieved.	Refer Figure 9
D-10	FAR 4:1	• More flexibility; clear street edge	• No step down at interface to lower intensity zones. • Urban form is less residential and more like city centre. • Will have extended effects beyond the adjoining site and compromises well-functioning urban environment outcomes on these sites. • Additional standards necessary to manage built form effects.	Refer figure 10

Selected Images from modelling investigations:

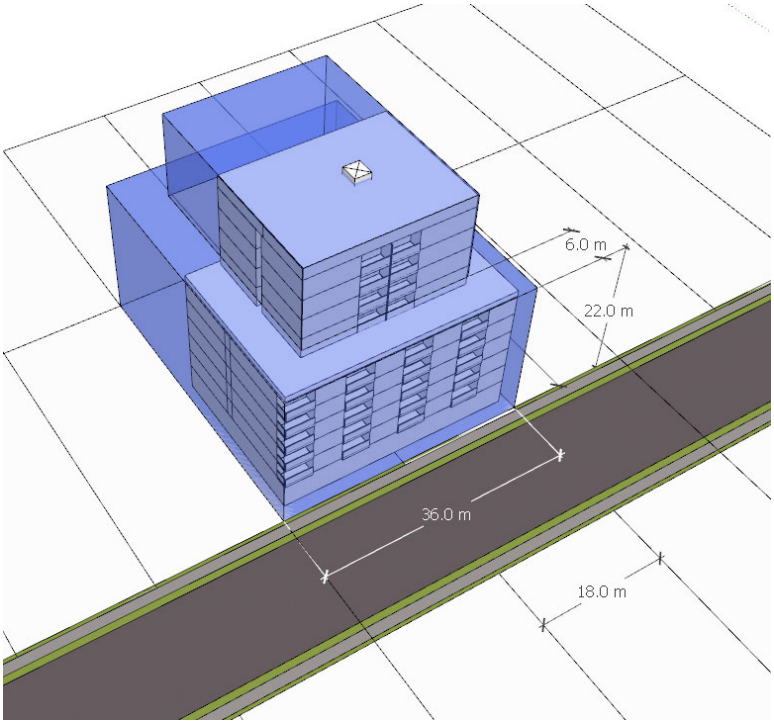


Figure 6: A-10 axonometric view of 10-storey apartment building model with no HIRB with 6m set back from all boundaries at 22m above ground level (on two typical sites).

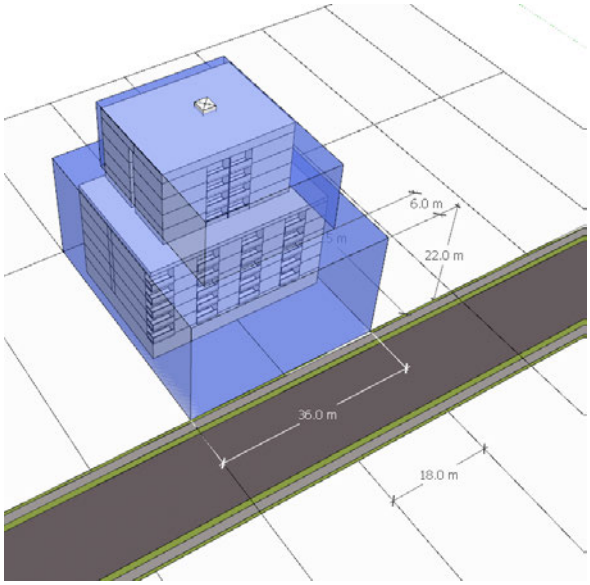


Figure 7: A-10 (alternative) axonometric view of 10-storey apartment building model with no HIRB with 6m set back from all boundaries at 22m above ground level. No rear HIRB or max front yard set back allows building to be set to back interrupting street front / allows carparking in front yard (on two typical sites).

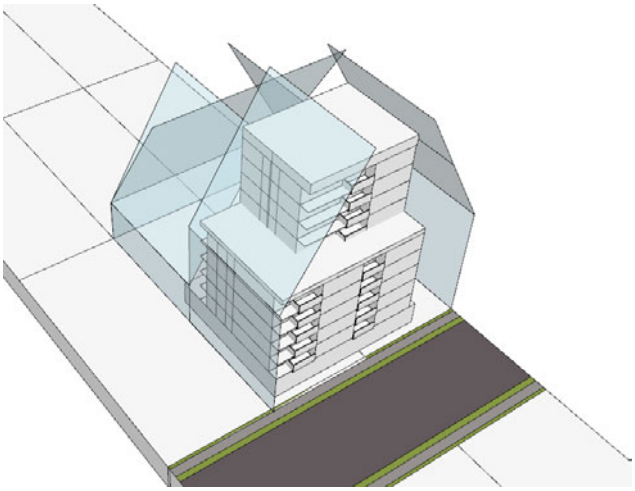


Figure 8: B-10 axonometric view of 10-storey apartment building model with 20 m + 60° HIRB for the first 21.5m, 8m + 60° beyond 21.5 m and rear on sites (on two typical sites).

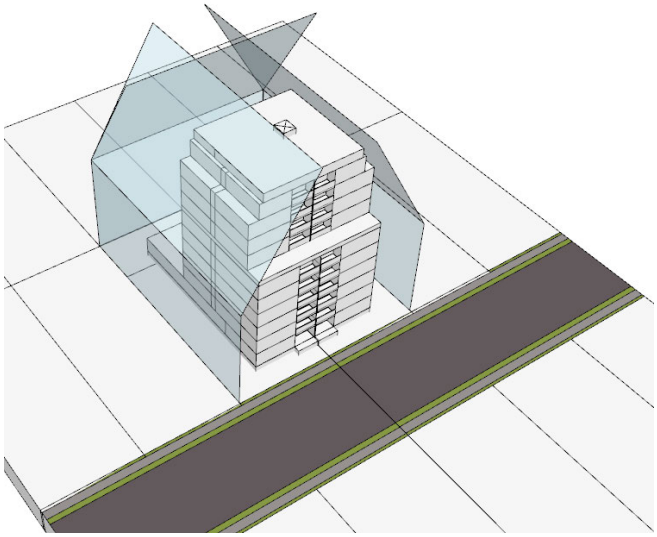


Figure 9: C-10 axonometric view of 10-storey apartment building model with 20 m + 60° HIRB on side and rear boundaries (on two typical sites).

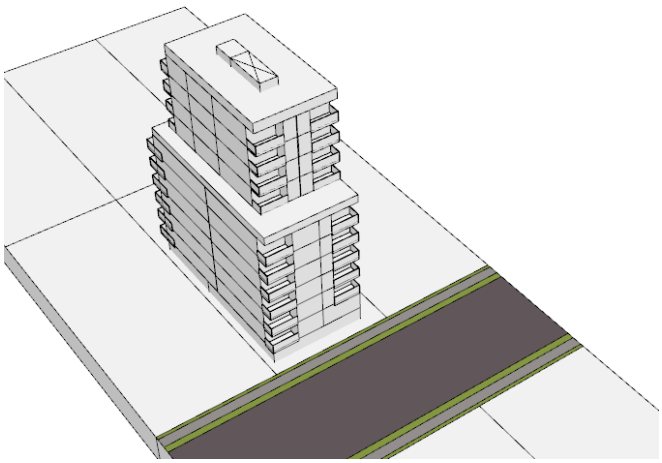


Figure 10: D-10 axonometric view of 10-storey apartment building model with FAR 4:1 (on one typical site).

Key Considerations

- Enablement of additional building height of 10 storeys conveys the need for diversified methods to maximise yield whilst managing dominance, shadowing and visual and character effects
- 10 or 15 storeys may often not be achievable on typical sites and many sites could not be counted toward capacity modelling without amalgamation.
- Realising maximum capacity on all sites does not provide for rationale transitioning between lower intensity zones.
- HIRB along rear and side boundaries provides a simple and trusted tool for implementation by plan users and a high-degree of certainty around the ability to manage potential adverse effects.
- Blanket upper-level controls — 6 m setbacks from all boundaries above six storeys, a 38 m maximum tower dimension above six storeys, and an 18 m interface separation to lower-intensity residential — are relevant to managing adverse effects to the street and adjacent properties and achieving a built form consistent with the Residential - Terrace Housing and Apartment Buildings Zone.
- Implementation: 3 m maximum street setback is important to ensure development is located toward street fronts (in the FAR scenario) and cannot be located to the rear of the site allowing front yards to be used for car parking or accessways except only in assessed exceptions.
- The package of controls provides clarity on anticipated built form outcomes of the zone.

The preferred approach therefore a 20m+60^{o} HIRB control along side and rear boundaries and targets effects through H6.6.8A/8B upper-floor setbacks and a maximum 6 m street setback, with tower dimension / separation applied only above 22 m.

This preserves capacity in Policy 3 locations where sites are large enough, while improving street sunlight/sky-view and moderating neighbour effects at sensitive interfaces.

Proposed Methods

Package	Components	Why preferred?
C10 plus additional built form controls (preferred)	20 m + 60° HIRB on side and rear boundaries + H6.6.8A + H6.6.8B (at sensitive edges) + H6.6.8C; above 22 m setback 6m from side, front and rear; 18m from sensitive edges; max 3m front yard set back setback; and max 38m plan dimension above 22m.	Balances capacity with street sunlight/sky-view and neighbour amenity; clear and legible controls.

Fifteen storeys

Enabling further height requires consideration of suitable methods to manage the potential bulk, dominance and shadowing / sunlight effects.

The following options (in Table 8) reflect the possible variation in application of the HIRB standard for buildings of 15 storeys developing this from the options considered for 10 storeys and are further supported by a range of architectural models.

Table 8: Options Evaluation of Relevant Design Standards for 10 Storey Buildings

Option	Description	Benefits	Costs	Figure reference where relevant
A-15	No HIRB no FAR	• Provides simple development envelope	• No step down at interface to lower intensity zones. • Urban form is less residential and more city centre. • Will have extended effects beyond the adjoining site and compromises well-functioning urban environment outcomes on these sites. • Additional standards necessary to manage built form effects.	Refer Figure 11
B-15	20 m + 60° HIRB for the first 21.5m, 8m + 60° beyond 21.5 m and rear on sites.	• Better street edge amenity • Preserves mid-block mass • Improved sunlight and overshadowing outcomes	• Step in roof form increases complexity. • May convey built forms that are irregular and inefficient. • Negatively impact on potential yield in strategic locations, as only the front part of the site can be developed up to 6-storeys not 15-storeys	Refer Figure 5 (which shows only 6-storeys can comply with this standard)
C-15	20 m + 60° HIRB on side and rear boundaries	• Predictable • Easy to assess	• Bulk located more centrally centre of site. • Limits overall yield on typical site i.e.: 15-storeys can't be achieved	Refer Figure 12

Option	Description	Benefits	Costs	Figure reference where relevant
D-15	FAR 5:1	• More flexibility; clear street edge	• No step down at interface to lower intensity zones. • Urban form is less residential and more city centre • Will have extended effects beyond the adjoining site and compromises well-functioning urban environment outcomes on these sites. • Additional standards necessary to manage built form effects.	Refer Figure 13

Selected Images from modelling investigations:

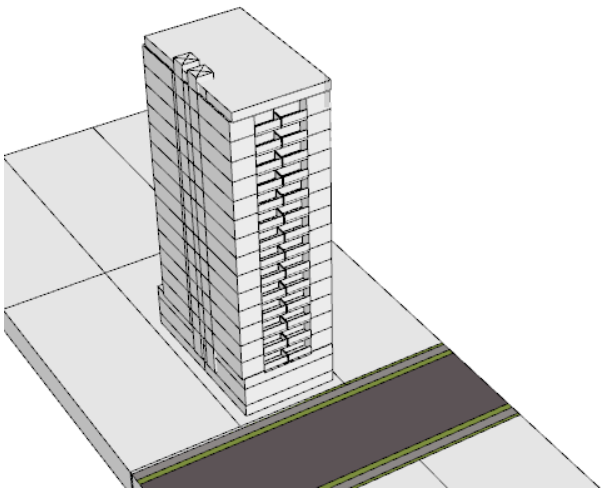


Figure 11: A-15 axonometric view of 15-storey apartment building model with no HIRB and no FAR (on one typical site).

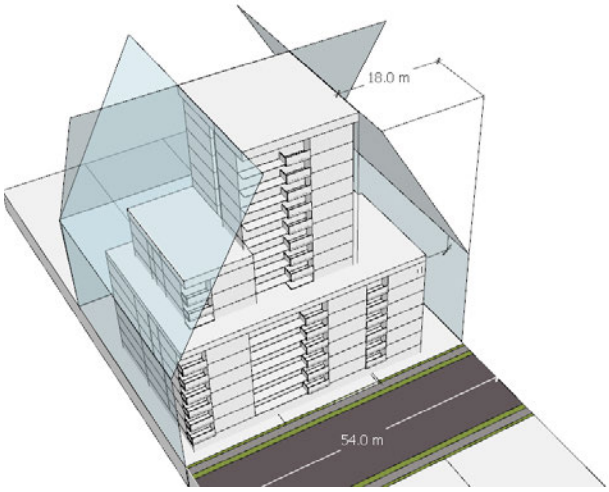


Figure 12: C-15 axonometric view of 15-storey apartment building model with 20 m + 60° HIRB on side and rear boundaries (on three typical sites).

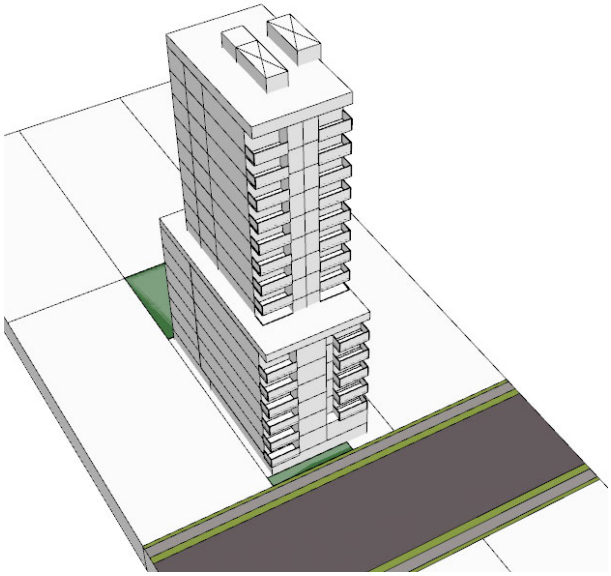


Figure 13: D-15 axonometric view of 15-storey apartment building model with FAR 5:1 (on one typical site).

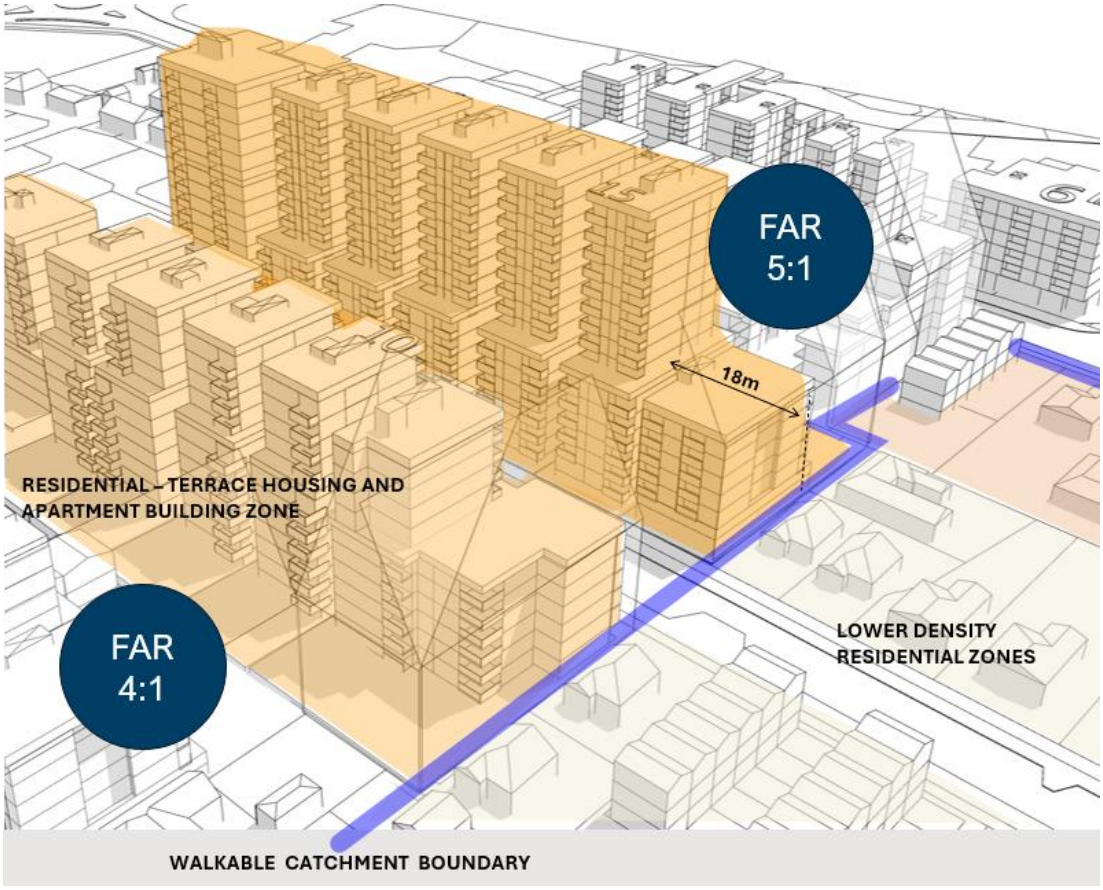


Figure 14 (above): model prepared depicting theoretical scenario of 6, 10 and 15 storeys. Includes: No HIRB standard for 15-storey buildings FAR of 5:1 No HIRB standard 10-storey buildings FAR of 4:1; The 18m upper floor set-back for parts of buildings above 22m where site is located at the walkable catchment edge adjoining a lower density residential zone; Minimum set back above 22m of 6m from the front boundary and 3m from side boundaries.

Key Considerations

- The potential realisation of 10 and 15 storeys is sensitive to site amalgamation.
- The HIRB of 20m+60° combined with a package of controls provides a high degree of certainty in terms of delivering anticipated built form outcomes appropriate to the residential zone and remains consistent with the transition in heights down from centres as anticipated in the wider AUP RPS objectives.
- The blanket upper-level controls remain applicable to 15 storey development in effectively managing adverse effects to the street and adjacent properties.

Proposed Methods

Package	Components	Why preferred
C-15 plus additional built form controls (preferred)	20 m + 60° HIRB at side and rear boundaries + H6.6.8A + H6.6.8B (at sensitive edges) + H6.6.8C; above 22 m setback 6m from front, rear and side;18m from sensitive edges;	Improves street sunlight and skyline at taller scales; protects sensitive interfaces; supports slender tower form

Key considerations Outside Walkable Catchments and sensitive interfaces (10 and 15 storeys)

The application of the HIRB is usually targeted for relatively low-rise houses and has the potential to over-constrain apartment sites, suppressing feasible development mass and pushing bulk into awkward forms. Stronger application of the HIRB at sensitive interfaces, including lower density environments is considered to represent an effective management approach outside of walkable catchments. Lifting the beyond 21.5m and rear site HIRB vertical height 8 m focuses protection on the first 2–3 levels, after the 6-storey street shielding elevations, where effects are most felt, while keeping viable floorplates above. On this basis, the following standards are considered viable to manage the possible dominance and shadowing effects outside of walkable catchments.

- Retain 2.5 m + 45° at Single House / MHS / Open Space boundaries.
- H6.6.8A does not need apply outside WCs; manage upper levels at these edges via HIRB and resource consent assessment matters if needed.

However, these as options within walkable catchments were considered to constrain development to unacceptable levels and were not applied.

Summary

The following table (Table 9) summarises the responsiveness of the preferred methods of siting and design standards for 10 and 15 storey buildings against the key legislative and section 32 considerations.

Table 9: Evaluation against legislative criteria of 10 and 15 storey responsiveness

Criterion	Test	10 storeys (C-10 plus additional built form controls	15 storeys (C-15 plus additional built form controls)	Comments
Sch 3C cl4(1)(a)	At least PC78 capacity	☑	☑	Step-backs protect streets yet keep mid-block yield Increases yield whilst providing bespoke solutions to achieve RPS outcomes
Sch 3C cl4(1)(b)/(ba)	**15/10-storey stations** enabled	☑	☑	Packages retain feasible height at stations and other strategic locations

Criterion	Test	10 storeys (C-10 plus additional built form controls	15 storeys (C-15 plus additional built form controls)	Comments
				Amalgamation often required to achieve maximum height
NPS-UD P3(c)/(d)	≥ 6 storeys & centre-consistent	☑	☑	WC calibration aligns with centres/transit / strategic locations
QMs – extent necessary	Mapped, targeted, proportional	☑	☑	Stronger controls only at sensitive interfaces High degree of certainty for plan users on anticipated planned built form outcomes
s32(1)(b)	Efficient & effective	☑	☑	targeted upper-level tools; high-degree of certainty on outcomes

3.3 Changes to the Town Centre zone, Local Centre zone, Neighbourhood Centre zone, Mixed Use zone and Business Park zone

As set out in sections 3.1.1 and 3.2.1 changes are proposed in the Business zones to enable 6, 10 and 15 storeys at the metrics provided for. This has been evaluated on the basis that a uniform assessment of design and market considerations and consented case studies for both multi-storey residential buildings and mixed use buildings. These amended standards are considered to be sufficient to provide the necessary building heights as directed by NPSUD Policy 3(c) and 3(d) and Schedule 3C of the Amendment Act.

Within the business zones the HIRB for sites adjoining residential, special purpose and open space zones has been consequentially amended to support and respond to the amendments made to the HIRB within these zones. These changes ensure the effective transition in scale between residential and business zones in design and amenity terms. In giving effect to the intensification provisions the building set back at upper floors has been introduced consistent with the reasons and changes to THAB requiring parts of buildings above 22m where site is located at the walkable catchment edge adjoining a lower density residential zone to be set back at least 18m. Whilst other options were considered to manage the effects at the interface such as the operative standards these were considered to unacceptably constrain development. The standard preferred will ensure the bulk of buildings is set off from the interface given the

scale, bulk, visual dominance, shading and loss of sunlight access that 10 and 15 storey development would have on the development enabled in lower intensity residential zones.

Other standards (Maximum tower dimension and tower separation, Outlook space) have also been amended to include different requirements dependent on the heights enabled within a walkable catchment reflecting and enabling the differing scales of development within these locations. Maximum tower dimension and tower separation have been amended from the AUP(OP) standards so that in walkable catchments they apply above 10-storeys consistent with the proposed amendments to building set back at upper floors from the frontage, and better enable taller buildings provide for enhanced densities of urban form.

3.4 Housing capacity and providing commensurate heights and densities:

PPC120 proposes a package of integrated intensification amendments to give effect to Policy 3 and Schedule 3C, including:

- Proposed additional walkable catchments (enabling 6 storey buildings in more locations than PC78);
- Proposed amendments to the THAB standard zone height to enable 6 storeys across the whole zone (inside and outside of walkable catchments), and Business zones in Walkable Catchments, and in selected locations (NPSUD Policy 3(d) to match the increase in THAB outside Walkable Catchments;
- Rezone additional land around key centres and transit corridors to THAB (enabling 6 storey buildings in more locations);
- Provide for 10 and 15 storey buildings around additional rapid transit stops (in addition to those identified in the amendment act);
- Proposed amendments to the MHU height in relation to boundary standard to enable a greater number of sites to achieve the standard zone height (11m or 3 storey buildings); and
- Rezone land from MHS to MHU in certain locations.

The 6-storey band secures the NPSUD baseline and supports a consistent apartment typology in a range of appropriate contexts. The 10 and 15-storey areas are the capacity drivers in Policy 3(c) and 3(d) locations, locating and intensifying yield where access and services are highest. With an upper-level step-back above 22 m, the envelopes allow efficient plates at lower levels and controlled modulation at height.

4.0 Conclusion

In conclusion, PC120 proposes a package of amendments as a means to give effect to the Policy 3 of the NPSUD and Clause 4, Schedule 3C of the Amendment Act including:

- Enabling 22m for 6 storey buildings, 34.5m for 10 storeys and 50m for 15 storey buildings; providing for those 10 and 15-storey buildings in walkable catchments and in the locations identified in the Amendment Act.
- Other walkable catchments (enabling 6 storey buildings in more locations than PC78); and other amendments to the THAB standard zone height to enable 6 storeys across the whole zone (inside and outside of walkable catchments);

The metrics proposed to achieve identified storeys has been developed through case study research and modelling and are considered necessary to also give effect to quality built environment outcomes of the RPS.

To that end, height and relation to boundary controls are also proposed as one mechanism to assist in managing effects of 6 storey buildings and achieving quality built environments.

Whereas 10 or 15 storey buildings located across entire extent of identified walkable catchments where factors are met will enable taller development over a more dispersed area within walkable catchment, the allocation has been undertaken on an analysis of the characteristics of that walkable catchment in terms of levels of:

- strategic importance and significant transport investment;
- accessibility including access to the rapid transit network;
- the proximity to a centre, the role and function of that centre, and the concentration of amenities within it; and,
- residential demand relative to other locations.

In areas where these factors are most evident, up to 15 storeys is enabled, with 10 storeys enabled where the factors are high. While the ability to achieve height is remains likely to be constrained to larger sites, this approach provides the greatest flexibility in terms of where development may occur within a walkable catchment, while still aligning with RPS outcomes.

The proposed rezoning of additional land to THAB zone aligns with legislative directions for growth of the NPSUD and the RPS, with those areas with high accessibility being rezoned to THAB.

The proposal to enable 6 storeys across the whole THAB zone and amend the MHU height in relation to boundary rule combined with additional rezoning to better enable 3 storey buildings across a greater land area all contribute to giving effect to Policy 3 and Clause 4(1)(a).

Overall, it is considered that the package of amendments proposed in the AHPI will give effect to the NPSUD and the Amendment Act.

Attachment 1: AUP(OP) Regional Policy Statement and zone height strategy

AUP(OP) ZONE		RELEVANT AUP(OP) RPS HEIGHT / INTENSITY PROVISIONS	RELEVANT AUP(OP) ZONE HEIGHT / INTENSITY PROVISIONS	RELEVANT EXTRACT FROM ZONE DESCRIPTION	AUP(OP) ZONE HEIGHT STANDARD[1]
Business zones	City Centre	(B2.5.2(1)) **city centre, metropolitan and town centres**, and enable retail activities on identified growth corridors, to **provide the primary focus** for Auckland's commercial growth (B2.5.2(2)(b))…greatest mix, **concentration and density of activities in the city centre** (B2.2.2(6)(a)) Identify **a hierarchy of centres that** supports a quality compact urban form: at a regional level through the **city centre, metropolitan centres and town centres which function** as commercial, cultural and social **focal points for the region or sub-regions**.	H8 – H12.2 (4) **Business activity is distributed in** locations, and is of **a scale and form**, that: (a) provides for the community's social and economic needs; (b) improves community access to goods, services, community facilities and opportunities for social interaction; and (c) manages adverse effects on the environment, including effects on infrastructure and residential amenity.; and (d) accommodates qualifying matters. H8 – H12.2(5) **A network of centres** that provides: (a) a framework and context to the functioning of the urban area and its transport network, recognising: (i) the **regional role and function of the city centre, metropolitan centres and town centres as** commercial, cultural and social **focal points** for the region, sub-regions and local areas; and (ii) **local centres and neighbourhood centres in their role to provide** for a range of convenience activities to support and serve as **focal points for their local communities**. H8 – H12.3(1) Reinforce the function of the **city centre, metropolitan centres and town centres as the primary location** for commercial activity, according to their role **in the hierarchy of centres.**	'…enables building heights and forms which maximise the benefits of intensification and reflect that the city centre sits at the top of the centres' hierarchy'	In the Special Height Area building height only constrained by Sunlight Admission Controls, Height Control Planes otherwise: 72.5m, 35m, 30m, 20m, 16m
	Metropolitan Centre			'…second only to the city centre in overall scale and intensity and act as focal points for community interaction and commercial growth and development and contain hubs serving high frequency transport.'	Zone standard = 72.5m
	Town Centre			'…typically located on main arterial roads, which provide good public transport access' 'There is a range of possible building heights depending on the context… The height opportunities within the centres will facilitate increased intensification, including office and residential activities at upper floors.'	Between 48.5m and 9m
	Local Centre	(B2.2.2(6)(b)) Identify **a hierarchy of centres** that supports a quality compact urban form: at a local level **through local and neighbourhood centres that provide** for a range of activities to support and serve **as focal points for their local communities**.		'…generally located in areas of good public transport. '…primarily provides for the local convenience needs of surrounding residential areas…'	Zone standard = 18m
	Neighbourhood Centre zone			'…applies to single corner stores or small shopping strips located in residential neighbourhoods. They provide residents and passers-by with frequent retail and commercial service needs.'	Zone standard = 13m
	Mixed Use			'…located around centres and along corridors served by public transport. It acts as a transition area, in terms of scale and activity, between residential areas and the [City Centre, Metropolitan and Town Centre zones]. It also applies to areas where there is a need for a compatible mix of residential and employment activities.' 'There is a range of possible building heights depending on the context. Provisions typically enable heights up to four storeys. Greater height may be enabled in areas close to the city centre, metroolitan centres and larger town centres.'	Zone standard = 18m

[1] There is a range of other AUP(OP) methods that impact on building height (which may reduce or increase height), including height variation controls overlays, and precincts

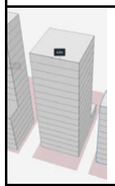
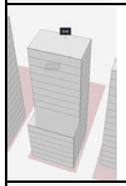
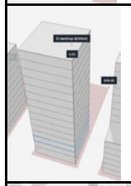
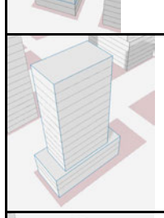
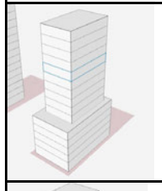
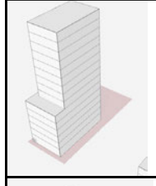
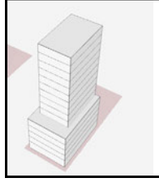
AUP(OP) ZONE		RELEVANT AUP(OP) RPS HEIGHT / INTENSITY PROVISIONS	RELEVANT AUP(OP) ZONE HEIGHT / INTENSITY PROVISIONS	RELEVANT EXTRACT FROM ZONE DESCRIPTION	AUP(OP) ZONE HEIGHT STANDARD[1]
Residential zones	Terrace Housing and Apartment Buildings Zone	(B2.4.1(1)) Residential intensification contributes to a well-functioning urban environment and supports a quality compact urban form. (B2.4.1(1A)) Residential intensification is limited in some areas to the extent necessary to give effect to identified qualifying matters. (B2.4.1(3)) Land within and adjacent to centres and corridors or in close proximity to public transport and social facilities (including open space) or employment opportunities **is the primary focus for residential intensification**. (B2.4.2(2)) **Enable higher residential intensities** in areas closest to centres, the public transport network, large social facilities, education facilities, tertiary education facilities, healthcare facilities and existing or proposed open space, which contribute to a well-functioning urban environment. (B2.4.2(3)) **Provide for medium residential intensities** in area that are within moderate walking distance to centres, public transport, social facilities and open space. (B2.4.2(4)) **Provide for lower residential intensity** in areas: (a) that are not close to centres and public transport; (b) that are subject to high environmental constraints; (c) where there are natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage and special character; (d) where there is a suburban area with an existing neighbourhood character; and (e) where there are other qualifying matters listed in Chapter A that justify that limitation.	(H5.2(1)) Land near the Business – Metropolitan Centre Zone and the Business – Town Centre Zone, high-density residential areas and close to the public transport network is efficiently **used for higher density residential living** and to provide urban living that increases housing capacity and choice and access to public transport. (H6.2(1)) Land adjacent to centres and near the public transport network is efficiently used to provide **high-density urban living** that increases housing capacity and choice and access to centres and public transport. (H6.2(2)) Development is in keeping with the areas planned **urban built character of predominantly five, six or seven storey buildings** in identified areas, in a variety of forms. (H5.2(2)) Development is in keeping with the neighbourhood's planned **urban built character of predominantly three-storey buildings**, in a variety of forms and surrounded by open space. (H4.2(2)) Development is **in keeping with** the neighbourhood's planned **suburban built character of predominantly two storey buildings,** in a variety of forms (attached and detached) (H3.2(1)) Development **maintains and is in keeping with the amenity values of established residential neighbourhoods** including those based on special character informed by the past, spacious sites with some large trees, a coastal setting or other factors such as established neighbourhood character. (H3.2(2)) Development is **in keeping with the neighbourhood's existing or planned suburban built character** of predominantly one to two storeys buildings.	"…is a high-intensity zone enabling a greater intensity of development than previously provided for. This zone provides for urban residential living in the form of terrace housing and apartments. The zone is predominantly located around metropolitan, town and local centres and the public transport network to support the highest levels of intensification." "The zone provides for the greatest density, height and scale of development of all the residential zones. Buildings are enabled up to five, six or seven storeys in identified Height Variation Control areas, depending on the scale of the adjoining centre, to achieve a transition in height from the centre to lower scale residential zones. This form of development will, over time, result in a change from a suburban to urban built character with a high degree of visual change."	Zone standard = 16m
	Mixed Housing Urban zone			"…a reasonably high-intensity zone enabling a greater intensity of development than previously provided for." "Over time, the appearance of neighbourhoods within this zone will change, with development typically up to three storeys in a variety of sizes and forms, including detached dwellings, terrace housing and low-rise apartments."	Zone standard = 11m + 1m for roof
	Mixed Housing Suburban zone			"…most widespread residential zone covering many established suburbs and some greenfields areas. Much of the existing development in the zone is characterised by one or two storey, mainly standalone buildings, set back from site boundaries with landscaped gardens." "The zone enables intensification, while retaining a suburban built character. Development within the zone will generally be two storey detached and attached housing in a variety of types and sizes to provide housing choice."	Zone standard = 8m + 1m for roof
	Single House			"…is to maintain and enhance the amenity values of established residential neighbourhoods in number of locations." "To support the purpose of the zone, multi-unit development is not anticipated,…"	Zone standard = 8m + 1m for roof

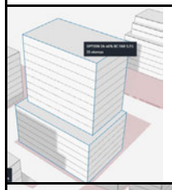
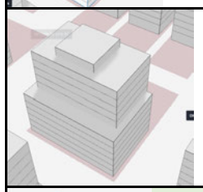
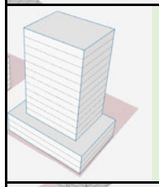
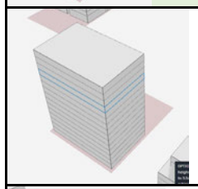
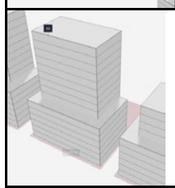
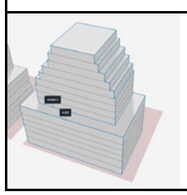
Attachment 2: Overview of storey / height calculations

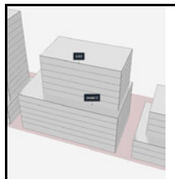
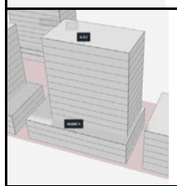
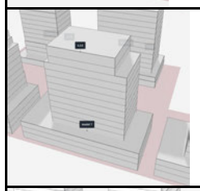
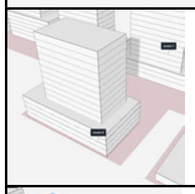
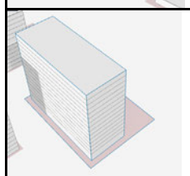
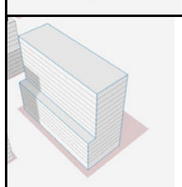
Storey / height calculation for Walkable Catchment for: Business – Town Centre, Local Centre, Neighbourhood Centre, Mixed Use and Busing Park zones; and Residential – Terrace Housing and Apartment Buildings zone				
Storeys	**Storey height, floor to floor (m)**	**Tolerance* (m)**	**Max height in (m)**	**Max height in (m) rounded to nearest 0.5**
1	4			
2	3.1	2.5	9.6	10**
3	3.1	2.5	12.7	12.5**
4	3.1	2.5	15.8	16
5	3.1	2.5	18.9	19
6	3.1	2.5	22	22
7	3.1	2.5	25.1	25.0
8	3.1	2.5	28.2	28
9	3.1	2.5	31.3	31.5
10	3.1	2.5	34.4	34.5
11	3.1	2.5	37.5	37.5
12	3.1	2.5	40.6	40.5
13	3.1	2.5	43.7	43.5
14	3.1	2.5	46.8	47
15	3.1	2.5	49.9	50
16	3.1	2.5	53	53
17	3.1	2.5	56.1	56
18	3.1	2.5	59.2	59
19	3.1	2.5	62.3	62.5
20	3.1	2.5	65.4	65.5
21	3.1	2.5	68.5	68.5
22	3.1	2.5	71.6	71.5
23	3.1	2.5	74.7	74.5

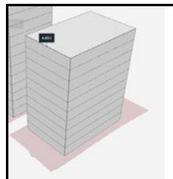
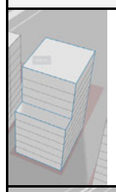
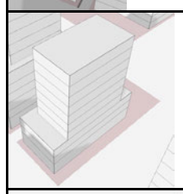
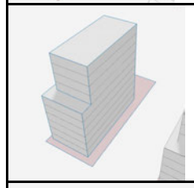
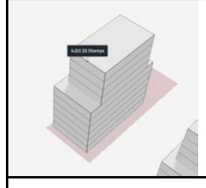
Notes:
* Allowance for roof build up, site slope factors and to enable flexibility at ground floor including semi basement conditions. **Note** this tolerance is more important in business mixed use where ground floor levels shouldn't be compressed lower than 4m given commercial outcome requirements.
** The 2 and 3-storey heights specified above relate to multi-storey multi-unit residential and business construction techniques / technology. These are different to the building heights in the Residential Single House, Mixed Housing Suburban, Mixed Housing Urban zones where 2-storeys can be accommodated in 8m + 1m for roof pitch or 3-storeys can be accommodated in 11m + 1m for roof pitch. Where their heights rely on lighter weight construction technologies.

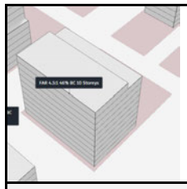
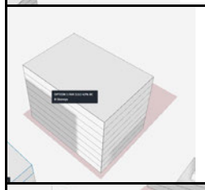
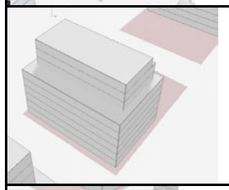
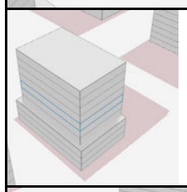
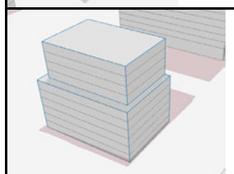
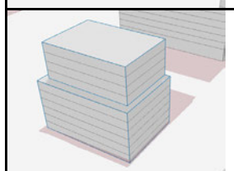
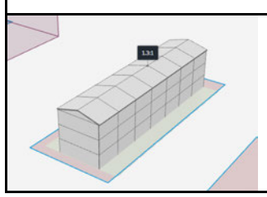
Attachment 3: Floor Area Ratios Comparison Table

Thumbnail Image	Site size	No. of floors	Podium level	HIRB	BC	GFA	FAR (x:1)	GFA by storey														Notes
								1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	801	15	2	nil	47%	3894	**4.86**	374	374	242	242	242	242	242	242	242	242	242	242	242	242	242	Large front yard - no podium to street. Podium to rear
	801	15	6	nil	30%	2793	**3.49**	242	242	242	242	242	242	149	149	149	149	149	149	149	149	149	6m setback from building edge at front with yard of 3m. 149m marginal floorplate
	801	15	nil	nil	30%	3630	**4.53**	242	242	242	242	242	242	242	242	242	242	242	242	242	242	242	No setbacks
	801	15	3	nil	50%	3591	**4.48**	397	397	397	200	200	200	200	200	200	200	200	200	200	200	200	6m Front and 3m side setbacks above 22m
	801	15	5	nil	48%	4010	**5.01**	386	386	386	386	386	208	208	208	208	208	208	208	208	208	208	6m Front and 3m side setbacks above 22m
	801	15	6	nil	41%	4026	**5.03**	329	329	329	329	329	329	228	228	228	228	228	228	228	228	228	6m Front and 3m side setbacks above 22m
	801	15	6	nil	45%	4005	**5.00**	360	360	360	360	360	360	205	205	205	205	205	205	205	205	205	6m Front and 3m side setbacks above 22m. Balconies excluded

	1600	15	6	nil	47%	9162	**5.73**	744	744	744	744	744	744	522	522	522	522	522	522	522	522	522	6m Front and 3m side setbacks above 22m
	1600	12	6	nil	47%	7247	**4.53**	744	744	744	744	744	744	522	522	522	522	522	173				6m Front and 3m side setbacks above 22m
	1600	15	3	nil	50%	7185	**4.49**	795	795	795	400	400	400	400	400	400	400	400	400	400	400	400	front and side setbacks
	1600	15	nil	nil	47%	11160	**6.98**	744	744	744	744	744	744	744	744	744	744	744	744	744	744	744	no setbacks
	1600	15	6	nil	43%	7974	**4.98**	693	693	693	693	693	693	424	424	424	424	424	424	424	424	424	6m Front and 3m side setbacks above 22m
	2295	15	6	20 60	49%	11394	**4.96**	1126	1126	1126	1126	1126	1126	627	627	627	616	563	500	415	359	304	Other standards applied including max tower dim 38m and side setbacks of 6m

	2295	12	6	nil	49%	10308	**4.49**	1126	1126	1126	1126	1126	1126	592	592	592	592	592	592	0	0	0	Other standards applied including max tower dim 38m and side setbacks of 6m
	2295	15	3	nil	48%	10404	**4.53**	1100	1100	1100	592	592	592	592	592	592	592	592	592	592	592	592	Other standards applied including max tower dim 38m and side setbacks of 6m
	2295	15	3	20 60	59%	11327	**4.94**	1365	1365	1365	623	623	623	623	623	623	623	623	623	623	501	501	Other standards applied including max tower dim 38m and side setbacks of 6m
	2295	15	1	20 60	50%	7245.5	**3.16**	1148	467	467	467	453	453	453	453	453	453	453	453	453	310	310	Other standards applied including max tower dim 38m and side setbacks of 6m
	2745	15	4	20 60	49%	12273	**4.47**	1355	1355	1355	1355	623	623	623	623	623	623	623	623	623	623	623	Other standards applied including max tower dim 38m and side setbacks of 6m
	2745	15	nil	20 60	44%	18150	**6.61**	1210	1210	1210	1210	1210	1210	1210	1210	1210	1210	1210	1210	1210	1210	1210	no frontage setback to street. 3m yards both sides
	2745	15	6	20 60	44%	15927	**5.80**	1210	1210	1210	1210	1210	1210	963	963	963	963	963	963	963	963	963	6m setback from frontage and 3 from sides

	801	10	nil	nil	47%	3730	**4.66**	373	373	373	373	373	373	373	373	373	373						No setbacks
	801	10	6	nil	40%	2916	**3.64**	320	320	320	320	320	320	249	249	249	249						Frontage setback
	801	10	2	nil	40%	2815	**3.51**	320	320	320	265	265	265	265	265	265	265						no setbacks
	801	10	6	nil	40%	2916	**3.64**	320	320	320	320	320	320	249	249	249	249						6m Setback from street
	801	10	3	nil	50%	2787	**3.48**	397	397	397	228	228	228	228	228	228	228						6m setback from frontage and 3 from sides
	801	10	6	nil	50%	3600	**4.49**	402	402	402	402	402	402	297	297	297	297						6m setback from frontage and 3 from sides
	801	10	6	nil	47%	3208	**4.00**	376	376	376	376	376	376	238	238	238	238						6m setback from frontage and 3 from sides

	1600	10	nil	nil	47%	7195	**4.50**	744	744	744	744	744	744	744	744	744	499						no setbacks
	1600	8	nil	nil	44%	5600	**3.50**	700	700	700	700	700	700	700	700								no setbacks
	1600	9	nil	nil	47%	5624	**3.52**	744	744	744	744	744	744	430	430	300							6m setback from frontage and 3 from sides
	1600	10	nil	nil	40%	5546	**3.47**	640	640	640	518	518	518	518	518	518	518						6m setback from frontage and 3 from sides
	1600	10	nil	6	50%	7198	**4.50**	793	793	793	793	793	793	610	610	610	610						6m setback from frontage and 3 from sides
	1600	10	nil	6	45%	6408	**4.01**	726	726	726	726	726	726	513	513	513	513						6m setback from frontage and 3 from sides
	801	3	nil	20 60	43%	1041	**1.30**	347	347	347													Terrace housing

APPENDIX 2 - OPTIONS ANALYSIS: MIXED HOUSING URBAN ZONE

1.0 Introduction

The purpose of this discussion paper is to support the PC120 to the (AUP(OP) as part of the AHPI. The paper outlines the matters and options considered in the development of the building height proposed in the Residential – Mixed Housing Urban Zone (**MHU**) zone.

In particular, the paper provides an overview of the rationale for why the proposed building height controls are the most appropriate means of giving effect to the National Policy Statement for Urban Development (**NPSUD**) Policy 3(c), Policy 3(d) and locations identified in the Resource Management (Consenting and Other System Changes) Amendment Act 2025 (**amendment act**).

2.0 Background

2.1 Legislative background

The overall background of the new legislation and the NPSUD has been set out in the section 32 evaluation above. Of most relevance to this options analysis is the requirement to provide at least the same amount of housing capacity as would have been enabled if PC78 were made operative (schedule 3C, clause 4(1)(a)) and giving effect to NPSUD including Policy 3(d), and the RPS.

2.2 Regional Policy Statement

The relevant sections of the RPS have set out in the section 32 evaluation above. Of most relevant to this options analysis is Objective B2.2.1(1) of the Auckland Unitary Plan – Regional Policy Statement (RPS) directs an urban growth and form which achieves a well-functioning urban environment with a quality compact urban form that enables (a) a higher-quality urban environment, and (h) improved resilience to the effects of climate change.

Objective B2.3.1 of the RPS directs the plan to achieve:

> *(1) a well-functioning urban environment with a quality built environment where subdivision, use and development do all of the following:*
>
> > *(a) respond to the intrinsic qualities and physical characteristics of the site and area, including its setting;*
> >
> > *(b) reinforce the hierarchy of centres and corridors;*
> >
> > *(c) contribute to a diverse mix of choice and opportunity for people and communities;*
> >
> > *(d) maximise resource and infrastructure efficiency;*
> >
> > *(e) are capable of adapting to changing needs; and (f) has improved resilience to the effects of climate change.*

(2) Innovative design to address environmental effects is encouraged.

(3) The health and safety of people and communities are promoted

In accordance with section 75(3)(c) of the RMA, a district plan must give effect to a regional policy statement. Therefore, in giving effect to Schedule 3C of the RMA and Policy 3 of the NPSUD, this must be done within the context of achieving a well-functioning urban environment, which includes a quality built environment.

3.0 What building heights are necessary to give effect to the NPSUD and the amendment act?

The NPSUD requires in Policy 3(d) locations building heights and densities of urban form commensurate with the level of commercial activity and community services.

Clause 4(1)(a), Schedule 3C of the RMA Amendment Act requires the Auckland Housing Planning Instrument (AHPI) to provide the same housing capacity as the notified PC78 (if made operative).

As part of a package of integrated intensification amendments to give effect to Policy 3 and Schedule 3C, the AHIP proposes the following amendments in relation to the MHU zone:

- Proposed amendments to the MHU height in relation to boundary standard to enable a greater number of sites to achieve the standard zone height (11m or 3 storey buildings); and
- Rezone land from MHS to MHU in certain locations.

The following discussion provides an overview of the development of the proposed height in relation to boundary standard in the MHU zone.

3.1 Operative height in relation to boundary

The AUP(OP) permits an 11m building height in the MHU zone, to achieve 3 storey buildings. This is then managed through a permitted 3m + 45^{o} height in relation to boundary standard. The AUP(OP) also provides for an Alternative Height in Relation to Boundary (AHIRB) as a restricted discretionary activity. This applies a 3.6m height control at the side and rear boundaries and thereafter a setback of 1m and then 0.3m for every metre in height (73.3^{o}) up to 6.9m and then 1m for every metre in height (45^{o}). The AHIRB only applies to development within the first 20m of a site. Beyond 20m of the frontage, the standard HIRB applies.

A key finding from the 2023 s35 Quality Built Environment Monitoring Report ('s35 report') was that the height of development within the MHU zone was not being maximised, with 95% of sampled development with the MHU being two storeys or less.

Following a review of consented case studies and modelling of a range of options on typical and real-world sites, the operative HIRB was identified as a key constraint in achieving the 11m height standard.

3.2 Development of an amended standard

Three key options were considered in the development PPC120 to ascertain the most effective and efficient means of giving effect to Policy 3(d) and Schedule 3C, Clause 4(1)(a):

Option 1: Existing MHU

- 3m+45^{o} as the zone standard, plus the AHIRB for the first 20m from site frontage

Option 2: Apply the operative AHIRB:

- For the first 20m from site frontage, a 3.6m height control at the side and rear boundaries and thereafter a setback of 1m and then 0.3m for every metre in height (73.3^{o}) up to 6.9m and then 1m for every metre in height (45^{o}).
- Development beyond 20m from the site frontage would have a HIRB of 3m+45^{o}.

Option 3: Amend the AHIRB (preferred option)

- A 3.6m height control at the side and rear boundaries and thereafter a setback of 1m and then 0.3m for every metre in height (73.3^{o}) up to 6.9m and then 1m for every metre in height (45^{o}).
- Amended to apply across the whole site (rather than just the first 20m from the site frontage).

3.2.1 Yield Study

The Terraced Housing – Residential Development Study (Attachment 1) tested the options using three different site sizes and three environmental scenarios:

- Site 1 (typical site): 18m (W) x 44.5m (L) = 801m^2
- Site 2 (large site): 36m (W) x 60m (L) = 2,160m^2
- Site 3 (small site): 15m (W) x 44.5m (L) = 677.5m^2

Three possible scenarios were then modelled against each test site based on common site arrangements in Auckland:

- Scenario 1: Vehicle and pedestrian accessway (‘S1’)
- Scenario 2: Grouped Car Parking (‘S2’)
- Scenario 3: Pedestrian Only Access (‘S3’)

The HIRB options were modelled along with the wider package of proposed standards in MHU, with HIRB being the only variable.

Figure 1 below demonstrates the modelling of the proposed standards on Site 1, applying the three HIRB options considered above.

Figure 1: Terraced House Study - Height in relation to boundary

Two key findings that are highlighted by Figure 1 above include that:

- HIRB has a significant impact on yield; and
- Option 2 (applying the operative AHIRB as the zone standard) continues to constrain the ability to achieve 11m at the rear of the site, although it does encourage development to orientate to the street.

The below summary table compares the yield effects of Options 2 and 3 (in conjunction with the wider package of proposed standards) in comparison with the operative standards.

Table 1: Summary comparison of yield arising from the operative and proposed standards in MHU zone, where HIRB is the only variable

	Vehicle and Pedestrian Accessway			Grouped Parking			Pedestrian Only Accessway		
	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE	TYPICAL SITE	LARGE SITE	SMALL SITE
	Option 3: Amended AHIRB (preferred option)								
Unit Increase	25%	30.8%	100%	0%	0%	0%	0%	0%	0%
GFA Increase	16.4%	30.8%	100%	21.4%	4.2%	37.5%	49%	3.8%	50%
Occupancy Increase	26.7%	38.8%	100%	16.7%	5%	40%	43.5%	3.1%	53.3%
	Option 2: Operative AHIRB								
Unit Increase	0%	0%	0%	0%	0%	0%	0%	0%	0%
GFA Increase	0%	0%	0%	0%	0%	12.5%	22%	0%	25%
Occupancy Increase	0%	0%	0%	0%	0%	10%	21.7%	0%	21%

The results of the terraced housing yield testing demonstrate that in all scenarios cumulatively, the proposed PC120 standards (including the application of an amended AHIRB as the zone standard) generally results in an increase in yield from the relevant operative position.

4.0 Conclusion

Table 2 below provides an overview of the options considered and discussion on the appropriateness of each option following results of modelling.

Table 2: Overview of HIRB options and appropriateness

Options	Discussion	Appropriateness
Option 1: **Existing MHU (operative HIRB and AHIRB)**	As discussed in section 3.1 above, it was identified through monitoring, a review of consented case studies and modelling on typical and real-world sites, that the operation HIRB is a key constraint in achieving the 11m height	It is considered that retaining the status quo is **not the most appropriate** option as it does not provide for sufficient housing capacity to give effect to Schedule 3C, Clause 4(1)(a) and constrains the ability to

	standard and anticipated built form outcomes of 3 storey buildings in the MHU zone.	achieve 11m building heights (Policy 3(d)).
Option 2: **Operative AHIRB as the zone standard**	Modelling demonstrated that while this option increased the ability to achieve 11m at the front of a site, development was still constrained at the rear of site. The overall outcome being that there was little change in yield from the operative plan.	It is considered that Option 2 is **not the most appropriate** option as it does not provide for sufficient housing capacity to give effect to Schedule 3C, Clause 4(1)(a) and continues to constrain the ability to achieve 11m building heights across the whole site (Policy 3(d)).
Option 3: (preferred option) **Amended AHIRB as the zone standard**	Modelling demonstrated that this approach provides significant increase in the ability to achieve the 11m zone height across the whole site, while still managing development to achieve quality built environment outcomes.	It is considered that Option 3 is **the most appropriate** option as it significantly increases yield in the MHU zone, which contributes to giving effect to Schedule 3C, Clause 4(1)(a) and it enables 11m building heights to be achieved across the whole site on a greater range of sites, thereby giving effect to Policy 3(d).

Overall, the modelling demonstrates that the PC120 proposed HIRB standard within the MHU zone is the most appropriate option to give effect to Schedule 3C, Clause 4(1)(a) and Policy 3(d).

RPC Terrace Housing - Residential Development Study

Tāmaki Makaurau Design Ope, Auckland Council - July 2025

Replacement Plan Change or PPC120 is referred to as RPC

Objective:

Two Terrace typologies - Typical Terrace **(T1)** and Terrace with Garage **(T2)** are modelled and tested using the existing operative MHU, and proposed RPC MHU Unitary Plan standards on three different site sizes in order to test and inform implications of the standards.

Four alternative typologies **(T1ii, T2ii, T2a, T2iia)** were prepared to comply with height in relation to boundard standards.

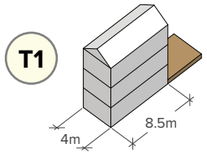
An alternative typology **(T2b)** was prepared to enable one Terrace House on a 15m wide site, and typologies **(T1a and T1iia)** were prepared to enable two Terrace Houses on this sized site.

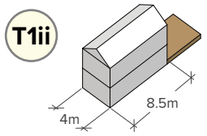
Typology **(T2c)** was prepared to enable Terrace Houses on an 18m wide site with a Grade Separated Footpath.

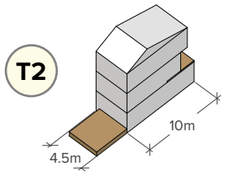
.

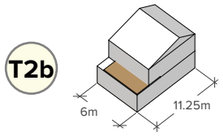
Terrace House Typologies:

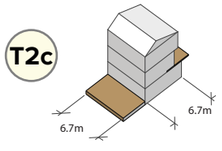
Floor to Floor 3.1m
3 Bedroom (with exception of **T1ii, T1iia**)











Type:	Description:		Dimensions (W) x (L):	Building Coverage:	GFA:
T1:	**Typical Terrace**		4m x 8.5m	34m^2	102m^2
T1a:	Alt Length		5m x 6.7m	34m^2	102m^2
T1ii:		2 Level **2 Bedroom**	4m x 8.5m	34m^2	68m^2
T1iia:	Alt Width	2 Level **2 Bedroom**	5m x 6.7m	34m^2	68m^2
T2:	**Terrace with Garage**		4.5m x 10m	45m^2	135m^2
T2a:	Alt Length		5.6m x 8m	45m^2	135m^2
T2ii:		2 Level	6.75m x 10m	67.5m^2	135m^2
T2iia:	Alt Length	2 Level	8.45m x 8m	67.5m^2	135m^2
T2b:	Alt Width	2 Level	6m x 11.25m	67.5m^2	135m^2
T2c:	Alt Length	3 Level	6.7m x 6.7m	45m^2	135m^2

RPC Terrace House Study

MHU Existing & MHU Proposed

Method/Standards:

Tests were conducted using the following metrics and assumptions:

- **Outlook Space**
  Primary: MHU Existing 6x4m,
  MHU Proposed 5x4m on Ground Floor
- **Private Outdoor Living Space -**
  (POLs) = 20m^2
- **Landscaped Area**
  35%
- **Landscaped Area in POLs**
  Enables LA in POLs,
  MHU Proposed enables 1m buffer if required
- **Non-vegetated Landscaped Area**
  Enables <9% of LA to be non-vegetated
- **Safety & Privacy Buffer**
  1m on side of Pedestrian Access way, free of services
- **Deep Soil + Canopy Tree Area**
  10% - 1 Tree p/300m^2, min dim 3m
- **Communal Outdoor Living Space**
  20+ units: 10m^2 p/5units
- **Bike Parking**
  20+ units: Double Stacked Parking - 11 Spaces p/carspace
- **6.3m Van Loading & Manoeuvering**
  10+ units - located at front of site
- **Waste Storage**
  Individual 1.4m^2 p/unit, 10+ Communally located,
  20+ Communal Storage (.7m^2 p/unit)
- **Accessible Parking**
  1 space for 10-19 units / 2 spaces for 20-29 units

- o Adjacent properties assumed as same planning zone
- o Site assumed flat with good ground conditions
- o No existing site constraints such as trees or underground assets
- o Studies apply a 3 storey maximum terrace house height as would be anticipated for this typology.
- o Where the HiRB standard has limited parts of the modelled schemes to a 2 storey terrace height this is highlighted on the model summary sheets by a pink coloured recessive plane.

RPC Terrace House Study

MHU Existing & MHU Proposed

Site & Scenario:

The sites are;

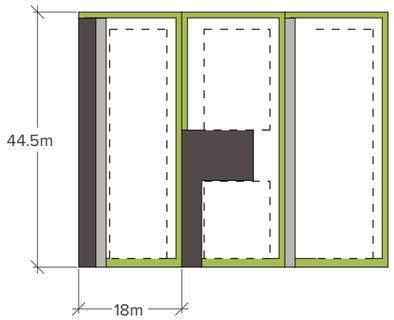
Site 1: 18m (W) x 44.5m (L) 801m^2

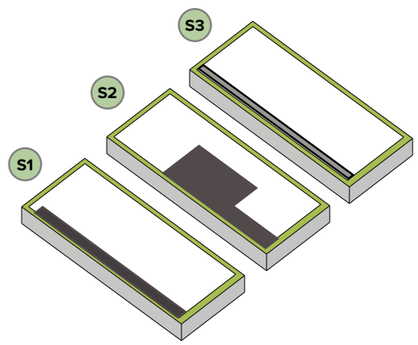
Site 2: 36m (W) x 60m (L) 2160m^2 to enable testing of 20+ Terraces

Site 3: 15m (W) x 44.5m (L) 677.5m^2

Site 1:

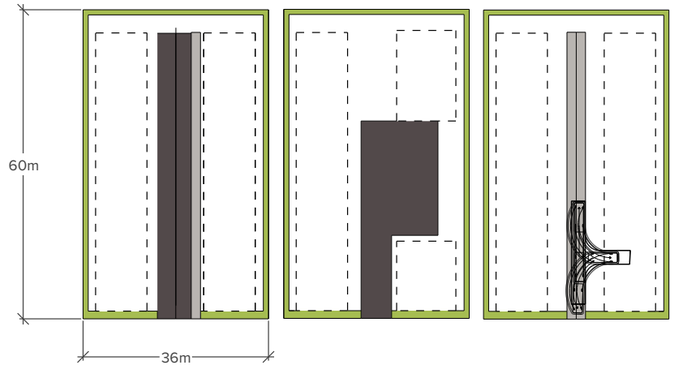
18m (W) x 44.5m (L), 801m^2





Site 2:

36m (W) x 60m (L), 2160m^2 - to enable/test 20+ units.



Site 3:

15m (W) x 44.5m (L), 667.5m^2

Environment:

Three scenarios based on common site arrangements seen in Auckland.

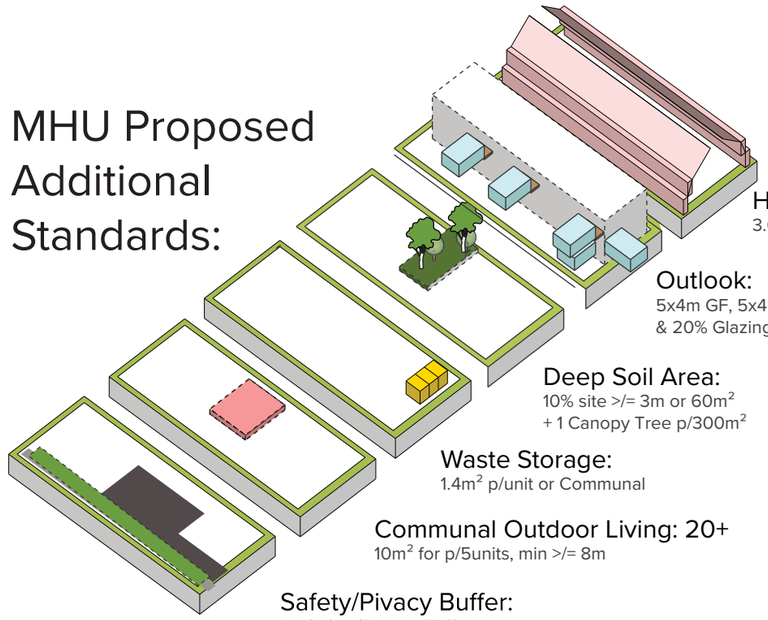
- S1 **Scenario 1**
  Vehicle Accessway
- S2 **Scenario 2**
  Grouped Car Parking
- S3 **Scenario 3**
  Pedestrian Only Access

RPC Terrace House Study

MHU Existing & MHU Proposed

Unitary Plan Standards for MHU

MHU Proposed Additional Standards:



HiRB:
3.6m + 1m setback 73.3o & 3.3m 45o

Outlook:
5x4m GF, 5x4m 1F from Balcony Edge
& 20% Glazing to Street

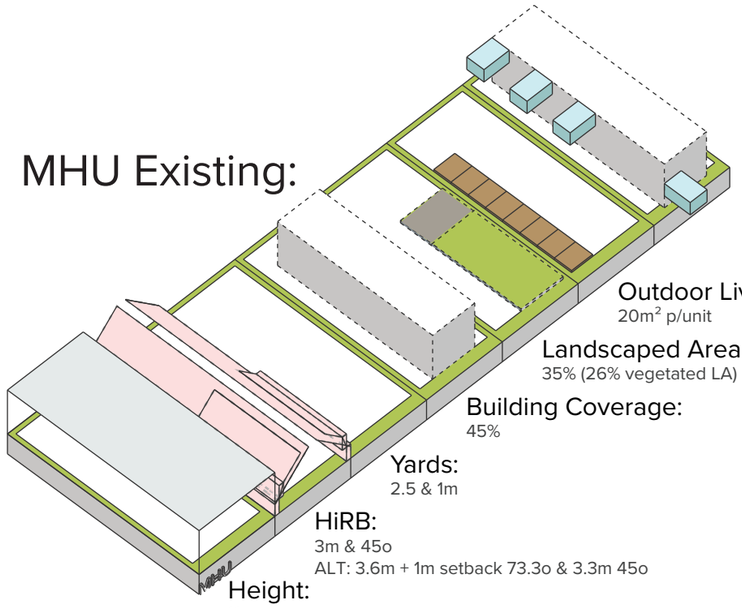
Deep Soil Area:
10% site >/= 3m or 60m^2
+ 1 Canopy Tree p/300m^2

Waste Storage:
1.4m^2 p/unit or Communal

Communal Outdoor Living: 20+
10m^2 for p/5units, min >/= 8m

Safety/Pivacy Buffer:
1m Safety/Privacy Buffer

MHU Existing:



Outlook:
6x4m GF, 5x4m GF 1F from Glazing
& 20% Glazing to Street

Outdoor Living Space:
20m^2 p/unit

Landscaped Area:
35% (26% vegetated LA)

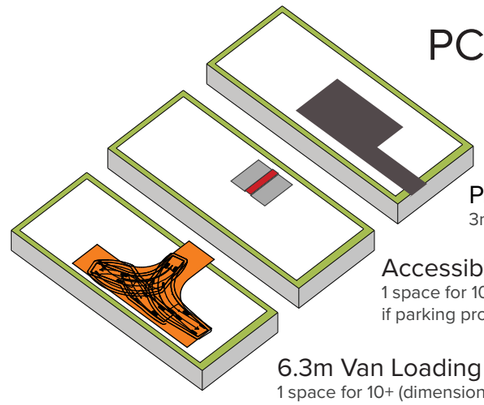
Building Coverage:
45%

Yards:
2.5 & 1m

HiRB:
3m & 45o
ALT: 3.6m + 1m setback 73.3o & 3.3m 45o

Height:
11m

PC79:



Private Accessway:
3m (inc 1.4, 20+ 1.8 Path)

Accessible Carspace:
1 space for 10-19 units / 2 spaces for 20-29 units
if parking provided

6.3m Van Loading space:
1 space for 10+ (dimensions 3.5mx6.4m)

Key:

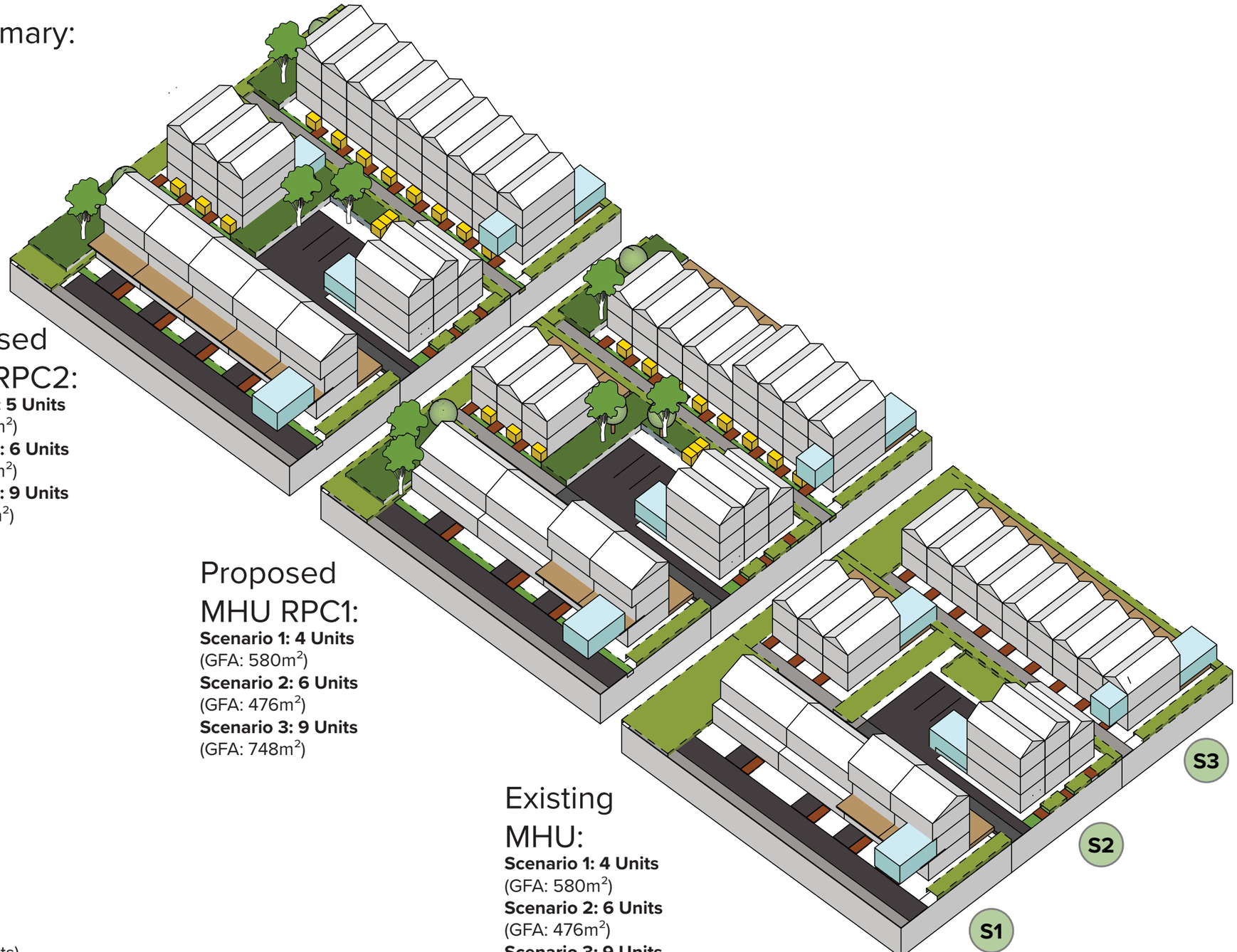
- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

RPC Terrace House Study

MHU Existing & MHU Proposed

Site 1 (18x44.5m = 801m^2) Summary:

- **S1** **Scenario 1**
  Vehicle Accessway
- **S2** **Scenario 2**
  Grouped Car Parking
- **S3** **Scenario 3**
  Pedestrian Only Access



Proposed MHU RPC2:

Scenario 1: 5 Units
(GFA: 675m^2)
Scenario 2: 6 Units
(GFA: 578m^2)
Scenario 3: 9 Units
(GFA: 912m^2)

Proposed MHU RPC1:

Scenario 1: 4 Units
(GFA: 580m^2)
Scenario 2: 6 Units
(GFA: 476m^2)
Scenario 3: 9 Units
(GFA: 748m^2)

Existing MHU:

Scenario 1: 4 Units
(GFA: 580m^2)
Scenario 2: 6 Units
(GFA: 476m^2)
Scenario 3: 9 Units
(GFA: 612m^2)

Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

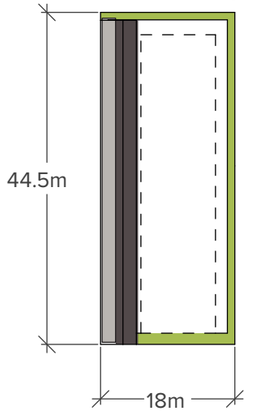
RPC Terrace House Study

MHU Existing & MHU Proposed

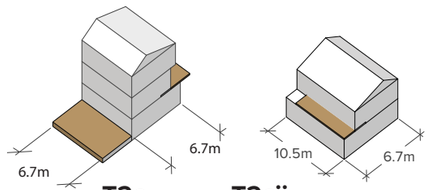
Standards Comparison

Site 1 + Scenario 1:

18x44.5m, 801m^2
Vehicle Accessway



Terrace House Typologies:

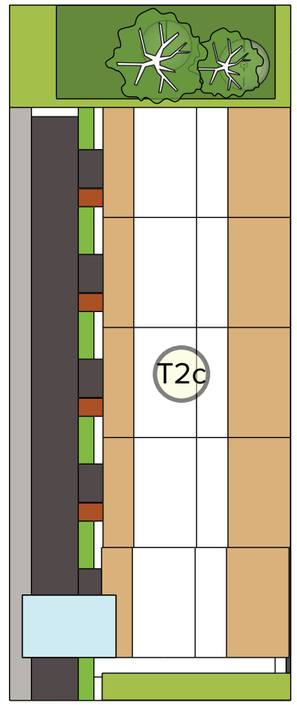


T2c **T2cii**

Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:
RPC 2



Building Coverage: 225m^2
(Standard: 45% <360m^2)
Terrace Type: 5xT2c
Total Units: 5
Total Bedrooms: 15
Occupancy: 19
GFA: 675m^2

Landscaped Area: 287.5m^2
(Standard: 35% >280m^2)
inc. Deep Soil Area: 80m^2

Impervious Area: 330m^2
(Standard: 50% <400m^2)
Building Footprints:225m^2
Vehicle Manoeuvring: 105m^2

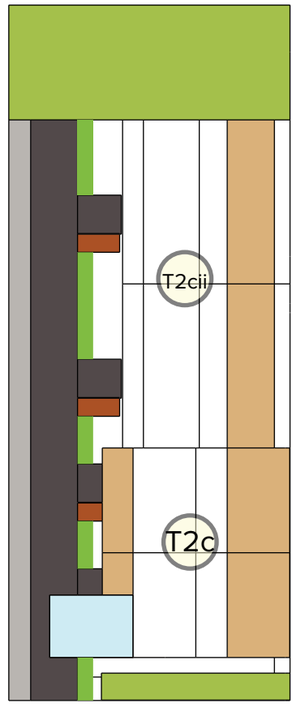
MHU Proposed:
RPC 1

Building Coverage: 225m^2
(Standard: 45% <360m^2)
Terrace Type: 2xT2c, 2xT2cii
Total Units: 4
Total Bedrooms: 12
Occupancy: 15
GFA: 580m^2

Landscaped Area: >287.5m^2
(Standard: 35% >280m^2)
inc. Deep Soil Area: 80m^2

Impervious Area: 325m^2
(Standard: 50% <400m^2)
Building Footprints: 225m^2
Vehicle Manoeuvring: 100m^2

MHU Existing:



Building Coverage: 225m^2
(Standard: 45% <360m^2)
Terrace Type: 2xT2c, 2xT2cii
Total Units: 4
Total Bedrooms: 12
Occupancy: 15
GFA: 580m^2

Landscaped Area: 287.5m^2
(Standard: 35% >280m^2)
inc. LA in POLs: 67.5m^2

Impervious Area: 325m^2
(Standard: 50% <400m^2)
Building Footprints:225m^2
Vehicle Manoeuvring: 100m^2

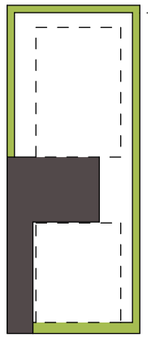
RPC Terrace House Study

MHU Existing & MHU Proposed

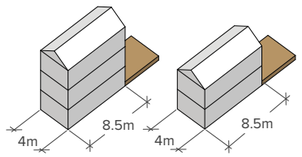
Standards Comparison

Site 1 + Scenario 2:

18x44.5m, 801m^2
Grouped Car Parking



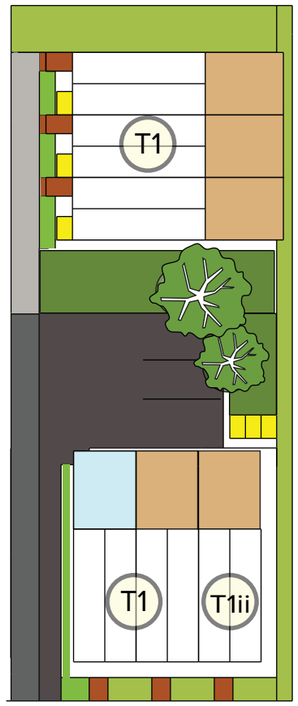
Terrace House Typologies:



Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:
RPC 2



Building Coverage: 204m^2
(Standard: 45% <360m^2)
Terrace Type: 5xT1, 1xT1ii
Total Units: 6
Total Bedrooms: 17
Occupancy: 21
GFA: 578m^2

Landscaped Area: 285m^2
(Standard: 35% >280m^2)
inc. Deep Soil Area: 80m^2

Impervious Area: 304m^2
(Standard: 50% <400m^2)
Building Footprints:204m^2
Vehicle Manoeuvring: 110m^2

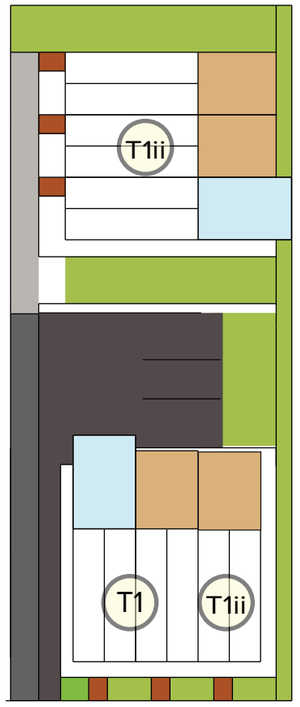
MHU Proposed:
RPC 1

Building Coverage: 204m^2
(Standard: 45% <360m^2)
Terrace Type: 2xT1, 4xT1ii
Total Units: 6
Total Bedrooms: 14
Occupancy: 18
GFA: 476m^2

Landscaped Area: >285m^2
(Standard: 35% >280m^2)
inc. Deep Soil Area: 80m^2

Impervious Area: 304m^2
(Standard: 50% <400m^2)
Building Footprints:204m^2
Vehicle Manoeuvring: 110m^2

MHU Existing:



Building Coverage: 204m^2
(Standard: 45% <360m^2)
Terrace Type: 2xT1, 4xT1ii
Total Units: 6
Total Bedrooms: 14
Occupancy: 18
GFA: 476m^2

Landscaped Area: 285m^2
(Standard: 35% >280m^2)
inc. LA in POLs: 30m^2

Impervious Area: 304m^2
(Standard: 50% <400m^2)
Building Footprints:204m^2
Vehicle Manoeuvring: 110m^2

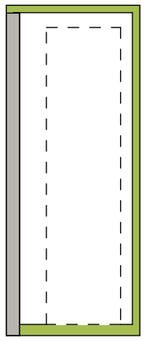
RPC Terrace House Study

MHU Existing & MHU Proposed

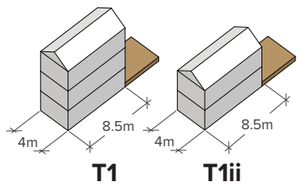
Standards Comparison

Site 1 + Scenario 3:

18x44.5m, 801m^2
Pedestrian Only Access



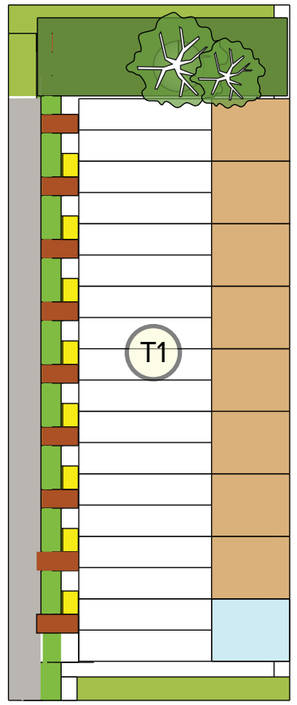
Terrace House Typologies:



Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:
RPC 2

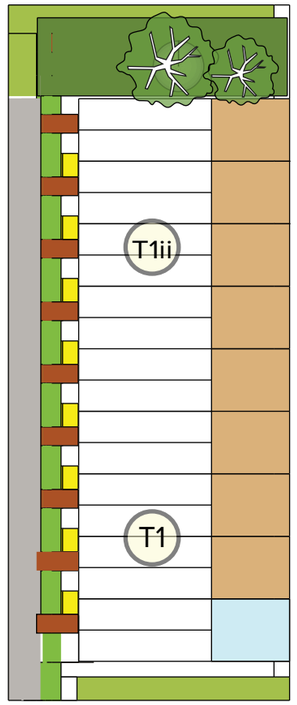


Building Coverage: 306m^2
(Standard: 45% <360m^2)
Terrace Type: 9xT1
Total Units: 9
Total Bedrooms: 27
Occupancy: 33
GFA: 912m^2

Landscaped Area: 284m^2
(Standard: 35% >280m^2)
inc. Deep Soil Area: 80m^2
and LA Buffer: 10m^2

Impervious Area: 306m^2
(Standard: 50% <400m^2)
Building Footprints:306m^2

MHU Proposed:
RPC 1

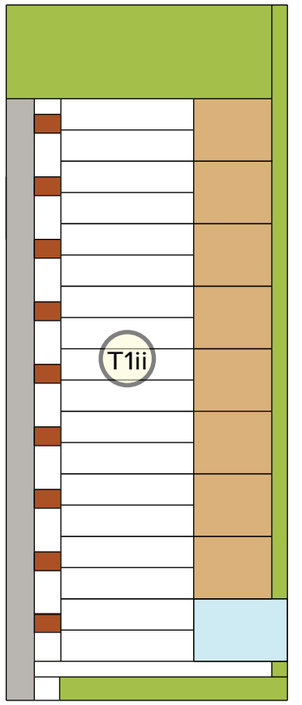


Building Coverage: 306m^2
(Standard: 45% <360m^2)
Terrace Type: 4xT1, 5xT1ii
Total Units: 9
Total Bedrooms: 22
Occupancy: 28
GFA: 748m^2

Landscaped Area: 284m^2
(Standard: 35% >280m^2)
inc. Deep Soil Area: 80m^2
and LA Buffer: 10m^2

Impervious Area: 306m^2
(Standard: 50% <400m^2)
Building Footprints:306m^2

MHU Existing:



Building Coverage: 306m^2
(Standard: 45% <360m^2)
Terrace Type: 9xT1ii
Total Units: 9
Total Bedrooms: 18
Occupancy: 23
GFA: 612m^2

Landscaped Area: 284m^2
(Standard: 35% >280m^2)
inc. LA in POLs: 150m^2

Impervious Area: 306m^2
(Standard: 50% <400m^2)
Building Footprints:306m^2

RPC Terrace House Study

MHU Existing & MHU Proposed

Site 2 (36x44.5m = 2160m^2) Non-Arterial Summary:

S1 **Scenario 1**
Vehicle Accessway

S2 **Scenario 2**
Grouped Car Parking

S3 **Scenario 3**
Pedestrian Only Access

Proposed MHU RPC2:

Scenario 1: 18 Units
(GFA: 2430m^2)
Scenario 2: 17 Units
(GFA: 1666m^2)
Scenario 3: 23 Units
(GFA: 2436m^2)

Proposed MHU RPC1:

Scenario 1: 14 Units
(GFA: 1890m^2)
Scenario 2: 17 Units
(GFA: 1632m^2)
Scenario 3: 23 Units
(GFA: 2278m^2)

Existing MHU:

Scenario 1: 14 Units
(GFA: 1890m^2)
Scenario 2: 17 Units
(GFA: 1632m^2)
Scenario 3: 23 Units
(GFA: 2278m^2)

Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

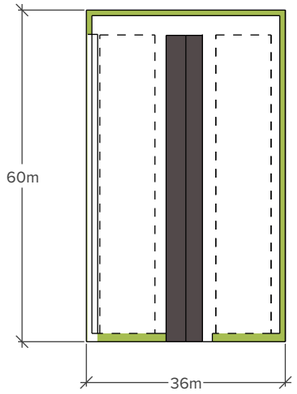
RPC Terrace House Study

MHU Existing & MHU Proposed

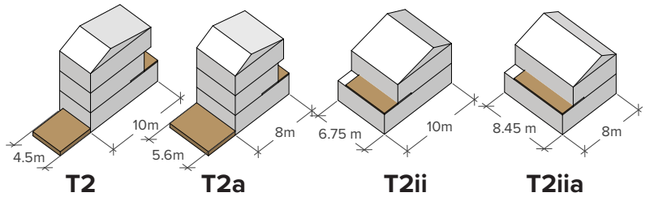
Standards Comparison

Site 2 + Scenario 1 <Non-artertial>:

36x60m, 2160m^2
Vehicle Accessway



Terrace House Typologies:

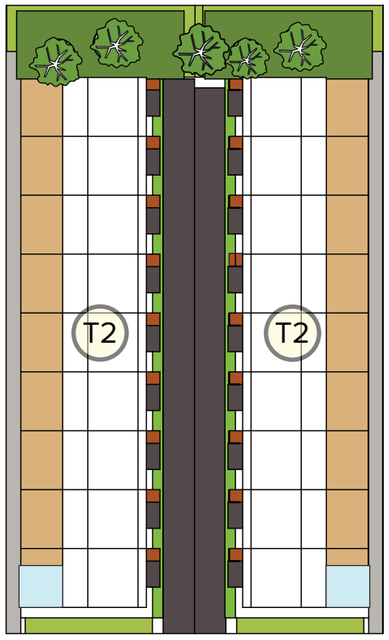


Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:

RPC2



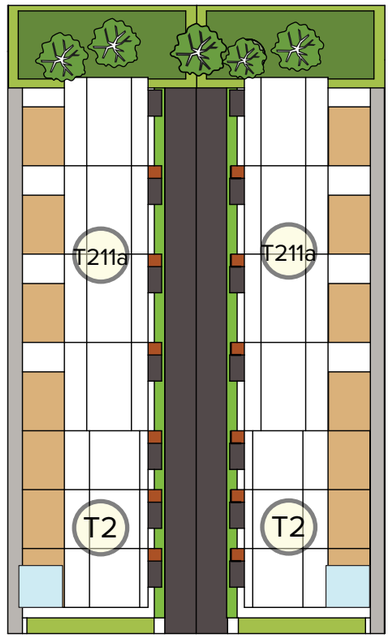
Building Coverage: 810m^2
(Standard: 45% <972m^2)
Terrace Type: 18xT2
Total Units: 18
Total Bedrooms: 54
Occupancy: 68
GFA: 2430m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: <1080m^2
(Standard: 50% <1080m^2)
Building Footprints: 810m^2

MHU Proposed:

RPC1

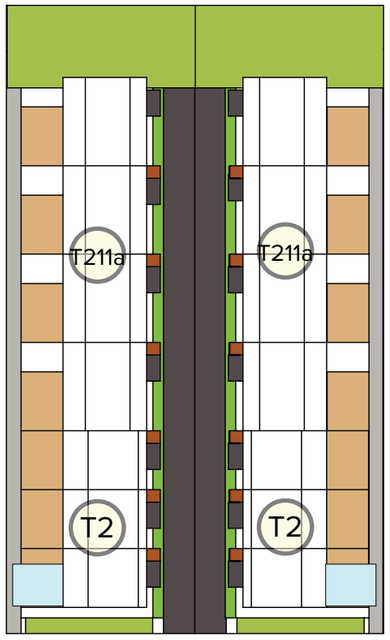


Building Coverage: 810m^2
(Standard: 45% <972m^2)
Terrace Type: 6xT2, 8xT2iia
Total Units: 14
Total Bedrooms: 42
Occupancy: 53
GFA: 1890m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: <1080m^2
(Standard: 50% <1080m^2)
Building Footprints: 810m^2

MHU Existing:



Building Coverage: 810m^2
(Standard: 45% <972m^2)
Terrace Type: 6xT2, 8xT2iia
Total Units: 14
Total Bedrooms: 42
Occupancy: 53
GFA: 1890m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. LA in POLs: 210m^2

Impervious Area: <1080m^2
(Standard: 50% <1080m^2)
Building Footprints: 810m^2

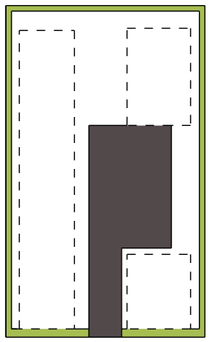
RPC Terrace House Study

MHU Existing & MHU Proposed

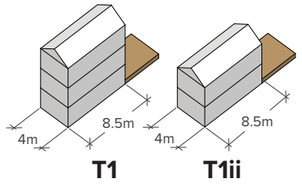
Standards Comparison

Site 2 + Scenario 2 <Non-artertial>:

36x60m, 2160m^2
Grouped Car Parking



Terrace House Typologies:

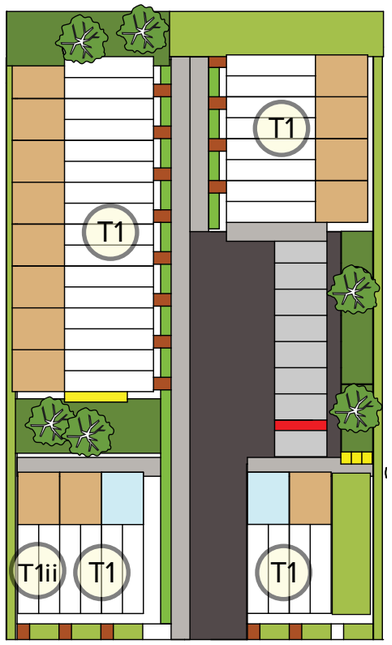


Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:

RPC2



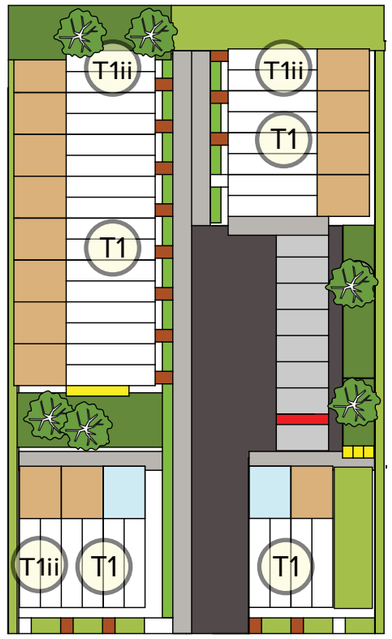
Building Coverage: 578m^2
(Standard: 45% <972m^2)
Terrace Type: 16xT1, 1xT1ii
Total Units: 17
Total Bedrooms: 50
Occupancy: 63
GFA: 1700m^2

Landscaped Area: 760m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: 858m^2
(Standard: 50% <1080m^2)
Building Footprints: 578m^2
Vehicle Manoeuvring: 280m^2

MHU Proposed:

RPC1

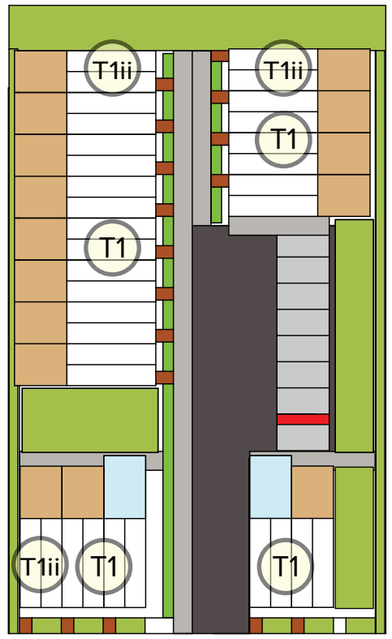


Building Coverage: 578m^2
(Standard: 45% <972m^2)
Terrace Type: 14xT1, 3xT1ii
Total Units: 17
Total Bedrooms: 48
Occupancy: 60
GFA: 1632m^2

Landscaped Area: 760m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: 858m^2
(Standard: 50% <1080m^2)
Building Footprints: 578m^2
Vehicle Manoeuvring: 280m^2

MHU Existing:



Building Coverage: 578m^2
(Standard: 45% <972m^2)
Terrace Type: 14xT1, 3xT1ii
Total Units: 17
Total Bedrooms: 48
Occupancy: 60
GFA: 1632m^2

Landscaped Area: 760m^2
(Standard: 35% >756m^2)
inc. LA in POLs: 200m^2
& non-vegetated LA: 42m^2

Impervious Area: 858m^2
(Standard: 50% <1080m^2)
Building Footprints: 578m^2
Vehicle Manoeuvring: 280m^2

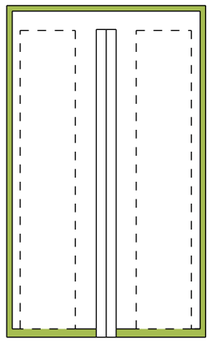
RPC Terrace House Study

MHU Existing & MHU Proposed

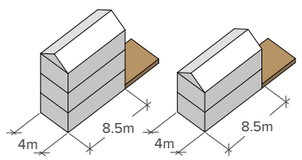
Standards Comparison

Site 2 + Scenario 3 <Non-artertial>:

36x60m, 2160m^2
Pedestrian Only Access



Terrace House Typologies:

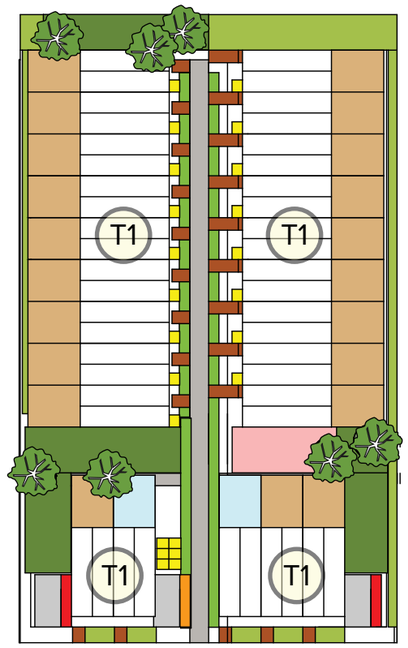


Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:

RPC2



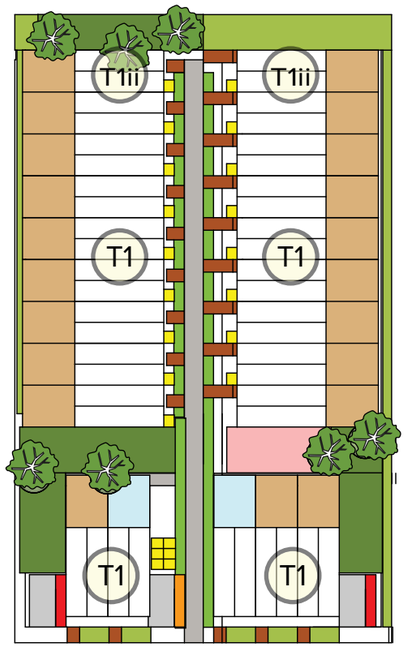
Building Coverage: 782m^2
(Standard: 45% <972m^2)
Terrace Type: 23xT
Total Units: 23
Total Bedrooms: 69
Occupancy: 86
GFA: 2346m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: 816m^2
(Standard: 50% <1080m^2)
Building Footprints: 680m^2

MHU Proposed:

RPC1

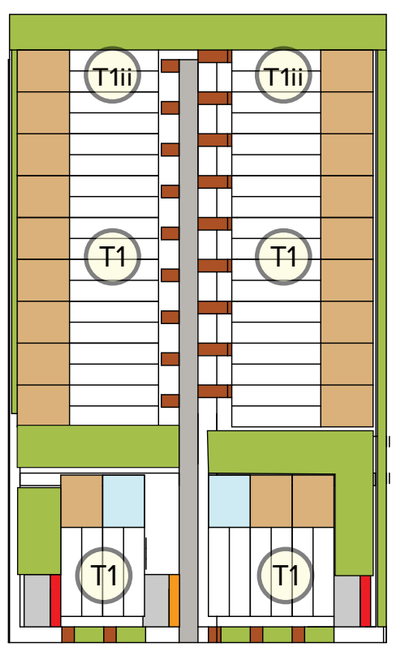


Building Coverage: 782m^2
(Standard: 45% <972m^2)
Terrace Type: 21xT1, 2xT1ii
Total Units: 23
Total Bedrooms: 67
Occupancy: 84
GFA: 2278m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: 816m^2
(Standard: 50% <1080m^2)
Building Footprints: 748m^2

MHU Existing:



Building Coverage: 782m^2
(Standard: 45% <972m^2)
Terrace Type: 21xT1, 2xT1ii
Total Units: 23
Total Bedrooms: 67
Occupancy: 84
GFA: 2278m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. LA in POLs: 400m^2

Impervious Area: 816m^2
(Standard: 50% <1080m^2)
Building Footprints: 816m^2

RPC Terrace House Study

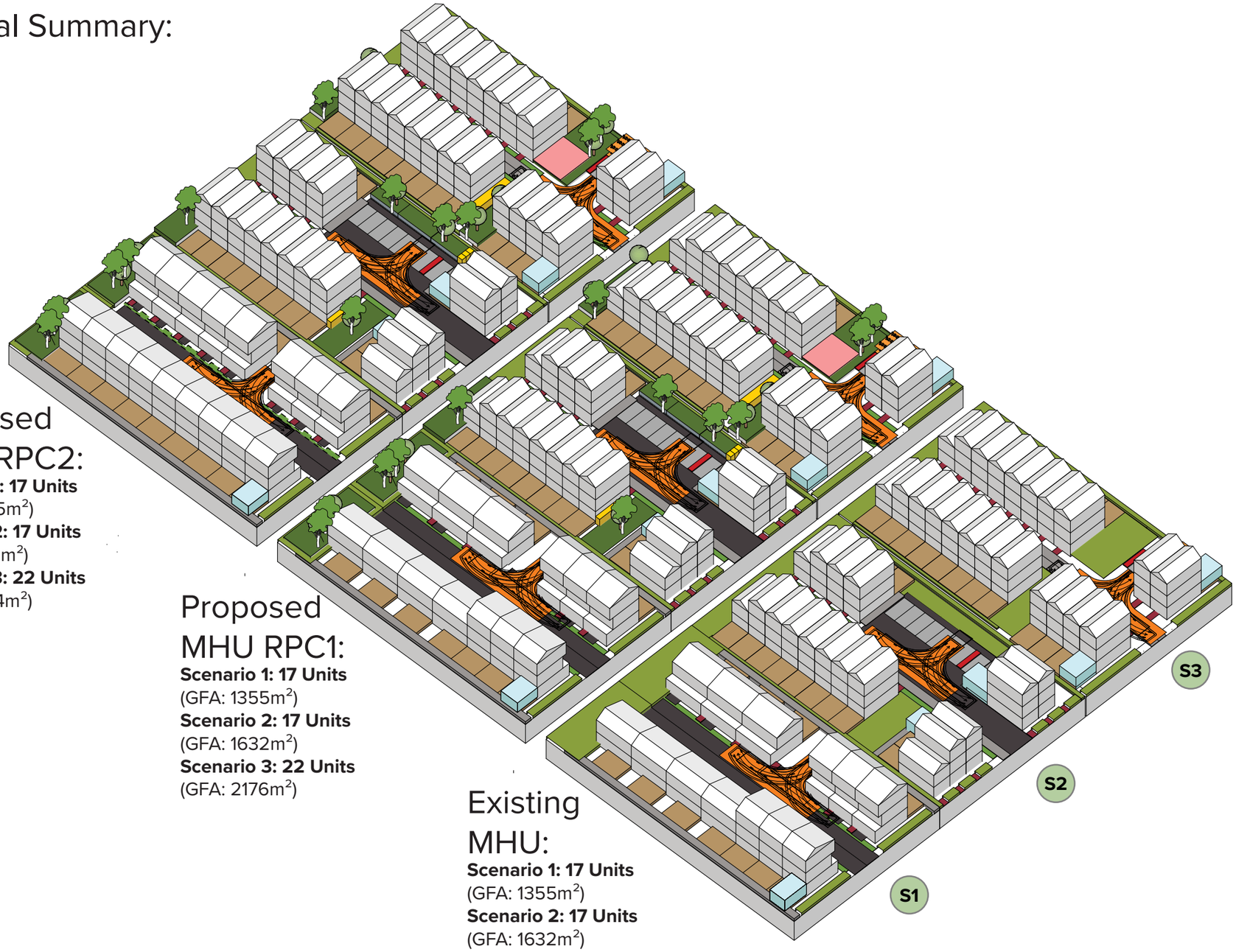
MHU Existing & MHU Proposed

Site 2 (36x44.5m = 2160m^2) Arterial Summary:

S1 **Scenario 1**
Vehicle Accessway

S2 **Scenario 2**
Grouped Car Parking

S3 **Scenario 3**
Pedestrian Only Access



Proposed MHU RPC2:

Scenario 1: 17 Units
(GFA: 2295m^2)
Scenario 2: 17 Units
(GFA: 1700m^2)
Scenario 3: 22 Units
(GFA: 2244m^2)

Proposed MHU RPC1:

Scenario 1: 17 Units
(GFA: 1355m^2)
Scenario 2: 17 Units
(GFA: 1632m^2)
Scenario 3: 22 Units
(GFA: 2176m^2)

Existing MHU:

Scenario 1: 17 Units
(GFA: 1355m^2)
Scenario 2: 17 Units
(GFA: 1632m^2)
Scenario 3: 22 Units
(GFA: 2176m^2)

Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

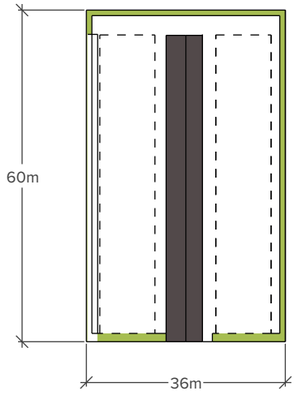
RPC Terrace House Study

MHU Existing & MHU Proposed

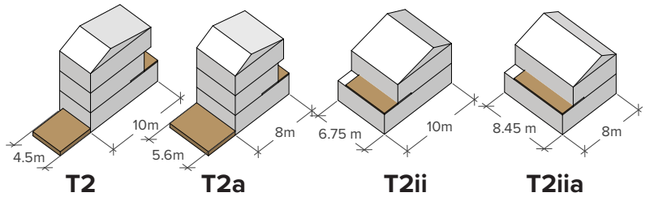
Standards Comparison

Site 2 + Scenario 1 <Arterial>:

36x60m, 2160m^2
Vehicle Accessway



Terrace House Typologies:



Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
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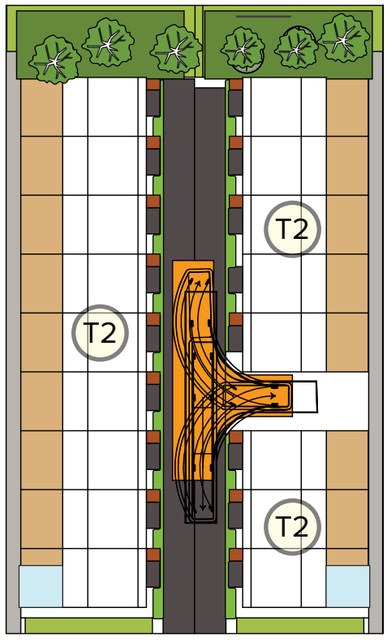
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:

RPC2



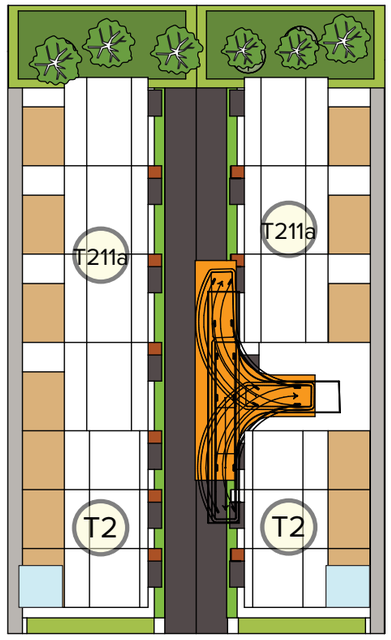
Building Coverage: 765m^2
(Standard: 45% <972m^2)
Terrace Type: 17xT2
Total Units: 17
Total Bedrooms: 54
Occupancy: 68
GFA: 2295m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: <1080m^2
(Standard: 50% <1080m^2)
Building Footprints: 765m^2

MHU Proposed:

RPC1

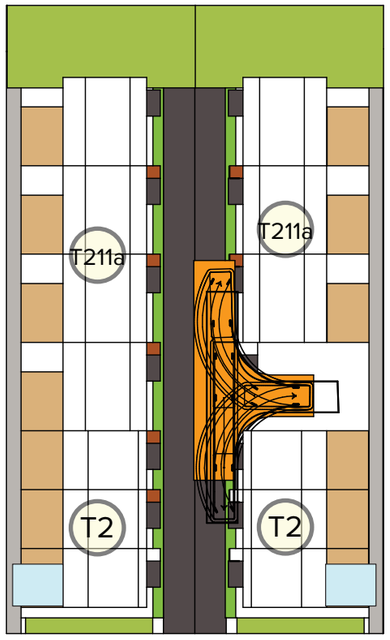


Building Coverage: 765m^2
(Standard: 45% <972m^2)
Terrace Type: 6xT2, 7xT2iia
Total Units: 13
Total Bedrooms: 39
Occupancy: 49
GFA: 1755m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: <1080m^2
(Standard: 50% <1080m^2)
Building Footprints: 765m^2

MHU Existing:



Building Coverage: 765m^2
(Standard: 45% <972m^2)
Terrace Type: 6xT2, 7xT2iia
Total Units: 13
Total Bedrooms: 39
Occupancy: 49
GFA: 1755m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. LA in POLs: 210m^2

Impervious Area: <1080m^2
(Standard: 50% <1080m^2)
Building Footprints: 765m^2

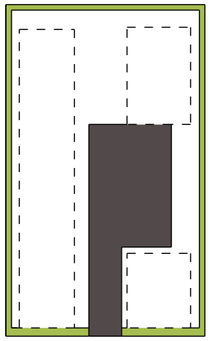
RPC Terrace House Study

MHU Existing & MHU Proposed

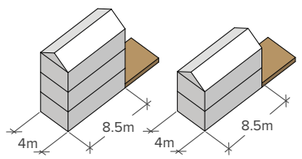
Standards Comparison

Site 2 + Scenario 2 <Arterial>:

36x60m, 2160m^2
Grouped Car Parking



Terrace House Typologies:

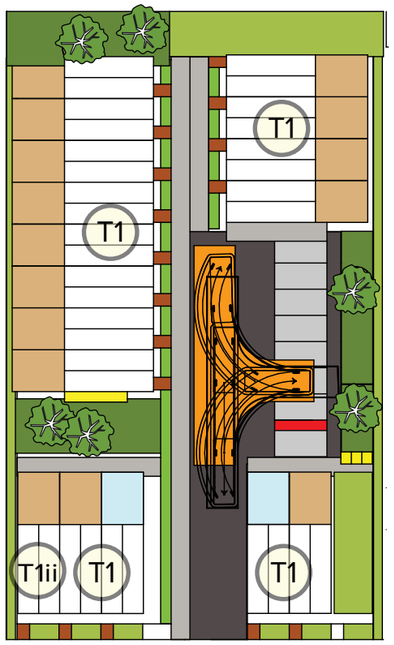


Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:

RPC2



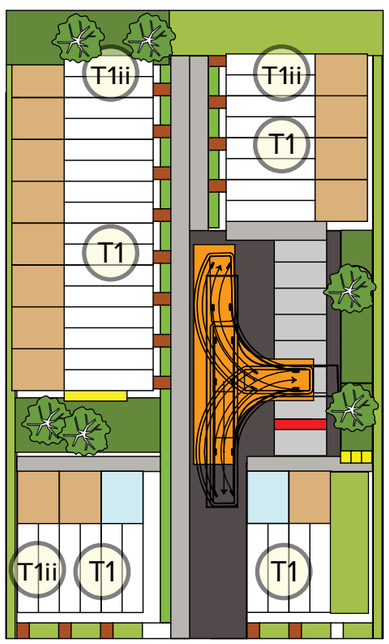
Building Coverage: 578m^2
(Standard: 45% <972m^2)
Terrace Type: 16xT1, 1xT1ii
Total Units: 17
Total Bedrooms: 50
Occupancy: 63
GFA: 1700m^2

Landscaped Area: 760m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: 858m^2
(Standard: 50% <1080m^2)
Building Footprints: 578m^2
Vehicle Manoeuvring: 280m^2

MHU Proposed:

RPC1

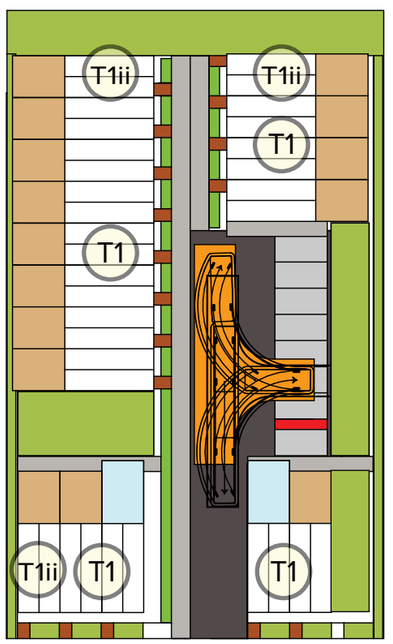


Building Coverage: 578m^2
(Standard: 45% <972m^2)
Terrace Type: 14xT1, 3xT1ii
Total Units: 17
Total Bedrooms: 48
Occupancy: 60
GFA: 1632m^2

Landscaped Area: 760m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: 858m^2
(Standard: 50% <1080m^2)
Building Footprints: 578m^2
Vehicle Manoeuvring: 280m^2

MHU Existing:



Building Coverage: 578m^2
(Standard: 45% <972m^2)
Terrace Type: 14xT1, 3xT1ii
Total Units: 17
Total Bedrooms: 48
Occupancy: 60
GFA: 1632m^2

Landscaped Area: 760m^2
(Standard: 35% >756m^2)
inc. LA in POLs: 200m^2
& non-vegetated LA: 42m^2

Impervious Area: 858m^2
(Standard: 50% <1080m^2)
Building Footprints: 578m^2
Vehicle Manoeuvring: 280m^2

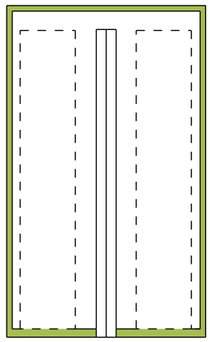
RPC Terrace House Study

MHU Existing & MHU Proposed

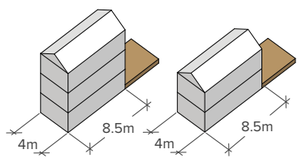
Standards Comparison

Site 2 + Scenario 3 <Arterial>:

36x60m, 2160m^2
Pedestrian Only Access



Terrace House Typologies:

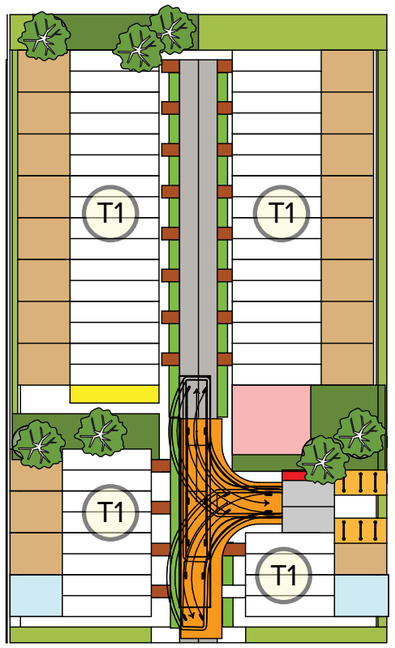


Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:

RPC2



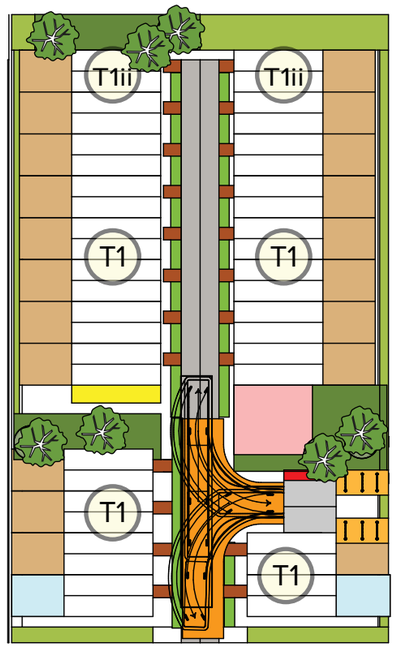
Building Coverage: 748m^2
(Standard: 45% <972m^2)
Terrace Type: 22xT1
Total Units: 22
Total Bedrooms: 66
Occupancy: 83
GFA: 2244m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: 816m^2
(Standard: 50% <1080m^2)
Building Footprints: 748m^2

MHU Proposed:

RPC1

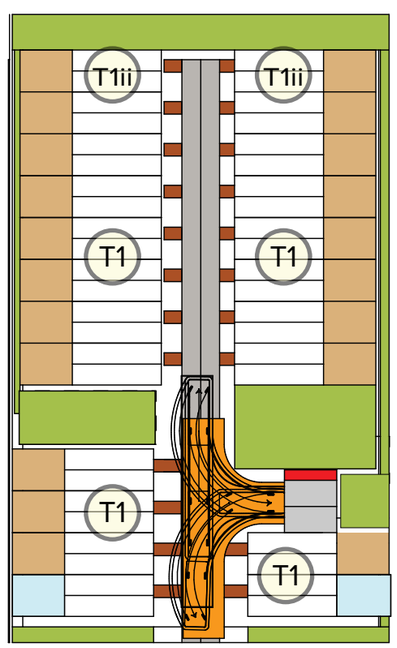


Building Coverage: 748m^2
(Standard: 45% <972m^2)
Terrace Type: 20xT1, 2xT1ii
Total Units: 22
Total Bedrooms: 64
Occupancy: 80
GFA: 2176m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. Deep Soil Area: 216m^2

Impervious Area: 816m^2
(Standard: 50% <1080m^2)
Building Footprints: 748m^2

MHU Existing:



Building Coverage: 748m^2
(Standard: 45% <972m^2)
Terrace Type: 20xT1, 2xT1ii
Total Units: 22
Total Bedrooms: 64
Occupancy: 80
GFA: 2176m^2

Landscaped Area: 770m^2
(Standard: 35% >756m^2)
inc. LA in POLs: 400m^2

Impervious Area: 816m^2
(Standard: 50% <1080m^2)
Building Footprints: 748m^2

RPC Terrace House Study

MHU Existing & MHU Proposed

Site 3 (15x44.5m = 667.5m^2) Summary:

S1 **Scenario 1**
Vehicle Accessway

S2 **Scenario 2**
Grouped Car Parking

S3 **Scenario 3**
Pedestrian Only Access

Proposed MHU RPC2:

Scenario 1: 2 Units
(GFA: 270m^2)
Scenario 2: 4 Units
(GFA: 374m^2)
Scenario 3: 6 Units
(GFA: 612m^2)

Proposed MHU RPC1:

Scenario 1: 1 Unit
(GFA: 135m^2)
Scenario 2: 4 Units
(GFA: 306m^2)
Scenario 3: 6 Units
(GFA: 510m^2)

Existing MHU:

Scenario 1: 1 Unit
(GFA: 135m^2)
Scenario 2: 4 Units
(GFA: 272m^2)
Scenario 3: 6 Units
(GFA: 408m^2)

Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

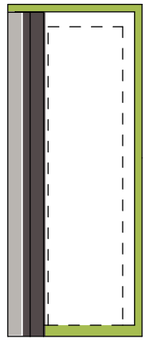
RPC Terrace House Study

MHU Existing & MHU Proposed

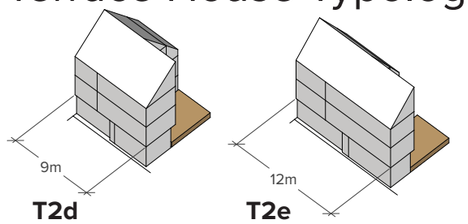
Standards Comparison

Site 3 + Scenario 1:

15x44.5m, 667.5m^2
Vehicle Accessway



Terrace House Typologies:



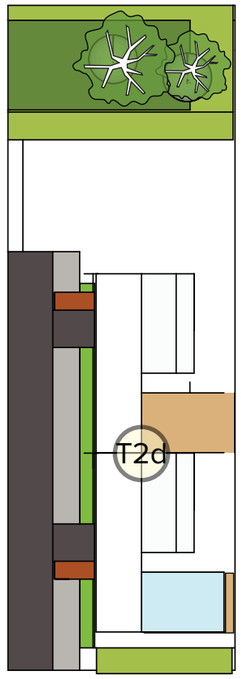
T2d **T2e**

Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:

RPC 2



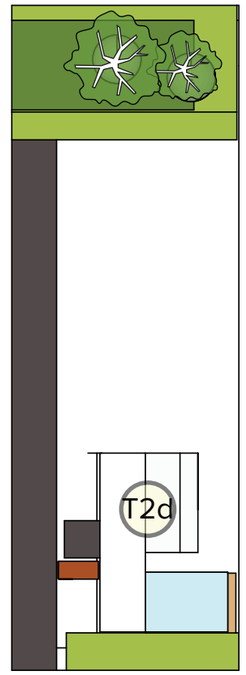
Building Coverage: 90m^2
(Standard: 45% <300m^2)
Terrace Type: 2xT2d
Total Units: 2
Total Bedrooms: 6
Occupancy: 8
GFA: 270m^2

Landscaped Area: >234m^2
(Standard: 35% >200m^2)
inc. Deep Soil Area: 67m^2

Impervious Area: 90m^2
(Standard: 50% <334m^2)
Building Footprints: 90m^2

MHU Proposed:

RPC 1

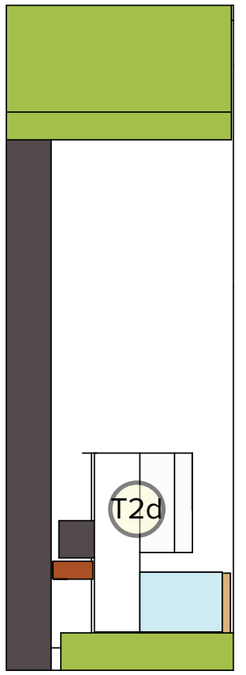


Building Coverage: 45m^2
(Standard: 45% <300m^2)
Terrace Type: 1xT2e
Total Units: 1
Total Bedrooms: 3
Occupancy: 4
GFA: 135m^2

Landscaped Area: >234m^2
(Standard: 35% >234m^2)
inc. Deep Soil Area: 67m^2

Impervious Area: 45m^2
(Standard: 50% <334m^2)
Building Footprints:45m^2

MHU Existing:



Building Coverage: 45m^2
(Standard: 45% <300m^2)
Terrace Type: 1xT2e
Total Units: 1
Total Bedrooms: 3
Occupancy: 4
GFA: 135m^2

Landscaped Area: >234m^2
(Standard: 35% >234m^2)

Impervious Area: 45m^2
(Standard: 50% <334m^2)
Building Footprints:45m^2

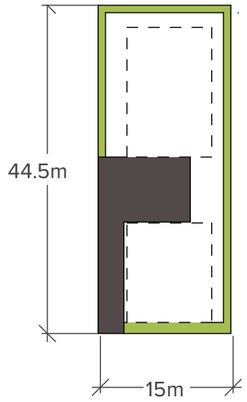
RPC Terrace House Study

MHU Existing & MHU Proposed

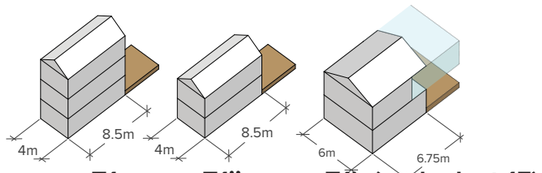
Standards Comparison

Site 3 + Scenario 2:

15x44.5m, 667.5m^2
Grouped Car Parking



Terrace House Typologies:



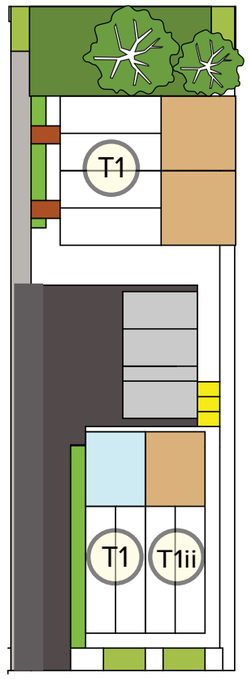
T1 **T1ii** **T1b (outlook at 1F)**

Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:

RPC 2



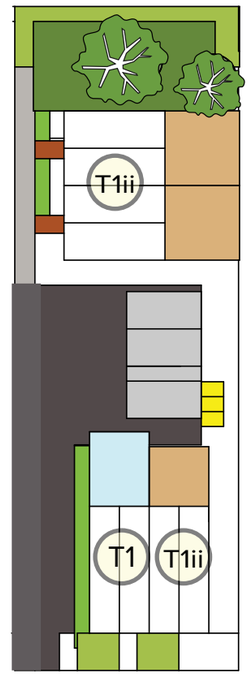
Building Coverage: 136m^2
(Standard: 45% <300m^2)
Terrace Type: 3xT1, 1xT1ii
Total Units: 4
Total Bedrooms: 11
Occupancy: 14
GFA: 374m^2

Landscaped Area: >234m^2
(Standard: 35% >234m^2)
inc. Deep Soil Area: 67m^2

Impervious Area: 246^2
(Standard: 50% <334m^2)
Building Footprints:136m^2
Vehicle Manoeuvring: 110m^2

MHU Proposed:

RPC 1

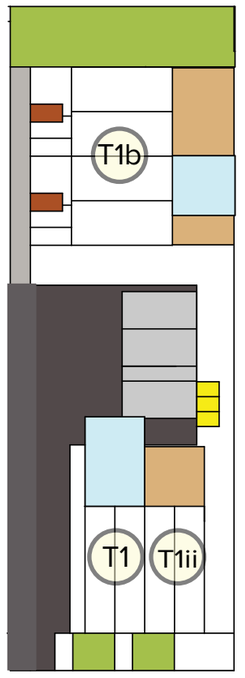


Building Coverage: 136m^2
(Standard: 45% <300m^2)
Terrace Type: 1xT1, 3xT1ii
Total Units: 4
Total Bedrooms: 9
Occupancy: 11
GFA: 306m^2

Landscaped Area: >234m^2
(Standard: 35% >234m^2)
inc. Deep Soil Area: 67m^2

Impervious Area: 246m^2
(Standard: 50% <334m^2)
Building Footprints:136m^2
Vehicle Manoeuvring: 110m^2

MHU Existing:



Building Coverage: 136m^2
(Standard: 45% <300m^2)
Terrace Type: 1xT1, 1xT1ii, 2xT1b
Total Units: 4
Total Bedrooms: 8
Occupancy: 10
GFA: 272m^2

Landscaped Area: >234m^2
(Standard: 35% >234m^2)

Impervious Area: 246m^2
(Standard: 50% <334m^2)
Building Footprints: 136m^2
Vehicle Manoeuvring: 110m^2

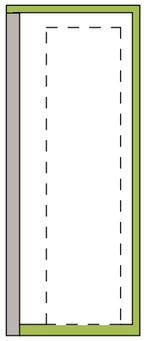
RPC Terrace House Study

MHU Existing & MHU Proposed

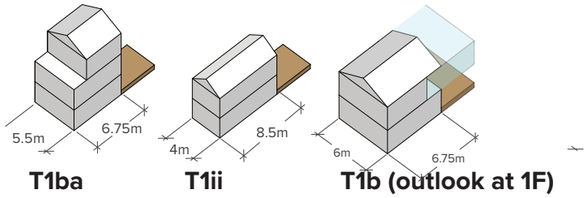
Standards Comparison

Site 3 + Scenario 3:

15x44.5m, 667.5m^2
Pedestrian Only Access



Terrace House Typologies:



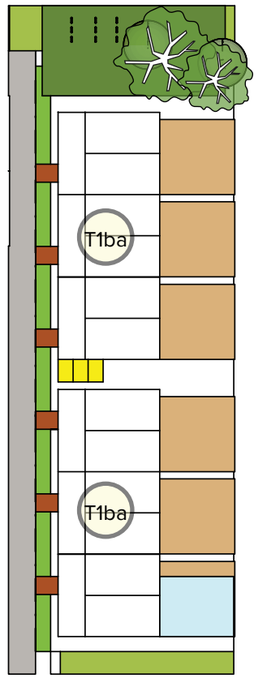
T1ba **T1ii** **T1b (outlook at 1F)**

Key:

- Outlook Space (Primary 6x4, 5x4)
- Private Outdoor Living Space - POLs (20m^2)
- Landscaped Area (35%)
- Landscaped Area in POLs (varies)
- Non-vegetated Landscaped Area (<9%)
- Safety/Privacy Buffer (1m)
- Deep Soil + Canopy Tree Area (10%)
- Communal Outdoor Living Space (20+ units)
- Bike Storage (20+ units)
- 6.3m Van Loading & Manoeuvering (10+ units)
- Waste Storage (1.4m^2 p/unit or Communal)
- Accessible Carspace (1 for 10-19 & 2 for 20-29 units)
- Grade Separated Footpath (1.8, 1.4 & 1.2m)
- Delineated Footpath (1m)

MHU Proposed:

RPC 2



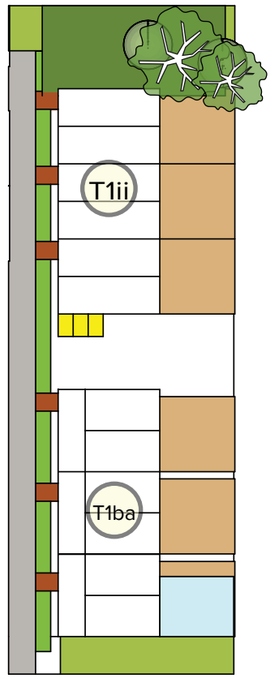
Building Coverage: 204m^2
(Standard: 45% <300m^2)
Terrace Type: 6xT1ba
Total Units: 6
Total Bedrooms: 18
Occupancy: 23
GFA: 612m^2

Landscaped Area: 234m^2
(Standard: 35% >234m^2)
inc. Deep Soil Area: 67m^2

Impervious Area: 204m^2
(Standard: 50% <334m^2)
Building Footprints: 204m^2

MHU Proposed:

RPC 1

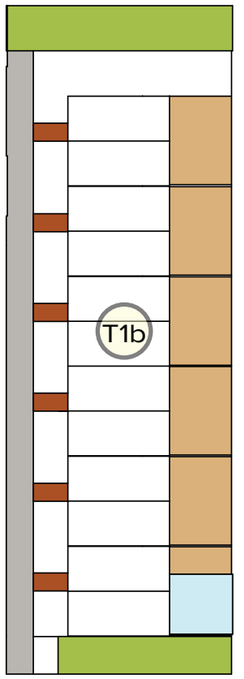


Building Coverage: 204m^2
(Standard: 45% <300m^2)
Terrace Type: 3xT1ba, 3xT1ii
Total Units: 6
Total Bedrooms: 15
Occupancy: 19
GFA: 510m^2

Landscaped Area: 234m^2
(Standard: 35% >234m^2)
inc. Deep Soil Area: 67m^2

Impervious Area: 204m^2
(Standard: 50% <334m^2)
Building Footprints: 204m^2

MHU Existing:



Building Coverage: 204m^2
(Standard: 45% <300m^2)
Terrace Type: 6xT1b
Total Units: 6
Total Bedrooms: 12
Occupancy: 15
GFA: 408m^2

Landscaped Area: 234m^2
(Standard: 35% >234m^2)

Impervious Area: 204m^2
(Standard: 50% <334m^2)
Building Footprints: 204m^2

APPENDIX 3 - PC120 – WELL-FUNCTIONING URBAN ENVIRONMENT OUTCOMES - TARGETED ANALYSIS

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1.0 Introduction

This options analysis paper sets out how PC120 gives effect to a well-functioning urban environment by updating and calibrating standards that deliver liveability and climate resilience at higher densities. The package draws on the Section 35 monitoring programme, the medium density residential standards lineage under the RMA, the NPSUD, and the RPS's climate direction. It focuses on where and how growth occurs: concentrating capacity in walkable catchments and other strategic locations (centres and frequent-transit corridors), and shaping built form so taller development remains workable, safe, and pleasant.

In doing so, the plan responds to NPSUD Policy 3(d) by enabling building heights and densities commensurate with accessibility and demand, while remaining responsive to NPSUD Policy 1, the characteristics of a well-functioning urban environment (housing choice and affordability over time, good access to jobs and services, reduced emissions and vehicle kilometres traverlled (VKT), resilience to natural hazards and climate change, high-quality urban form and amenity, and efficient infrastructure use).

The standards therefore emphasise quantity and quality of housing in high-density situations, responding to the ongoing investment in public transport adopting accepted transit-oriented development principles. Quality built environment outcomes focus on: outlook and outdoor-living space calibrated for apartments; windows-to-street and privacy buffers for safe, active edges; deep-soil and canopy requirements for heat mitigation and stormwater infiltration and evapotranspiration; and targeted upper-level modulation that works with HIRB and setback controls. Together, these methods enable the capacity promulgated in RMA Scheduled 3C to be accommodated in the right places and in way that maintains the everyday qualities, sunlight, privacy, street legibility, and green relief, that make intensification consistent with, and as envisaged by, the RPS and NPSUD.

2.0 Background

2.1 Legislative background

The overall background of the new legislation and the NPSUD has been set out in the section 32 evaluation above. Of most relevance to this options analysis is the requirement to provide at least the same amount of housing capacity as would have been enabled if PC78 were made operative (Schedule 3C, clause 4(1)(a)) and giving effect to NPSUD including Policy 3, and the RPS.

2.2 Regional Policy Statement

The RPS incorporates the NPSUD concept of a well-functioning urban environment, together with direction on urban climate resilience and qualifying matters, through amendments to Chapter B, particularly B2 Urban growth and form, made operative in December 2024.

The RPS frames well-functioning urban environments through a quality, compact urban form: most growth is directed to centres and corridors and to places with good public transport and services, so people can access jobs, education, and daily needs efficiently. It emphasises efficient use of existing infrastructure, supporting the centres hierarchy, improving transport choice, and reducing adverse environmental effects (including climate-responsive development). It also expects sufficient development capacity and housing choice in appropriate locations, generally within the Rural Urban Boundary, while safeguarding rural values and productive land.

A quality built environment is about fit to place and long-term performance. The RPS expects subdivision, use, and development to respond to site and area characteristics; reinforce the planned form of centres and corridors; provide choice and opportunity; and maximise efficient use of land, energy, and infrastructure. It seeks adaptable, resilient buildings and neighbourhoods with strong street and public-space relationships, good sunlight and daylight, safe and accessible environments, and design that manages effects such as visual dominance and privacy, so built form is context-responsive and durable.

The intensification elements of the proposed change are evaluated against the outcomes sought by the RPS for well-functioning urban environments, especially as it relates to intensification in strategic locations.

2.4 Section 35 Monitoring - key findings relevant to liveability and resilience (amenity trends, implementation feedback)

The Section 35 programme evaluates how efficiently and effectively AUP provisions are delivering RPS outcomes across 34 topics, reported in tranches from 2022–2024. It produces technical and summary reports that explain methods, indicators, findings and recommendations, and contains material intended to inform plan changes and future reviews.

For built environment topics, the primary evidence base is the resource consent decisions database, supported by building consent data and geospatial information; case-study sampling is used where volumes are high. Most datasets span the period between 2016–2020/21. The programme emphasises transparency about data limits and attribution and suggests that outcomes may reflect factors beyond the AUP. Confidence levels in the monitoring can also be constrained by sample sizes and system gaps and therefore and findings must be read with stated limitations. In short, evidence should guide calibration but avoid over-certain conclusions where the record is incomplete.

Amenity and implementation signals relevant to a well-functioning urban environment include:

- development often under-shooting permitted height in THAB zone during the study window, with typology and height in relation to boundary/lot-width interactions influential; and
- mixed compliance with outlook standards and balcony configurations affecting privacy and spaciousness, prompting recommendations to treat outlook as a core standard and measure from balcony edges where relevant.

These evidence based monitoring-led insights support a standards package that achieves clear, baselines (e.g., outlook, windows-to-street, waste / servicing), resilience oriented green infrastructure, and built form modulation, so higher densities in walkable catchments still deliver quality built environments, daylight and sunlight access and streetscape quality. Notably, even

where later mandatory amendments have superseded some advice, s35 findings remain a valid point-in-time evidence source for s32 and for process improvements.

2.5 Climate resilience direction in the RPS and integration points in the zone standards

The policies of the NPSUD regarding well-functioning urban environments directs growth to places with good access and transport choice and expects development patterns that support reductions in greenhouse-gas emissions and improve resilience to climate change. The RPS now embeds that direction, explicitly integrating climate resilience within the quality compact urban form framework, so density enabled by NPSUD Policy 3 is paired with tools that manage natural hazard exposure and neighbourhood amenity. The policies enable height and capacity in walkable catchments, while shaping form and site performance so streets, people, and networks cope better with heat, stormwater and hazard events.

The MHS, MHU, THAB and business zone package translates that policy framework into standards depending on zone function and spatial allocation that are consistent with the degree of change and level of development anticipated whilst implementing respective built form controls and in residential include space for vegetated areas and deep soil with canopy trees to cool sites, moderate built form bulk and thus enabling sunlight access.

Key integration points include:

- Deep soil and canopy trees (minimum 10% site area with calibrated tree sizes) to reduce urban heat and enable on-site infiltration;
- Maximum impervious area (70%) and a strengthened landscaped area purpose to temper runoff and heat;
- Setbacks from streams, lakes and the coast to protect water quality and manage flood and coastal risks; and
- Street-oriented massing with upper-level modulation (e.g., step-backs above 22 m in walkable catchments) supported by outlook space, windows-to-street/accessways and buffers to secure sunlight/daylight and passive surveillance at higher densities.

All standards are to be complied with and together these provide development feasible levers that align built form with climate and amenity outcomes anticipated by the RPS.

Notably, the deep soil / canopy tree approach stems from both s32 evidence and s35 findings on gaps in tree provision under legacy rules. The draft MHS, MHU and THAB zone descriptions and objectives now make climate resilience an explicit outcome of development scale and layout. The package therefore advances well functioning urban environments by enabling transit oriented development capacity while strengthening on site resilience and street quality. This is consistent with the amended RPS (Objective B2.2.1(1)) and the liveability emphasis in the updated THAB chapter.

3.0 How to give effect to the NPSUD and the Amendment Act within the context of the RPS?

Enabling the NPSUD and the 2025 Amendment Act means a step-change in form and pattern of intensification, with a significant shift to enable greater intensity in walkable catchments at, rapid transit stops, centres and in the Frequent Transit Network Corridor intensification areas. Taller buildings, higher site utilisation, and more resident and worker activity will follow. On the ground, this shifts the amenity envelope: changes to streetscape character, more urban built form, different outlook and privacy relationships, changed sunlight access and shadow, and potential urban heat effects from increased impermeable areas and structures. The RPS requires that this uplift must also delivers a quality compact urban form and climate-responsive development, consequently PC120 must enable mandated capacity while keeping streetscape quality, neighbour amenity and resilience in balance.

Giving effect in this context is a two-part task.

1. Ensure capacity is evidenced to retain at least PC78 development capacity and explicitly enable the increased capacity including 3-storey terrace development and apartments in 6, 10 and 15-storey outcomes in the right locations.
2. A set of design standards that are proportionate to height and context, avoid over-regulation, and directly support RPS outcomes for a well-functioning urban environment.

This approach gives effect to the NPSUD and the Amendment Act while remaining squarely within the RPS frame: compact growth that is context-responsive, supports mode shift and infrastructure efficiency, and is designed for long-term environmental performance.

4.0 Evidence Base and Method

4.1 Evidence base

The evidence base for PC78 contains many valid methods and standards that warrant consideration and re-evaluation to support the imperatives of the 2025 framework (the same capacity as PC78; and enable 10/15 storeys). The following contemplates the methods that are translatable to PC120 and those elements requiring re-evaluation.

1) What carries over from PC78

• Height enablement: 6 storeys, 22 m in walkable catchments based on floor-to-floor and roof/ground allowances, used to give effect to NPS-UD Policy 3(c).

• Inside walkable catchment urban form with buildings to street to prioritise streetscape and introduce tighter controls beyond ~21.5 m depth where more sensitive uses and respite from built development is anticipated.

• Outlook/daylight: principal living outlook depth of 6m by 4m on all levels to maintain a degree of separation and space between development and encouraging outlook over streets or to the rear, rather than to sides to maintain privacy/dominance management.

2) What changes are proposed under the 2025 framework

• Capacity imperatives: maintain at least PC78 capacity and explicitly enable 10/15 storeys at mapped locations.

• Control hierarchy: in areas enabled for taller buildings: apply a height in relation to boundary of 20m + 60-degrees along with tower, setback at upper floors and outlook space that deepens as buildings are taller to achieve 6-storey podiums and slender built form above 22 m on street and sensitive edges.

• Height in relation to boundary role: retained for inside and outside walkable catchments for development increased to provide for up to 6-storeys in THAB and outside walkable catchments stepping down at sensitive interfaces. MHU's height in relation to boundary is modified from the AUP(OP) to enable 3-storeys on more sites, but of a more refined dimension than the medium density residential standards height in relation to boundary standard.

4.2 Evaluation method

The method is designed to demonstrate responsiveness to NPSUD Policy 3(d) while remaining consistent with NPSUD Policy 3(c) and the amended RPS B2 outcomes. Options associated with each standard is assessed in section 5 using a consistent, evidence-based method covering:

(i) Capacity enabled;

(ii) Effectiveness for well-functioning urban environment outcomes;

(iii) Alignment with the RPS; and

(iv) Extent-necessary to achieve outcomes.

The method applies to the standards most material to well-functioning urban environment and Policy 3(d)—outlook space, outdoor living space, windows to street/private accessways, deep soil and canopy, and buffers to accessways.

5.0 Analysis of Standards

5.1 Outlook Space

Outlook space is the primary separation tool for dwellings, in standalone and terraces and apartments forms in the MHS, MHU and THAB zones, securing daylight, visual privacy and a sense of spaciousness without applying blunt setbacks. This standard works in combination with windows to-street and outdoor living space standards to enhance passive surveillance, keeping streets safe and active, and with daylight controls to manage dominance at upper levels. In

walkable catchments, height in relation to boundary and floor area ratio standards (where applicable) along with building setback at uppers floors modulate building form to contribute to sufficient quality built environment outcomes.

A clear outlook standard set at appropriate depths and widths avoids over-reliance on recession planes or other built form standards and preserves yield by allow building design and the placement of uses and activities within the building to optimise efficiency.

Design considerations

- THAB development up to 22m: principal living room 6 m depth × 4 m width; ground-floor principal living room may be 5 m where outlook is defined by a fence; bedrooms 3 m × 3 m; other habitable rooms 1 m × 1 m; depth measured perpendicular; width from largest window centre.
- Town Centre Zone; Local Centre Zone; Neighbourhood Centre Zone; Mixed Use Zone; Business Park Zone in walkable catchments: up to 22m, principal living room 6 m × 4 m.
- For Town Centre Zone; Local Centre Zone; Neighbourhood Centre Zone; Mixed Use Zone; Business Park Zone THAB development in walkable catchments more than 22 m calibrated separation per zone figure – ground to 12.5m outlook space = 6m x 4m; 12.5m – 22m outlook space = 8m x 4m; above 22m outlook space = 20m x 4m; for passive surveillance of the street and privacy, and to avoid overlooking of neighbouring sites and tower-to-tower separation.
- Standard to be complied for all residential developments. Pair with daylight control to manage within-site dominance.

Options considered

Option	Description	Benefits	Costs / Risks	Use
A1. Status quo (operative THAB)	6×4 Principal living room; 3×3 bedrooms; 1×1 other; width from glazing line;	Simple and well understood	Potential issues with taller buildings but increasing depths impacts on development yield.	Retain, but only for development up to 6-storeys
A2. Status quo (operative centres / business) And apply to THAB more than 6-storeys	walkable catchment centres/business: 6×4 to 22 m; calibrated (e.g., ~20×4 above 22 m consistent with Metropolitan Centre zone	Simple and well understood	Potential issues with taller buildings but increasing depths impacts on development yield	Retain and include for THAB development more than 6-storeys
C. Performance-only	No fixed depths; rely on assessment of effects and daylight modelling	Flexible on atypical sites	Uncertain; higher processing cost; variable outcomes	Fallback only

Section 32 mini-matrix

Criterion	Test	Rating	Notes
Schedule 3C cl4(1)(a) capacity	≥ PC78 capacity maintained	☑	Numeric settings preserve feasible lots
Schedule 3C cl4(1)(b)/(ba)	Enables 10/15-storey areas	☑	Walkable catchment calibration supports taller forms
NPS-UD Policy 3(c)/(d)	≥6 storeys & centre-consistent	☑	Outlook pairs with step-backs/floor area ratio
Extent necessary (QMs)	Targeted, proportional	☑	Depths tailored to form/context
s32(1)(b)	Efficient & effective	☑	Checkable; avoids over-regulation

Implementation notes

- Provide diagrams clarifying where to measure depth/width rule.
- Allow overlap of outlook spaces on the same wall plane; enable across streets/open space.
- Measure from glazing or balcony edge whichever is closer to address matters raised in s35 Monitoring Report in recognition that the measurement dimension reduce the practical separation distance between developments introducing privacy effects.
- Cross-reference daylight control and windows-to-street; reserve height in relation to boundary for sensitive interface at walkable catchment edge and lower density residential zones.

5.2 Outdoor living space

Outdoor living space secures functional, private or communal outdoor space for daily use, enabling solar access, complementing outlook and windows-to-street to deliver liveability at higher densities. In MHS, MHU and THAB outdoor living space contributes to liveability and play a role in maintaining streetscape quality and climate-responsive amenity, by enhancing access from common areas of dwellings these spaces can play a better role in enhance liveability and quality. The provision of communal outdoor living spaces in development of 20 or more dwellings will positively contribute to the health and safety of residents on-site.

Design considerations

- Ground-level dwellings (MHS, MHU and THAB): at least 20 m², no dimension < 4 m, gradient ≤ 1:20; if part provided as balcony/patio/roof terrace: ≥ 5 m² and ≥ 1.8 m minimum dimension.
- Above ground dwellings (MHS, MHU and THAB): ≥ 5 m² for studio/1-bed; ≥ 8 m² for 2+ bed; 1.8 m minimum dimension; balcony not required if net internal area ≥ 35 m² (studio) or ≥ 50 m² (1+ bed).

- Communal outdoor living space (≥ 20 dwellings): 10 m² per 5 dwellings, minimum dimension 4 m; at least 20 m² receives 3 hours sun between 9am–4pm on 21 June; gradient ≤ 1:20; may be split into ≤ 2 areas and must be communally accessible.
- South-of-building offset (ground outdoor living space): separate the southern boundary of the outdoor living space from any wall by 2 m + 0.9(h) where h is wall height (south = 135–225°).

Options considered

Option	Description	Benefits	Costs / Risks	Use
A. Status quo	Baseline private outdoor living space with limited communal requirement; no explicit winter-sun calibration	Simple; familiar	Sun-poor/under-sized spaces persist; variable outcomes	Not preferred
B. Calibrated numeric (preferred)	20 m²/4 m ground; 5–8 m² balcony by unit size; communal ratio with winter-sun test; south-offset rule	Checkable; usable MHS, MHU and; scalable to 10/15 storeys	More diagrams/drafting	Preferred
C. Performance based only	Effects-based sizing and sunlight modelling	Flexible on atypical sites	Uncertain; higher processing cost; inconsistent	Fallback only

Section 32 mini-matrix

Criterion	Test	Rating	Notes
Schedule 3C cl4(1)(a) capacity	≥ PC78 capacity maintained	☑	Communal option preserves yield
Schedule 3C cl4(1)(b)/(ba)	Enables 10/15-storey areas	☑	Numeric; integrates with step-backs/floor area ratio
NPS-UD Policy 3(c)/(d)	≥6 storeys & centre-consistent	☑	Amenity calibrated, not capacity-capping
Extent necessary (QMs)	Targeted, proportional	☑	Sunlight/usability focus; avoids blunt yards
s32(1)(b)	Efficient & effective	☑	Clear thresholds; consent certainty

Implementation notes

- Provide diagrams for balcony sizing, ground-outdoor living space dimensions and the south-of-building offset formula.
- Allow communal outdoor living space to overlap with deep-soil/landscaped areas; keep private outdoor living space free of servicing/parking.
- Measure related outlook from balcony edge; cross-reference windows-to-street and daylight controls.

5.3 Windows to street and private vehicle access and primary pedestrian access

Minimum street-edge glazing provides passive surveillance, legibility and activity at ground level while balancing privacy. It complements outlook, outdoor-living space and buffers so higher densities feel safe and welcoming in walkable catchments.

For multi-unit developments including apartments, deep floorplates and privacy-led ground floors often produce long blank façades and internalised lobbies. A single, checkable transparency ratio applied to public streets and private vehicle access and primary pedestrian access avoids design by appearance and improves perceived safety without affecting capacity.

Design considerations

- Minimum 20% glazing on ‘relevant façades’ facing: public streets/open spaces, public pedestrian/cycle links, private vehicle access and primary pedestrian access within the site.
- ‘Relevant façade’ = wall within 45° of the boundary it addresses; ratio measured over façade area between 0.8 m and 2.5 m above adjacent finished ground.
- What counts: windows and doors (vision panels); exclude opaque spandrels/films. Allow privacy treatments that remain see-through above ~1.2 m.
- Ground-floor residential privacy: pair with the 1 m planted buffer standard along private accessways; allow higher sill/transom treatment while maintaining 20% transparency.
- Corner/long frontages: apply to each relevant frontage; avoid continuous blank lengths > 8 m along private accessways.

Options considered

Option	Description	Benefits	Costs / Risks	Use
A. Street-only glazing	20% transparency to public streets only	Simple	Weak surveillance on internal lanes/entries	Not preferred
B. Street plus private accessways (preferred)	20% transparency to streets, public links, private vehicle and primary	Consistent Crime Prevention Through Environmental Design (CPTED)	Slightly more glazing on secondary edges	Preferred

	pedestrian access	benefits; legible entries		
C. Performance only	Design statement instead of a ratio	Flexible	Variable outcomes; low certainty; higher processing cost	Fallback only

Section 32 mini-matrix

Criterion	Test	Rating	Notes
Schedule 3C cl4(1)(a) capacity	Capacity unaffected	☑	Façade treatment only
Schedule 3C cl4(1)(b)/(ba)	Supports 10/15-storey areas	☑	Improves ground-floor quality without height penalty
NPS-UD Policy 3(c)/(d)	≥6 storeys & centre-consistent	☑	Activation and safety in walkable catchments
Extent necessary (QMs)	Targeted, proportional	☑	Applies only to exposed edges
s32(1)(b)	Efficient & effective	☑	Single clear ratio; easy to check

Implementation notes

- Provide clarity in standard for compliance.
- Coordinate with buffers to private accessways, refuse storage (not in front of glazing) and active-edge retail where provided.

5.4 Deep soil area and canopy tree and landscaped areas

Deep soil and canopy trees are the primary on-site climate-resilience lever in higher-density housing, providing cooling, carbon uptake, and stormwater infiltration, while also improving street amenity. Calibrated soil/tree metrics let developments with minimal capacity impact by allowing overlap with landscaped and communal open space.

When applied at development scale, the landscaped area alone often yields little canopy. In addition, s35 monitoring found trees on plans were frequently unplanted or failed to establish. A numeric soil percentage, minimum patch sizes and dimensions, and canopy tree specifications (with planting grades and landscape plans) lift delivery and survivability.

Design considerations

- Applicability: sites > 200 m² provide deep soil ≥ 10% of site area and canopy tree(s) per site area
- Minimum deep-soil patch (by site size): 20 m² / 2.5 m (200–600 m²); 30 m² / 3 m (601–1,500 m²); 50 m² / 4 m (≥1,501 m²).
- Canopy tree requirement: 1 small per 200 m² (8 m height / 6 m canopy / 120 L grade); 1 medium per 300 m² (10 m / 8 m / 160 L); 1 large or 2 medium per 500 m² (15 m / 12 m / 200 L).
- Overlap rules: deep soil may overlap with communal outdoor living space and landscaped area (but not with private outdoor living space); no obstructing structures above/below ground; show on a landscape plan with species, grades and canopy extents.
- Performance relief (constrained sites): provide equivalent canopy outcomes via adjacent deep-soil linkages or alternative greening (e.g., green roofs/walls) supported by assessment.

Options considered

Option	Description	Benefits	Costs / Risks	Use
A. Landscaped area only	No deep soil metric; trees optional	Developer flexibility	Low canopy; weak climate resilience; poor delivery	Not preferred
B. Calibrated soil plus canopy (preferred)	10% deep soil; patch sizes/dimensions by site size; tree numbers/specs; overlap with communal/landscaped areas	Deliverable canopy; minimal yield impact; checkable	More design coordination; tree establishment obligations	Preferred
C. Off site / roof greening offset	Allow green roofs/walls or off-site planting in lieu	Useful on very constrained sites	Lower resilience than in-ground trees; verification burden	Exceptional cases

Section 32 mini-matrix

Criterion	Test	Rating	Notes
Schedule 3C cl4(1)(a) capacity	≥ PC78 capacity maintained	☑	Overlap limits yield impact
Schedule 3C cl4(1)(b)/(ba)	Supports 10/15-storey areas	☑	Climate lever without height penalty
NPS-UD Policy 3(c)/(d)	≥6 storeys & centre-consistent	☑	On-site resilience within walkable catchment growth

Extent necessary (QMs)	Targeted, proportional	☑	Scaled by site bands; clear purpose
s32(1)(b)	Efficient & effective	☑	Numeric; plan-led delivery; enforcement-ready

Implementation notes

- Provide tables/diagrams for site-band patch sizes/dimensions and tree specifications; include example landscape plan content.
- Allow deep-soil/communal/landscaped overlaps in calculations; exclude private outdoor living space from deep-soil counts.
- Require evidence of planting grades and maintenance.
- Include a constrained-sites performance path referencing equivalent canopy outcomes and s35 monitoring learnings.

5.5 Safety and privacy buffer from private vehicle access and primary pedestrian access

A planted buffer between dwellings and internal lanes/paths protects privacy, reduces glare into habitable rooms, and clarifies pedestrian / vehicle movement while retaining passive surveillance. It complements windows-to-street and outdoor living space so higher densities feel comfortable and legible.

When applied at development scale, front doors and windows opening directly onto shared lanes or primary internal paths can generate conflicts and privacy complaints. A small, consistent buffer provides separation without materially affecting capacity or floorplate efficiency.

Design considerations

- Minimum 1.0 m buffer between any dwelling façade/entrance and private vehicle access and/or primary pedestrian access within the site.
- Planting within the buffer: shrubs/groundcovers to an average ≥ 400 mm height (no more than 600 mm where subject to clear width / height requirements from E27). Maintain clear sightlines at driveways and intersections.
- Keep clear of buildings, parking, cycle parks and waste staging (except at designated crossing points). Allow door swing/entry stoops/awnings where safe.
- Coordination: pair with 20% glazing to relevant façades for CPTED benefits; align with accessible routes and emergency responder requirements for access.

Options considered (shortlist)

Option	Description	Benefits	Costs / Risks	Use
A. No buffer	Rely on case-by-case design assessment	Maximises interior area	Recurring privacy/safety conflicts; inconsistent outcomes	Not preferred
B. 1.0m planted buffer (preferred)	Simple numeric setback with low planting and integrate with clear width / height requirements in E27	Predictable; low cost; CPTED gain	Minor space take; coordination with entries required	Preferred
C. Wider buffer (1.5 o 2.0m) at sensitive edges	Greater separation next to primary lanes or schools/elderly housing	More space cost; potential yield loss	Use selectively by condition/gateway location	Not preferred

Section 32 mini-matrix

Criterion	Test	Rating	Notes
Schedule 3C cl4(1)(a) capacity	≥ PC78 capacity maintained	☑	Slim buffer; negligible yield impact
Schedule 3C cl4(1)(b)/(ba)	Supports 10/15-storey areas	☑	Ground-plane amenity only
NPS-UD Policy 3(c)/(d)	≥6 storeys & centre-consistent	☑	Improves safety/comfort in areas of intensification
Extent necessary (QMs)	Targeted, proportional	☑	Applies only along internal access routes
s32(1)(b)	Efficient & effective	☑	Single metric; easy to administer

Implementation notes

- Provide a site plan showing buffer extents, planting schedule and driveway sightlines; avoid locating waste stores within buffer.

- Allow tactical widening at building entries; integrate tactile treatments where a buffer intersects accessible routes.
- Where transport corridor rules (e.g., E27) impose visibility limits, use planting species/height controls to retain sight distance.

6.0 Resilience

Auckland's strategic intensification approach, focusing higher densities in walkable catchments around rapid and frequent transit and within the centres network, aligns with the RPS direction for a quality, compact urban form and the NPSUD requirement to enable growth where accessibility and services are highest. Concentrating development in these locations improves access to jobs, education and daily needs, supports transport choice, and reduces adverse environmental effects through climate-responsive urban form.

Directing density to areas within walkable catchments and along identified corridors reduces vehicle kilometres travelled (VKT) by shortening trip lengths and increasing feasible mode share for public transport and active modes. This approach explicitly supports reductions in greenhouse gas emissions, as recognised in the NPSUD, and makes best use of existing infrastructure, consistent with the RPS and the THAB zone's purpose of efficiently using land adjacent to centres and public transport.

Resilience is also improved by locating the greatest capacity in less-vulnerable places, that is, within the centres / corridors and station catchments hierarchy, while recognising qualifying matters and natural hazard constraints elsewhere. The amended RPS integrates well-functioning urban environment and climate resilience objectives, allowing plan methods to concentrate height and density in strategic locations and moderate interfaces where sensitivity or hazard exposure is higher. This yields a city form that is adaptable and robust under climate stress (heat, intense rainfall), with standards such as deep soil and canopy trees mitigating urban heat and enabling on-site stormwater infiltration.

The PC120 package operationalises this strategy by pairing capacity-enabling height and increases in the level of development enabled with calibrated design controls including outlook space, daylight, outdoor living space, windows-to-street, buffers to private accessways, and deep soil / canopy provisions so that intensification delivers streetscape quality, privacy, sunlight/daylight, safety, deep soil and tree canopy. This integrated method is consistent with s32's efficiency lens (achieve objectives at lowest total cost) and is supported by the s35 monitoring framework as evidence for targeted improvements to plan methods.

In summary, concentrated density in strategic locations advances mode shift in accessibility, emissions reduction, service efficiency and hazard resilience, while the THAB standards framework maintains quality built environment outcomes as development intensifies in strategic locations.

7.0 Section 32 evaluation - summary

7.1 Reasonably practicable options and reasons for the preferred approach

The plan must enable at least PC78 capacity and the 10/15-storey outcomes in mapped areas while delivering a well-functioning urban environment and climate resilience under the RPS and NPSUD. The core choice is between:

(i) Legacy controls which have not provide the levels of intensification in some zones and areas than is anticipated;

(ii) A performance-only regime reliant on case-by-case assessment; or

(iii) An integrated package that pairs a range of bulk and location controls include HIRB and other targeted form controls that deliver good quality outcomes, liveability and resilience standards.

- Option 1 - Status quo / legacy controls (not preferred). A largely unchanged regime (uniform yards; HIRB as primary shaper; limited calibration in walkable catchments) is simple but does not necessarily enable the level of capacity anticipate on typical MHU and THAB lots or produces amenity gaps at height (privacy, sunlight, street quality), and under development e.g.: THAB used for terraces or standalone dwellings. It performs poorly against s32 efficiency (more land consumed for the same yield) in the context of the Amendment Act and the NPS-UD and does not reliably enable the legislated 10 and 15-storey development in identified and other strategic locations.

- Option 2 - Performance-only (not preferred). A largely effects-based approach (design statements, bespoke sunlight/daylight modelling, case-by-case separations) offers flexibility on atypical sites but reduces certainty, increases processing cost and time, and risks inconsistent outcomes. It weakens the ability to demonstrate up-front enablement of height bands and undermines transparency needed for hearings and implementation.

- Option 3 – an integrated package (preferred). In walkable catchments, adopt a height in relation to boundary of 20m + 60-degrees along with tower, setback at upper floors and outlook space that deepens as buildings are taller. These controls in combination achieve 6-storey podiums and slender built forms above 22 m on street and sensitive edges, managing effects on neighbours to avoid overspill effects and manage the transition of areas to higher density built forms. In MHU use alternative height in relation to boundary and THAB in 6-storeys use height in relation to boundary that encourages building bulk to the street / front 21.5m of a site. All standards are to be complied with for residential developments and outlook space is a primary separation tool and paired with outdoor living space (private and communal), building coverage and landscaped area. Require windows to street/primary pedestrian access and a 1 m planted buffer to internal lanes for safety and privacy. Deliver climate resilience through deep soil and canopy tree requirements that overlap with communal open space to minimise yield impact. At the edge of walkable catchments and at the interface with lower density residential zones use a tower setback standard proportionately at this edge only to manage effects.

- Reasons – Option 3 best meets s32 because it is:
  (a) Effective: it demonstrably enables the required height bands and concentrates capacity where access is highest;
  (b) Efficient: simple, checkable standards reduce assessment cost and avoid over-regulating bulk where it is not needed; and
  (c) Proportionate: controls are targeted to the issues they solve (streetscape quality, privacy/daylight, resilience) and relaxed where unnecessary.

It aligns with the RPS quality-compact direction and NPS-UD emissions/resilience outcomes by focusing density in strategic locations, supporting mode shift and efficient infrastructure use, and moderating effects at sensitive interfaces. It is also implementable: the standards lend themselves to clear diagrams and compliance notes, reduce litigation risk through predictable envelopes, and integrate with monitoring so future calibration can be evidence-led.

8.0 Conclusion

This targeted evaluation of the integrated package of standards promoted in PC120 has determined that the methods give effect to NPSUD Policy 3(c) and is expressly responsive to Policy 3(d) by enabling greater heights and densities in the places with the greatest accessibility including walkable catchments, rapid and frequent transit areas, and other mapped strategic locations under the Amendment Act. Within these areas, the development standards will enable the 10 and 15-storey building height outcomes while sustaining liveability and climate resilience anticipated by the RPS and the contribution to NPSUD Policy 1 attributes of a well-functioning urban environment (choice over time, access to jobs and services by low-emissions modes, efficient infrastructure, and resilience to natural hazards).

Against the section 32 tests, the preferred approach is effective (it demonstrably enables the mapped heights where accessibility and demand are highest, as required by NPS-UD Policy 3(c) and 3(d)), efficient (clear, checkable standards that lower processing effort), and proportionate (controls are targeted to effects and moderated at sensitive interfaces and outside walkable catchments). The core set of standards including outlook space, outdoor living space, windows to street/private access, deep soil and canopy, and buffers to internal access work as a package to promote quality living environment outcomes. These include sunlight access, privacy, street quality and urban cooling without the application of rigid, capacity suppressing methods.

Taken together, the package is the most appropriate means to give effect to NP-UD Policy 3(c) and 3(d) while maintaining the everyday quality and resilience needed for intensified, transit-oriented neighbourhoods.

Monitoring under s35 can act as the recalibration test if any standard materially suppresses capacity or under delivers quality and amenity.

ATTACHMENT 1 - AUCKLAND COUNCIL. S35 MONITORING REPORT, B2.3 QUALITY BUILT ENVIRONMENT OF THE AUCKLAND REGIONAL POLICY STATEMENT.JULY 2022

AUCKLAND COUNCIL

Te Aroturukitanga o te Mahere ā-Wae ki Tāmaki Makaurau

Auckland Unitary Plan Section 35 Monitoring:

B2.3 A quality built environment

July 2022

Technical Report

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Executive summary

The Auckland Unitary Plan (AUP) became operative in part in November 2016. This report considers how effective and efficient the objectives, policies, rules and other methods of the AUP have been in meeting the outcomes intended by the Regional Policy Statement – Chapter B2.3 A Quality Built Environment.

This monitoring work will contribute to our knowledge base – what is working in the plan and where there may be challenges. This knowledge will help to inform future plan changes and fulfill the policy cycle. Additionally, this report will address the Section 35(2)(b) plan monitoring requirements of the Resource Management Act 1991 (RMA).

Auckland's growth

Auckland's growing population increases demand for housing, employment, business, infrastructure, social facilities and services. Growth needs to be provided for in a way that enhances the quality of life for Aucklanders and their communities.

The regional policy statement B2.3 A Quality Built Environment incorporates the expectations of The Auckland Plan and Auckland Unitary Plan (AUP) for quality development across all types and scales of development – be it site, street, block, neighbourhood or city. It provides a framework for the role of the built environment to support people's lives - their health, safety, well-being, choices, accessibility and travel. The policy statement also recognises the need to innovate, maximise resources, provide efficient infrastructure and adapt to climate change. These are particularly important considerations for residential development which is the predominant form of development in Auckland. As new residential developments increase in number, scale and density, they have a greater influence on the city's built environment.

The monitoring for the B2.3 A Quality Built Environment topic focuses on the quality of residential developments in the more intensive residential zones - Mixed Housing Suburban (MHS), Mixed Housing Urban (MHU) and Terrace Housing and Apartment (THAB) zones. It also looks at the quality of residential developments in Business – Mixed Use zones. Residential development is where the highest proportion of constructed developments are occurring and creating rapid and visible changes to Auckland's built environment. The speed and quantum of new residential development from council consenting through to the completed development enabled a broad housing sample from across suburban and urban areas to be selected within the three-year monitoring period – 2018-2020.

The monitoring evaluated aspects of other regional policy statements - B2.1 Urban Growth and Form and B2.4 Residential Growth topic. This included the extent of intensification to achieve a quality compact urban form as well as attractive, healthy and safe housing with a range of choices to meet the diversity of Aucklanders needs.

The residential sample selected from the three residential zones looked at 130 developments comprising at least four dwellings on a site, with some over 150 dwellings. This produced a combined total of 2,339 dwellings from across the Auckland urban region. These developments were either completed or in the construction phase to qualify for the monitoring sample. There were 33 residential developments in the Business – Mixed Use sample which could produce 1,665 dwellings when built. The majority of these developments had not been completed during the monitoring phase. Development in business zones (which includes our centres) tend to be larger-scale and have longer timeframes between design, consenting and construction. For this reason, they were not included in this monitoring analysis, but will be included in the next monitoring programme.

The research findings from the monitoring help determine whether the AUP has enabled quality outcomes for residential development across the city. The analysis takes an aggregated approach because assessing residential developments is complex. To do this, the analysis looked at over 50 aspects of each housing development as no one measure can conclusively determine whether quality has been achieved. The monitoring attempts to subjectively evaluate quality by quantifying terms such as 'attractive' used by the AUP into assessing design elements such as 'variation in roof forms and 'modulation of building façades'. Site visits to completed developments also focused on aspects which contribute to well-designed housing rather than the style of a development. The approach enabled specific standards or in some cases the lack of standards, to be identified and provide direction for recommended changes to the AUP. The analysis helped determine the AUP's effectiveness as well as identify trends, opportunities and issues across different housing types, densities and zones.

The effects from recent Government legislation - the National Policy Statement – Urban Development 2020 and the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021 are not considered in the monitoring analysis. These were issued after the monitoring began and the purpose of the monitoring is to evaluate the effectiveness and efficiency of the Auckland Unitary Plan over the 2018-2020 period. However, the Government's new requirements have a significant influence on the validity, scope and timeframes of some recommendations in the monitoring report. This includes the national Medium Density Residential Standards which limit the scope of potential changes to address AUP issues identified through the monitoring. Those recommendations that are affected, may be investigated and progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded from further changes because they are superseded or limited by legislation.

Six themes with twelve performance indicators were developed to evaluate the AUP's effectiveness and efficiency. For each indicator, a series of measures were applied to determine whether the developments were achieving quality outcomes anticipated by the plan's objectives, polices and standards. Site visits to nearly 50 residential developments provided further opportunities to consider the quality of housing at the site, street and neighbourhood scale.

Theme 1: The quality of site development, built form, appearance and setting

Theme 1 analyses site development, built form, appearance and relationship to the street and adjacent sites. The B2.3 A Quality built environment objectives and policies for this theme seek to ensure development responds to its site and surrounds as well as through the form and appearance of buildings.

The analysis looked at how developments manage the intrinsic qualities and physical characteristics of the site, topography and setting. Most sites were already modified when they were developed for previous buildings, although not necessarily to the extent required by new intensive development. Some large-scale developments were able to retain intrinsic landscape features such as streams or vegetation. Earthworks created flat building platforms to provide for different housing types. This sometimes improved privacy, outlook and reduced the visual dominance of the development within the site or on adjacent sites. Conversely, deep cuts and significant retaining walls in some cases, negatively affected on-site amenity by reducing natural light into dwellings and shading outdoor living space.

To assess the quality of buildings in terms of appearance, form and scale of development in the residential zones, the analysis focussed on elements of design that contribute to well-designed housing. This included the appearance of dwellings when viewed from the street and how a development responds to adjacent sites. Consideration was given to the privacy, dominance and shading effects on existing dwelling as well as the redevelopment potential for future higher density housing on adjacent sites. Site observations were also valuable for assessing quality in the completed development

The findings showed that the AUP is variable in terms of managing the form and appearance of more intensive residential development. Development responses to the unlimited density provisions and

standards that manage the building envelope (such as height and height in relation to boundary) had a significant influence on outcomes.

The generic set of residential standards that apply to standalone houses as well as terraces and apartments are inadequate for complex medium to large scale developments. This can be compounded by Auckland's existing subdivision pattern of long, narrow sites which were initially developed for standalone houses – not high-density housing. Accommodating greater building lengths and heights on narrow sites can limit the ability for apartments and terrace housing to achieve appropriate building forms and scale for their site or location. This can cause shading, privacy and dominance effects of adjacent sites which can influence existing uses as well as future redevelopment potential of those sites.

Theme 2: Building Auckland's planned built form with more intensive housing

This theme investigates the range of housing types and the amount of residential development to accommodate the city's growing and diverse population. It also looks at land use efficiency and the implications of higher density development to address the RPS B2.1. growth issues. The types and density of multi-unit developments with four or more dwellings being built in the more intensive residential zones were analysed. These influence the planned suburban and urban built character of the street and neighbourhood.

The findings showed that there was a largely even split across housing types in the sample from MHS, MHU and THAB zones. The types identified were standalone houses, duplex/town houses, terraces, apartments, and some developments had a mixture of all of the types. The AUP residential zone descriptions and provisions have been effective in enabling a range of housing types to support the intensification anticipated for each zone. The amount of new residential development in some areas is starting to produce street environments that allude to the future planned form of Auckland.

The AUP has been effective in achieving intensification at levels promoted through the zoning principles and standards to reinforce the hierarchy of centres and corridors. The analysis showed a broad transition of increasing density through the MHS, MHU, THAB and Business – Mixed zones. There is a clearer transition of increasing building bulk as a consequence of the amount of building coverage rather than height. Some sites were underdeveloped – usually with less height than the zone enabled due to site constraints or other factors. While the zone standards broadly achieve the intensification enabled by the zone objectives in terms of housing types, they are less effective in achieving the planned character through height and site spaciousness.

The analysis looked at whether the AUP is encouraging efficient use of land and resources. The number of dwellings per site facilitated through the land use led subdivision consent (that enables unlimited density) was assessed. The findings showed that 130 developments in the residential zone sample produced 2,339 new dwellings. Collectively, the new developments replaced approximately 275 existing dwellings across the sample. Seventy per cent of developments were for between 4-15 dwellings per site, 20 per cent were for 16-40 dwellings per site and 10 per cent were for developments with 40 – 150 or more dwellings. This shows that the unlimited density provisions in the AUP have been very effective. In the Business – Mixed Use zone, consents for 33 developments – primarily apartments, would produce a theoretical number of 1,655 dwellings.

Zone provisions, unlimited density and increasing height/building coverage is enabling higher density development with smaller site sizes. However, site functionality and quality can be compromised if sites become too small. This includes the quality of outdoor living spaces, solar access, privacy, landscaping, provision for rubbish bins, clotheslines and so on. Higher density developments do not inherently produce

poor outcomes. Issues can arise from not appropriately addressing the unique interrelationship of housing types, amount of housing and site conditions.

Theme 3: Supporting the health, safety and wellbeing of residents

Aspects of residential developments that influence people's health, safety and wellbeing was the focus for this theme. This includes growth that enhances the quality of life for individuals and communities. The analysis looked at how the AUP residential provisions support housing that is safe, has sunlight, functions well and is pleasant to live in. Specific standards were monitored from the residential zone provisions that contribute to the regional policy statement objectives focusing on the health and safety of people and communities.

The analysis looked at whether the AUP requirement for outlook spaces from primary living areas and to a lesser degree, other habitable rooms in dwellings in the residential zones were achieving quality outcomes. The focus on primary living area outlook reflects an assumption that residents will spend longer periods of time in this space which will have a greater effect on the quality of their day-to-day lives - including their health and wellbeing.

The outlook space requirement for principal living areas and habitable rooms in the AUP is an effective and efficient method for ensuring daylight, pleasant outlook and a degree of privacy. Seventy per cent of developments in both the residential zones and the Business – Mixed Use zone samples complied with the AUP standards for size and dimensions. Those developments that did not comply, often infringed the standard for just a small number of their dwellings.

Analysis showed that compliance with the AUP standards can still result in potential issues with the outlook spaces from principal living areas. Those with outlook spaces facing the street were sometimes interrupted by fences that reduced the sense of spaciousness. In some cases, structures such as sheds, utilities, or shading from high retaining walls reduced the quality and functionality of outlook spaces. Other issues arise from principal living area outlooks facing towards adjoining sites (this applied to approximately one third of the sample in the residential zones) and could compromise privacy for both properties. This was most evident when principal living area outlooks were above ground level – especially if there were balconies. Primary living areas with outlook spaces over driveways or car parking areas also produced poorer quality outlook for residents. The monitoring showed that the location of the outlook is not as effectively managed by the AUP as it could be.

The analysis also looked at the quality of outdoor living spaces to support the health, safety and wellbeing of residents. The purpose of the outdoor living area is to provide spaces for people to enjoy the outdoor environment within their properties. The analysis showed that most developments complied with the outdoor living space requirements for either 20m^2 for a ground level space or 8m^2 for a balcony. Most developments in the sample provided ground level outdoor living spaces. However, outdoor living spaces in many developments were cluttered with rubbish bins, hot water cylinders, rainwater tanks and other housing infrastructure which affected the quality and functionality of the space. The amount of outdoor living space required by the AUP standard is not adequate to accommodate this additional household infrastructure such as rainwater tanks.

Primary outdoor living spaces in the form of balconies were prevalent in higher density THAB and Business – Mixed Use zones where there were more apartments. Balcony sizes were assessed for functionality based on the number of bedrooms to gauge the number of likely users. The majority of balconies in the residential zones complied with the standard. In the Business – Mixed Use zone, where the AUP does not require any outdoor living space, 95 per cent of residential developments did provide outdoor living spaces for the majority of dwellings. The analysis showed 15 per cent of balconies in the residential zones were inadequate sizes, and approximately 30 per cent were inadequate in the Business – Mixed Use zone.

The AUP requires sunlight to outdoor living spaces at the equinox but not in mid-winter when residents most need sunlight for their health and wellbeing. Up to a quarter of primary outdoor living areas in the residential sample could have sunlight compromised during mid-winter. Observations from site visits also highlighted potential privacy issues (visual and acoustic) arising from the configuration and location of outdoor living spaces facing towards adjacent sites. Privacy was a more significant issue when balconies at upper levels faced towards and overlooked adjacent sites. The monitoring indicates that the AUP could be more effective at ensuring outdoor living spaces are providing for quality spaces to support the health and wellbeing of residents.

Theme 4: Providing choice through a diversity of housing

Theme 4 focuses on whether developments provide choice for Aucklanders to meet their housing needs. A range of housing sizes and types are critical to a well-functioning city with a diverse population and urban fabric that allow communities to change in place. The analysis considered the types and variety of houses that are being built in developments. Many developments had a mix of different house types and sizes which for larger developments, contribute to a sense of community.

The monitoring shows that the AUP is effective and efficient in delivering a diversity of housing for Aucklanders. The plan provisions enable a wide range of housing types and dwelling sizes. The findings show an even split across all developments between housing types of standalone houses, duplexes/terrace houses, apartments, and a mixture of these in the sample. The zone influenced the predominance of a particular housing type - there were more apartments in the THAB zone.

There was a broad range of dwelling sizes and numbers of bedrooms – often with a mix of different sized dwellings in a development to provide more choice. Across the monitoring sample, there was a good spread of dwelling sizes from one to five bedrooms. In most developments, the dwelling sizes well exceed the AUP's minimum standards.

Another aspect of the analysis was the ability of housing to meet changing needs of residents. An important consideration is whether people can access and live in their house if they experience a temporary mobility impairment through an illness or accident for example. Residential intensification is producing more dwellings that are two or more storeys high which can exacerbate this situation. Enabling people to live in their homes on the ground level (or an accessible level such as lift-accessed apartments) during a period of limited mobility rather than needing to find alternative accommodation can improve recovery and wellbeing. Each dwelling was assessed for its ability to provide a habitable room (that fits a bed) and toilet and handbasin, on the ground floor or a fully accessible level.

An important consideration is whether people can access and live in their house if there are temporary limitations to their physical capabilities, such as an accident. Residential intensification is producing more dwellings that are two or more storeys high which could exacerbate this situation. The analysis show that new dwellings are generally adaptable to the changing needs of residents despite the AUP not requiring this. Most developments could provide for temporary changes in residents' mobility needs by avoiding steps between the street and dwelling front door, and with a minimal step over the entry threshold. Eighty per cent of dwellings in the sample had a habitable room, toilet and hand basin at ground level or an accessible floor (such as a lift accessed apartment).

Theme 5: Responding to climate change and environmental sustainability

This theme focuses on aspects of residential development that may help reduce the effects of climate change and contribute to environmental sustainability. Limiting the amount of impervious surfaces,

managing stormwater better, providing quality landscaping and managing waste in residential developments can reduce the impact of residential intensification on the environment.

The analysis looked at ways development can minimise environmental effects caused by stormwater in the residential zones. This includes the management of stormwater runoff and supporting water quality where it enters natural environments such as coasts and streams. Collecting on-site rainwater is another way that stormwater run-off can be reduced and has the added benefit of providing water for gardens or other outdoor uses. The findings showed that approximately a third of the sample in the residential zones did not comply with the maximum impervious area standards. In many cases this enabled a site-specific response to be pursued to satisfy the purpose of the standard. This was more prevalent in the higher density zones of MHU and THAB. Nearly half the developments had rainwater tanks to provide for exterior household use or as detention devices to manage on-site stormwater. Without clear evidence of the cumulative effects of more intensive residential development, it is not possible in this monitoring analysis to evaluate whether the plan is effective or efficient.

Quality landscaping supports biodiversity and provides privacy, shade, shelter, food sources, improves amenity. It is important for reducing stormwater run-off, reducing contaminants (air and water), carbon absorption and the reducing the urban heat effect to support climate change resilience.

The monitoring showed the AUP is not sufficiently effective or efficient in achieving quality landscape areas in residential developments. Approximately 35 per cent of the residential zone developments in the sample did not comply with the landscaping requirement – the majority of which infringed it by up to five per cent. The extent of low compliance with the landscape area standard reflects a similar level of infringement for the maximum impervious surface standard. In many cases, alternative solutions may have been proposed to meet the purpose of the standard but it is unclear whether this could undermine the anticipated landscape outcomes. This could be an issue in terms of managing stormwater and in the MHS zone where landscape is considered an attribute to the site and neighbourhood character. The amount of landscape area and the quality of landscaping is also fundamental for achieving biodiversity and climate change resilience in the urban environment.

Site observations showed many sites were poorly landscaped and lacked the amount of planting shown in the consented landscape plans. This suggests shortcomings in monitoring and compliance to ensure approved landscape plans are properly implemented. There were also issues around the types of landscaping (particularly lack of trees or planting for future mature trees) and the lack of thought for the ongoing maintenance of sites – especially terrace housing.

Effective waste management is an essential part of well-functioning sites and urban environments. The provision of waste storage, its visibility within the site and how on-site waste management and provision of waste-collection and recycling facilities impact the functions of the site and surrounding urban environment were all assessed. The majority of developments showed some consideration for on-site waste management although site observations in the residential zones showed that these often weren't sufficient to address effects on the functionality of outdoor living spaces, site access, on-street amenity and pedestrian safety.

Theme 6: Supporting safe access and travel choice

Theme 6 analyses the safety and functionality of site access and circulation for pedestrians and vehicles. It also looks at the safety issues and opportunities of new developments on public streets and places. Pedestrian safety within a site is a particular concern given the high incidence of driveway accidents involving pedestrians (particularly children).

The findings showed that 65 per cent of developments with 10 or more parking spaces in the residential zone sample provided a separated footpath. Only a quarter of those developments that had footpaths were separated from the driveway by a kerb or other physical barriers. Most chose to use an alternative material or colour on a level flush with the driveway. Only half the footpaths (of those developments that had them) were designed to avoid the reversing space of cars.

The majority of developments avoided having front doors opening directly onto a driveway. Some forms of parking such as centralised communal parking areas are not adequately designed for pedestrian safety within the site. This suggests that the AUP is not managing on-site pedestrian safety effectively or efficiently, with respect to pedestrian access and circulation.

Most developments fronting streets optimised passive surveillance with windows or/and balconies overlooking the street. Seventy per cent of developments in the residential sample had up to half their dwellings overlooking the street. Most front doors for street facing dwellings were visible or partially visible from the street. This demonstrates that the AUP is effective and efficient in ensuring that dwellings in residential zones are well-designed to provide passive surveillance of the street to make neighbourhoods safer.

Conclusion

The broad scope and complexity of the monitoring for the B2.3 A Quality Built Environment topic has meant it is challenging to draw a single conclusion on the performance of the AUP in achieving the B2.3 A Quality Built Environment objectives and policies. Notwithstanding this, the monitoring has provided some overall trends and observations.

Successes

Analysis has shown that the AUP is both effective and efficient in many aspects of development in the residential and the Business – Mixed Use zones. These mainly relate to:

- residential intensification at levels promoted through the zoning principles and zone standards support AUP and Auckland Plan growth objectives
- residential developments and zones progressively intensify towards centres and transport corridors, reinforcing the AUP hierarchy of centres and corridors
- enabling sites to maximise housing yield with unlimited density provisions enabled through the land use led subdivision consenting process
- enabling a wide range of housing types and sizes to meet the diverse needs of Aucklanders
- achieving good form, design and function in many developments across all suburban and urban residential areas of Auckland, regardless of location, socio-economic, market or other external factors
- achieving good quality street frontage appearance for most developments in the residential zones.

Issues

The analysis also revealed potential issues and emerging trends where the AUP is less effective or efficient. These mainly relate to:

- managing the effects (e.g. shading, privacy, dominance) of new development on adjacent sites, which could affect the existing and the future re-development potential of these sites
- the pressure of high-density residential developments compromising site amenity and functionality
- recognising complexities and uniqueness of housing types – currently a single generic set of standards is applied to all housing types whether it's a standalone house or an apartment building
- issues with building form, scale and bulk relative to site conditions (eg. size, dimensions) to accommodate more intensive terrace housing and apartment developments

- type and scale of earthworks producing poor site amenity and functionality in some developments
- insufficient standards to address climate change at a site-specific level – particularly the need for better stormwater management and quality landscaping
- Inadequate waste management within the site and street environment
- managing the safety of pedestrians within sites and the street.

The above conclusions should be considered in conjunction with the specific conclusions and recommendations for each indicator in the report.

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Abbreviations in this report include:

Abbreviation	Meaning
AUP	Auckland Unitary Plan (Operative in Part)
the council	Auckland Council
RMA	Resource Management Act 1991
RPS	Regional Policy Statement
resource consents database	Plans and Places resource consent decision tracking database
compliance database	Resource consent compliance and monitoring database
building consents database	Building consent decisions database
AT	Auckland Transport
Watercare	Watercare Services Limited
council-controlled organisation	CCO
MHS	Residential - Mixed Housing Suburban (zone)
MHU	Residential - Mixed Housing Urban (zone)
THAB	Residential - Terrace Housing and Apartment Building (zone)
IHP	Independent Hearings Panel (for the Auckland Unitary Plan)
HIRB	Height in Relation to Boundary (planning standard)
AHIRB	Alternative Height in Relation to Boundary (planning standard)

Introduction

This report considers how effective and efficient the objectives, policies, rules and other methods of the AUP have been in meeting the outcomes intended by the Regional Policy Statement – B2.3 Quality built environment. The monitoring is in accordance with 35(2)(b) of the RMA.

Section 35(2)(b) specifies that monitoring results are published every five years. The AUP became operative in part in November 2016 and will have been operative in part for five years in November 2021.

The research findings seek to tell a story of what the AUP is achieving and where challenges may be. Monitoring isa key link in the policy development lifecycle providing data and the evidence base for taking appropriate action where necessary.

The terms 'effectiveness' and 'efficiency' are not explicitly defined in the RMA. For the purposes of this monitoring report the terms are generally interpreted as[1]:

Effectiveness is the contribution that the provisions make towards achieving the objective, and how successful they are likely to be in solving the problem they were designed to address when compared with alternatives. The difficulty when assessing effectiveness is to be able to answer the question 'how do we know that implementing the policy, rule or method led or contributed to the outcome?'

Efficiency is an assessment of whether the provisions will be likely to achieve the objectives at the lowest total cost to all or achieves the highest net benefit relative to cost to all.

The steps undertaken in this monitoring work are briefly summarised in Figure 1.

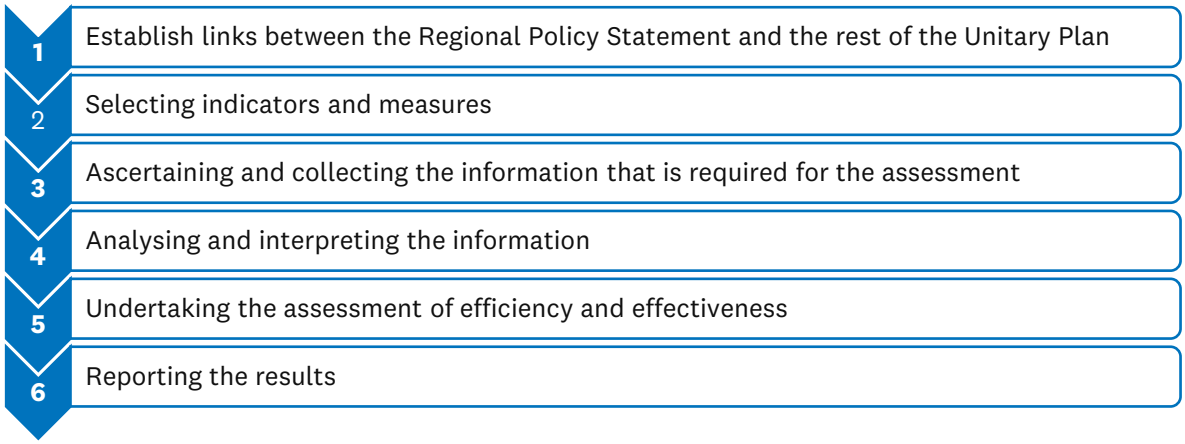


Figure 1 Steps in the monitoring process

[1] Auckland Unitary Plan Monitoring Strategy 2018

RPS Chapter B2 Urban Growth and Form overview

Auckland's growing population increases demand for housing, employment, business, infrastructure, social facilities and services. Growth needs to be provided for in a way that enhances the quality of life for individuals and communities. It must also support integrated planning of land use, infrastructure and development, and optimise the efficient use of the existing urban area. New growth needs to enhance the quality of the environment, both natural and built.

The B2.2 Urban Growth and Form chapter has a wide scope. It seeks a quality compact urban form that enables a higher-quality urban environment. B2.3 Quality built environment sets the parameters around how it will be delivered at every scale. B2.4 Residential Growth focuses on the quality, efficiency and amount of housing to be delivered. B2.5 Commercial and Industrial Growth concentrates on employment areas and the role of centres.

The regional policy statement for B2.3 A quality built environment has a broad reach – seeking quality outcomes across all scales of development – site, street, block, neighbourhood and city. It sets a framework for considering the role of the built environment in supporting people's health, safety, well-being, choices, accessibility and travel. It also recognises the need to innovate, maximise resources, infrastructure efficiency and adapt to climate change. These are particularly important considerations for residential development which is the predominant form of development in Auckland.

The regional policy statement objectives are:

> B2.3 A quality built environment
>
> (1) A quality built environment where subdivision, use and development do all of the following:
>
> (a) respond to the intrinsic qualities and physical characteristics of the site and area, including its setting;
>
> (b) reinforce the hierarchy of centres and corridors;
>
> (c) contribute to a diverse mix of choice and opportunity for people and communities;
>
> (d) maximise resource and infrastructure efficiency;
>
> (e) are capable of adapting to changing needs; and
>
> (f) respond and adapt to the effects of climate change.
>
> (2) Innovative design to address environmental effects is encouraged.
>
> (3) The health and safety of people and communities are promoted.

Refer to Appendix A for the full policy statement objectives and policies.

The built environment in Auckland's urban area is heavily influenced by the activities which they contain. This informs that building type, form and scale of business, industrial and residential development. Business development tends to be concentrated in centres and along transport corridors with a wide variation in scale and form. Auckland's city centre provides the most visibly intense version of the city's built form with some tower heights over 150m that are occupied by business and residential activities. In contrast, industrial development is characterised by large floor-

plates and lower heights concentrated around transport corridors – including the airport and ports. Residential development predominates Auckland's wider urban-scape and is particularly concentrated as apartments in the centres and along transport corridors. Change has been rapid in some residential zones since the AUP became operative in 2016.

As new residential developments increase in number, scale and intensity, they have a greater influence on the city's form at every scale. Quality housing also has an essential role in providing for the health, safety and wellbeing of residents. For these reasons, monitoring of the effectiveness and efficiency of B2.3 Quality built environment concentrates on individual housing development in residential zones where rapid growth is occurring.

Future S.35 monitoring will look at development in business zones which tend to follow longer timeframes between design, consenting and construction. The influence of development on the site, neighbourhoods and wider area is best assessed when they are completed. At this stage of AUP implementation, there has been adequate residential development completed to undertake a robust assessment of whether quality built form outcomes are being achieved.

The research findings from the monitoring will help determine whether the AUP has enabled quality outcomes for residential development across the city with regards to health, safety, wellbeing, choice, functionality, design of built form and the amenity of the site. It also assesses how well new residential developments respond to the site, street, neighbourhood and area to gauge whether the future planned form anticipated for the various zones is being achieved. The monitoring does not seek to review the individual performance of planning rules and instead, focuses on the collective outcomes they produce in the built environment.

Auckland's growing population increases demand for housing, employment, business, infrastructure, social facilities and services. AUP Chapter B2.1. Urban Growth and Form sets out eight key issues. Growth needs to be provided for in a way that does all of the following:

- enhances the quality of life for individuals and communities
- supports integrated planning of land use, infrastructure and development
- optimises the efficient use of the existing urban areas
- encourages the efficient use of existing social facilities and provides for new social facilities
- enables provision and use of infrastructure in a way that is efficient, effective and timely
- maintains and enhances the quality of the environment, both natural and built
- maintains opportunities for rural production
- enables Mana Whenua to participate and their culture and values to be recognised and provided for.

The RPS2.3 Quality Built Environment monitoring evaluates how effectively and efficiently the plan is addressing these issues. The focus of this monitoring topic is on achieving 'higher-quality urban environment' through the evaluation of a residential development sample across four specified zones (see below).

Other S.35 monitoring topics address different aspects of urban growth. As this is an assessment of the AUP effectiveness and efficiency, the monitoring is closely but not explicitly aligned with the residential provisions in the plan. This focus provided consistency in the data collection while enabling the influence of external factors to surface. For example, apartment development was more concentrated in areas with good public transport, access to goods, services and community facilities. This correlated with the AUP zoning provisions which enabled more intensive development to occur

in these locations. References to similar, concurrent or future monitoring topics are identified in this report where relevant.

Connections with other parts of the plan

This topic has close connections with three other sections of the RPS. The relevant sections are:

- B2.2 Urban growth and form
- B2.4 Residential growth
- B3.3 Transport

Refer to Appendix D for the objectives relevant to this topic in chapters B2.2 Urban growth and form, B2.3 A quality built environment, B2.4 Residential growth and B3 Transport.

These sections are particularly relevant as they influence the policy direction in B2.3 Quality built environment. The monitoring results from this topic are necessary to present a high-level analysis on which parts of B2.2.2 and B2.4 require further investigation.

Lower tier objectives, policies and provisions are also relevant to monitoring for B2.3 A quality built environment in terms of residential development. The zones relevant to this monitoring are:

- Residential - Mixed Housing Suburban zone (MHS)
- Residential - Mixed Housing Urban zone (MHU)
- Residential - Terrace Housing and Apartment Building zone (THAB)
- Business – Mixed Use zone (BMU)

The plan provisions for each zone influence the scale, form and quality of the built environment. The performance of individual standards in zones are not the subject of the monitoring. However, the purpose statements of some standards specify the outcomes sought and these informed the indicators. This approach enables an assessment of the collective effect of packages of residential zone standards and other provisions.

Auckland context

The Auckland Plan 2050 identifies ‘Homes and Places’ as one of the key outcomes for Auckland. The outcome is for 'Aucklanders to live in secure, healthy and affordable homes, and have access to a range of easily accessible public places.'

There are currently about 540,000 dwellings in Auckland. These are made up of stand-alone houses, duplex/townhouses, terraced housing and an increasing number of apartments. The Auckland Plan highlights the need for more good quality housing to be built, and to ensure that a range of housing types, sizes and price points are built across the region. This includes for individuals, couples, groups (such as flatters) and families. Warm, dry, quality housing is a key determinant of a healthy community - a healthy home is a core foundation for positive health and wellbeing. Conversely, poorly designed residential developments can have negative effects on the quality and functionality of dwellings and neighbourhoods.

This monitoring focusses on the quality of residential developments and provides a ‘short snapshot’ across urban Auckland. The monitoring sample includes developments with four or more dwellings that were consented after April 2018 and primarily constructed before December 2020 in the higher density residential zones. This includes Residential - Mixed Housing Suburban (MHS), Residential -

Mixed Housing Urban (MHU), Residential - Terrace Housing and Apartment Building (THAB), and Business – Mixed Use zones.

In addition to the implementation of the Unitary Plan provisions, there are many other factors that influence the quality, location, development and construction of housing in Auckland. Many of these are beyond the control of the AUP. This includes the selection of location, building typology, scale, materials, style and other externalities such as:

- market demand, trends and preferences
- population changes – demographics, growth, employment etc
- development funding
- mortgage lending – amount, restrictions on types of housing, the ability to buy off plans, timeframes for unconditional borrowing, restrictions on progress payments associated with new builds, etc
- insurance
- construction industry – skills, capacity, and competency
- construction costs – and the impact that significant rises have on housing choice, affordability, location and transport costs
- supply chains
- taxation penalties and incentives
- legislation such as the Building Code and Unit Titles Act 2010.
- Provision of and funding for infrastructure – water supply, waste-water, stormwater, power supply, street networks and public transport provision.

Determining the degree of influence these externalities may have on the quality of housing outcomes is a challenge. A limitation of the monitoring programme is understanding to what extent the quality of housing is a consequence of the AUP provisions or/and a result of market and cultural influences around housing typology, development economics and build capacity.

The AUP seeks to accommodate growth in Auckland through a quality compart urban form. RPS B2 Urban Growth identifies this approach as enabling the following:

> (a) a higher-quality urban environment
>
> (b) greater productivity and economic growth
>
> (c) better use of existing infrastructure and efficient provision of new infrastructure
>
> (d) improved and more effective public transport
>
> (e) greater social and cultural vitality
>
> (f) better maintenance of rural character and rural productivity; and (g) reduced adverse environmental effects.

As noted above, the focus of this monitoring topic is to evaluate how residential development contributes to Auckland's goal of achieving a higher-quality urban environment.

Indicators

Indicators and measures have been developed to assess the progress toward achieving the RPS's objectives and outcomes.

An **indicator** (for the purposes of this report) is a qualitative or quantitative gauge that displays degrees of progress to determine whether or not the AUP is moving in the right direction toward meeting its objectives. An indicator should be used to assess the condition of the environment, to identify changes to that condition, to diagnose problems and then to guide future changes to objectives, policies or methods (via plan change or plan review).

A **measure** is the selected information that enables evaluation of the indicator. Methods of measurement will differ depending on the indicator.

The indicators developed for this topic have been shaped by limitations. It was not possible to develop a set of indicators which encompassed all facets of the topic – this is due to constraints on time, resource, and data availability.

Development of the indicators and measures took into account the following:

- the B2.3 objectives and policies
- the relevant B2.2 and B2.4 objectives and policies
- provisions in the MHS, MHU, THAB and Business – Mixed use zones
- overlaps in the coverage of the objectives
- data availability
- the need for both quantitative and qualitative assessments
- emerging issues identified by planners, urban designers, councillors, local boards, public concern (correspondence, media)
- time and other resource constraints.

Evaluating quality

The research findings from the monitoring help determine whether the AUP has enabled quality outcomes for residential development across the city. The analysis takes an aggregated approach because assessing residential developments is complex. To do this, the analysis looked at over 50 aspects of each housing development as no one measure can conclusively determine whether quality has been achieved. The monitoring attempts to subjectively evaluate quality by quantifying terms such as 'attractive' used by the AUP into assessing design elements such as 'variation in roof forms and 'modulation of building façades'. Site visits to completed developments also focused on aspects which contribute to well-designed housing rather than the style of a development. The approach enabled specific standards or in some cases the lack of standards, to be identified and provide direction for recommended changes to the AUP. The analysis helped determine the AUP's effectiveness as well as identify trends, opportunities and issues across different housing types, densities and zones.

Determining housing quality requires the evaluation of various aspects of a development. A range of key factors were developed from the AUP RPS B2.3 and residential zone objectives, policies, standards, purpose statements and assessment criteria to evaluate residential quality. They individually and collectively influence the quality of housing and neighbourhoods including:

- onsite amenity
- building scale, housing typology
- appearance
- functionality – dwelling size, outdoor living
- health and wellbeing – outlook, solar access
- safety – access to and within the site, passive surveillance
- level of intensification
- street and neighbourhood interface.

Designing indicators and measures to produce statistical outputs enabled trends to emerge and issues to be quantified. These may show the effects of AUP residential provisions, how they are implemented or the influence of other conditions and pressures. This includes externalities such as market preferences (developers and buyers), the emergence of new construction and landscaping materials, changes to legislation etc.

Twelve indicators were developed. Most of the indicators relate to more than one B2.3 objective and some also respond to other RPS growth topics. This is summarised in a matrix set out in Appendix 4.

Themes

The indicators and the respective objectives and policies have been arranged into six themes as follows:

Theme 1: The quality of site development, built form, appearance and setting

Theme 2: Building Auckland's planned built form with more intensive housing

Theme 3: Supporting the health, safety and wellbeing of residents

Theme 4: Providing choice through a diversity of housing

Theme 5: Responding to climate change and environmental sustainability

Theme 6: Supporting safe access and travel choice

B2.3 indicators and measures

Chapter B11 Monitoring and environmental results anticipated

Chapter B11 in the AUP sets out the monitoring and environmental results anticipated (ERA) of a regional policy statement. B11 is not exhaustive, an ERA is not listed for every objective in the RPS. Chapter B11 explains:

> Environmental results anticipated identify the outcomes expected as a result of implementing the policies and methods in the regional policy statement and provide the basis for monitoring the efficiency and effectiveness of those policies and methods as required by section 35 of the Resource Management Act 1991.
>
> Environmental results anticipated are not additional objectives, policies or rules: they are indicators to be used when assessing progress towards achieving the objectives in the regional policy statement. These indicators should be used:
>
> - to assess the condition of the environment
> - to identify changes to that condition

- to diagnose the causes of environmental problems
- to guide future changes to objectives, policies and methods.

In the absence of prescribed AUP indicators for this topic in chapter B11, the RPS B2.3 objectives and policies inform the following indicators. The measures for each indicator are specified in Section 4 of this report.

Table 1

Reference	Primary objective:	Indicators
B.2.3.1(1)(a)	*A quality built environment where subdivision, use and development do all of the following:* *(a) respond to the intrinsic qualities and physical characteristics of the site and area, including its setting;*	Indicator 1 – Extent that developments respond to the physical characteristics of sites Indicator 2 – Extent that developments respond to the intrinsic qualities of the area and setting through the form and appearance of buildings
B.2.3.1(1)(b) & (d)	*A quality built environment where subdivision, use and development do all of the following:* *(b) reinforce the hierarchy of centres and corridors;* *(d) maximise resource and infrastructure efficiency;*	Indicator 3 – Building the planned built form with intensification reinforcing the hierarchy of centres and corridors Indicator 4 – Maximising land and building resources and infrastructure efficiency
B.2.3.1(3)	*The health and safety of people and communities are promoted.*	Indicator 5 – The extent that the health and wellbeing of residents is supported by living spaces with quality outlooks, privacy and sunlight. Indicator 6 – The extent that the health, safety and wellbeing of residents is supported by quality outdoor living spaces
B.2.3.1(1)(c) & (e)	*A quality built environment where subdivision, use and development do all of the following:* *(c) contribute to a diverse mix of choice and opportunity for people and communities;*	Indicator 7 – Diverse mix of housing choice for people and a range of built form to suit changing needs

	(e) are capable of adapting to changing needs;	
B.2.3.1(1)(f) *B2.3.1(2)*	*A quality built environment where subdivision, use and development do all of the following:* *(f) respond and adapt to the effects of climate change* *Innovative design to address environmental effects is encouraged.*	Indicator 8 – Managing stormwater to mitigate adverse environmental effects Indicator 9 – Quality of landscaping to address the effects of subdivision and climate change Indicator 10 – Location and appearance of on-site waste management
B.2.3.1(3)	*The health and safety of people and communities are promoted.*	Indicator 11 – Safe access to residential developments Indicator 12 – Promoting safety and travel choice on-site and in the movement network – people and vehicles

Data and information

Monitoring Sample

The monitoring sample included multi-dwelling medium (4-9 dwellings) and large-scale (10 or more dwellings) developments. Medium and large scale developments are the focus for monitoring because issues concerning quality, scale and effects on the environment have been raised by council staff, councillors, local boards and the public. The developments are in the MHS, MHU and THAB residential zones and residential developments in the Business – Mixed Use zone. This enabled analysis of residential developments consented under different sets of provisions – residential and business.

Residential zones sample

Samples of residential developments were selected from the three relevant residential zones. The effects of change are most evident in these zones because they have no density controls and allow for a significant amount of residential intensity to occur. For this analysis all the sample developments were approved through resource and building consent processes under the AUP. The residential zone provisions in the AUP became fully operative on the 6th April 2018. The samples of residential developments reviewed were selected from the period April 2018 – December 2020.

Figure 1 shows a map with the locations of the selected developments in these residential zones. In January 2020, Plan Change 16 to the AUP modified the standards for Outdoor Living Space (H64.6.13, H5.6.13, H6.6.13). In particular, it removed the standard requiring the primary outdoor living space to be directly accessible from the living areas. The plan change enabled outdoor spaces to be accessed from any room in the dwelling – including from a garage. The monitoring included a measure to evaluate the effects of this plan change.

Residential development samples in the THAB, MHU and MHS zones that conformed to the following parameters were selected:

- Residential developments within the Auckland urban area. Smaller towns such as Warkworth, rural and coastal settlements, or other places are not included in the samples.
- Developments must not be within a precinct or an overlay (such as Special Character Areas or the Waitakere Ranges Heritage Area). This is because the planning mechanisms in precincts and overlays generally contain additional provisions responding to unique characteristics. Exclusion of these developments from the sample allows for a 'like-for-like' comparison on how the built environment is shaped by AUP's *zone* provisions.
- Residential developments with four or more dwellings.
- Residential developments with a Resource Consent and Code of Compliance Certificate (CCC) issued between April 2018 and December 2020. Data set supplied by Auckland Council Research, Investigation and Monitoring Unit (RIMU).
- The short timeframe between consenting and construction potentially restricted the sample range to small to medium scale developments. To address this, larger scale residential developments were selected by the Urban Design Unit. The selection criteria ensured that all developments were for 10 or more dwellings per site,

consented after April 2018 and were in the construction phase in December 2020, and were randomly selected from across Auckland.

As a result, a total of 130 developments were selected for analysis from the residential zones. These came from two sources:

- Research and Evaluation Unit (RIMU): 102 developments were randomly selected from a possible 179 developments which met the parameters. This equates to 57 per cent of the possible sample. Developments were also selected where they formed clusters or a concentration of developments in an area. This enabled the monitoring team to observe the cumulative effects of more intensive development in neighbourhoods. These clusters were from all parts of the city. Refer to figure 3.
- Urban Design Unit: 28 developments were selected on the basis that they were consented after April 2018 and were in the construction phase (most yet to receive CCCs). These provided more large-scale developments in the sample while recognising that such developments take a longer time to complete than the monitoring timeframe allowed.

Developments included brownfield (redeveloped from existing sites) and greenfield sites (newly developed from rural land or sites without previous development) across urban Auckland. The majority of developments in the sample were on brownfield sites.

The residential zone sample of 130 developments comprised of:

- 51 developments in the MHS zone (39 per cent of the sample)
- 56 developments in the MHU zone (44 per cent of the sample)
- 23 developments in the THAB zone (17 per cent of the sample).

Developments in the THAB zone are often larger scale with longer timeframes for consenting and construction than developments in other zones. This meant that fewer developments in the THAB zone qualified for the sample selection.

Figure 1 shows the location and housing typologies of developments in the residential zone that qualified for the sample selection. Those developments that were in clusters were prioritised for selection as these provided an opportunity to see the influence and cumulative effects of new development in streets and neighbourhoods.

The concentration of developments in South Auckland shows a greater amount of development activity. There may also have been market influences such as cheaper land, larger properties, or higher residential demand in these areas.

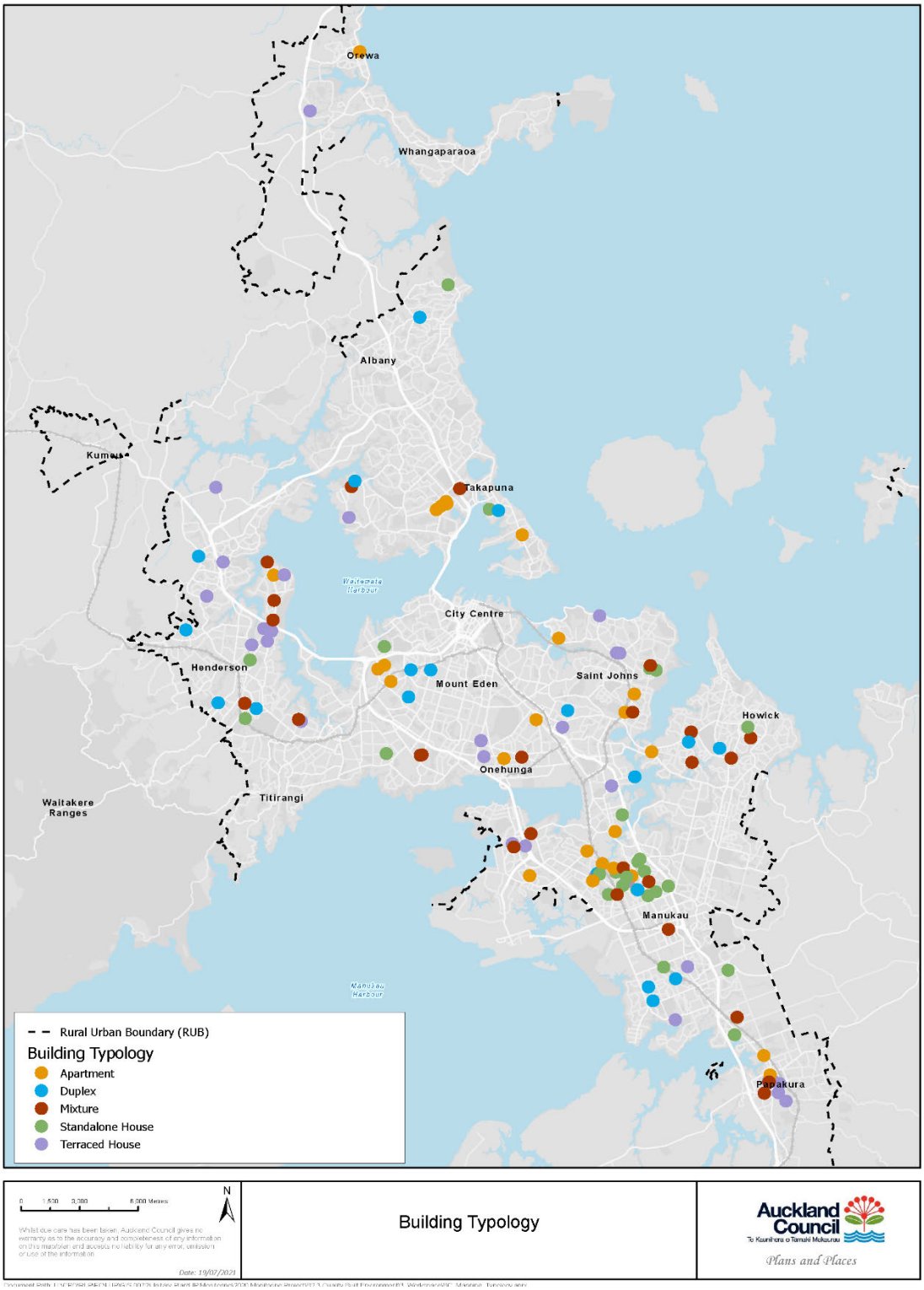


Figure 1 Residential developments that qualified for the sample selection.

The residential zone sample comprised:

- 30% of developments had 4-6 dwellings
- 23% of developments had 7-9 dwellings
- 21% of developments had 10-20 dwellings
- 12% of developments had 21-30 dwellings

- 8% of developments had 31-50 dwellings
- 3% of developments had 51-100 dwellings
- 3% of developments had 101-150+ dwellings

Standards set limits on the extent to which an activity is permitted or may be assessed as a controlled or restricted discretionary activity. Exceedance of a standard normally results in the activity being considered as a more restrictive class of activity. In the residential zones, these exceedances or infringements will be restricted dis/cretionary. Most standards in the residential zones however are 'non-core' standards and so do not require compliance but are assessment matters guided by the AUP's assessment criteria. Specific matters for discretion are set out in the AUP are what the planner is limited to considering when determining the proposal. Outcomes are negotiated through this assessment process.

Consent planners and urban designers often work with developers at the pre-application stage when design decisions are still being considered. However, many developers do not seek pre-application meetings for smaller developments less than 10 dwellings. Once the resource consent application is lodged, the scope for changes becomes very limited.

Planners, urban designers and other specialists undertake a comprehensive assessment of the application against the AUP standards and assessment criteria. In many cases, non-compliance with the standards and additional consents for activities such as earthworks require more consideration and increase the complexity of consenting. The Auckland Urban Design Panel also provides advice on some significant large-scale residential developments.

There are approximately 16-17 standards in the residential zones with five of these set out as 'core' standards to be complied with for developments comprising four or more dwellings in MHS and MHU, and for all dwellings in THAB. Compliance with other standards can be negotiated through the Restricted Discretionary consenting process when applying for consents for four or more dwellings (or for all dwellings in THAB). The core standards for compliance for the MHS, MHU and THAB zones are:

- building height
- height in relation to boundary
- alternative height in relation to boundary
- yards
- THAB and MHU zones only: Height in relation to boundary adjoining lower density zones.

The AUP Independent Hearings Panel limited the number of core standards to encourage a more flexible approach to multi-unit developments. The core standards were selected to manage developments from directly affecting adjoining and nearby sites. Non-compliance with a one or more of these standards can be assessed for public or partial notification of the resource consent. All other development standards were non-core standards and matters for assessment rather than compliance. The core and non-core standards are listed in Appendix D AUP references.

Business - Mixed Use zone sample

The Business – Mixed Use zone was monitored as it is part of the transition towards the more intensive centre zones. Typically, this zone is located along transport corridors and between the THAB zone and centre zones. More height and building bulk is enabled in this zone.

Residential development samples in the Business – Mixed Use zone that conformed to the following parameters were selected:

- Resource consents used for this analysis were filtered to remove any developments which were significantly affected by a plan overlay or precinct. This ensured a more accurate reflection of the outcomes generated by the Business – Mixed Use zone rules.
- Developments which consisted solely of visitor accommodation units were removed from the sample. This is because the design of these were strongly influenced by very specific functional requirements and produced a quite different built form from the wider sample. This did not make these developments useful for comparative analysis. However, developments which included a mixture of permanent dwellings and visitor accommodation units were retained.

This resulted in a final sample of 33 granted resource consents from Business – Mixed Use on sites across the Auckland region, with approval dates ranging from April 2018 to February 2020. Collectively, these consents would produce 1,655 new dwellings when constructed.

The monitoring evaluated whether the Business – Mixed Use provisions were producing quality residential developments with less standards in the AUP than for the residential zones. In the business zones, eight standards manage the building bulk, form and effects. These include building height, height in relation to boundary, building setback at upper floors, maximum tower dimension and tower separation, yards, landscaping (as a buffer to street frontage carparking only), maximum impervious area in the riparian yard, wind, outlook space and minimum dwelling size. These are all standards to be complied with.

Recent Government legislation

The influence of recent Government legislation - the National Policy Statement – Urban Development 2020 and the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021 were not considered during the monitoring analysis. The legislation was issued after the monitoring began and the purpose of the monitoring is to evaluate the effectiveness and efficiency of the Auckland Unitary Plan over the 2018-2020 period. However, the Government's new requirements have a significant influence on the validity, scope and timeframes of some recommendations in the monitoring report. This includes the national Medium Density Residential Standards which limit the scope of potential changes to address AUP issues identified through the monitoring.

Methodology

Section 35 of the Resource Management Act 1991 requires Council to monitor plan processes. The analysis recognises that different council consenting processes including building consents, compliance monitoring and enforcement can influence the end quality of development. The results of this monitoring could show whether the level of quality is influenced by the plan provisions, by the respective council process or a combination of both.

For the purposes of this analysis, the definition of 'quality' as defined in the Oxford Dictionary is used:

> 'The standard of something as measured against other things of a similar kind: the degree of excellence of something'

This analysis gauges whether the high-level Regional Policy Statement aspirations for a quality built environment are being achieved in various scales of residential development. While the AUP residential provisions are considered in the analysis, it is not intended to be a review of the residential standards. The built form outcomes produced by the AUP provisions and consenting process are the focus of this report.

There were two drivers which set the scope for monitoring:

- The first was whether the current AUP provisions were performing as anticipated.
- The second was to investigate a range of developing issues that are not controlled by the AUP. This additional research goes beyond the S.35 monitoring requirements to consider some of the issues raised by Auckland Council staff, councillors, local boards and the public. Refer to Appendix B. The investigation will help to quantify if these issues were a matter of perception or supported by evidence. Likewise, it can help identify whether there are any relationships with the AUP or other factors such as market pressures. Research on the implications of externalities was limited and most clearly identified through statistical trends that emerged through the monitoring.

However, to consider some issues emerging from either the data or from other sources, the analysis delves deeper in some topics. This includes references to the Proposed Auckland Unitary Plan and the legacy council district plans for the purposes of clarification, context and to inform recommendations. In some cases, this helps provide the context by which the effectiveness and efficiency of the AUP can be assessed.

The monitoring did not interview or survey residents or neighbours on sites adjoining new developments (e.g., to record their preferences and lived experiences of their homes and developments) due to resource limitations. This would provide a more robust assessment of the social, economic, health, safety and well-being aspects of housing provision. It is recommended that this be included in future S.35 monitoring for this topic.

Data collection method

The resource consent documents used to inform the analysis were the decision report, planners report, urban design report and approved plans for each development. For more complex developments, the applicant's Assessment of Effects, engineering reports and other documents were sometimes referred to.

The approved consents have already been assessed against the AUP standards, but this analysis goes further to see whether developments are achieving the wider aspirations of the Regional Policy Statement – B2.3 A quality built environment. Measures were included to help identify good, poor or unintended consequences that were occurring (see also discussions on indicators above). This is to see whether the AUP provisions are delivering what is intended or whether there are other factors such as plan implementation or external influences. While there is a degree of subjectivity in the analysis, it is minimised and identified in the findings.

RPS B2.3 dataset

The categorisation of various aspects of residential development into measures enables the majority of built form design elements to be assessable and measurable. An Excel spreadsheet assessment matrix was used to evaluate each development against the common set of measures. An example is 'whether the principal outdoor living space is orientated for sunlight'. A list of measures is contained in Appendix A.

Two assessment matrices were designed:

- MHS, MHU, THAB residential zone developments – 58 measures.
- Business – Mixed Use zone residential developments – 6 measures.
- Where relevant, residential development in the Business Mixed Use zone was also evaluated using the same measures as the residential zones.

The purpose of the statistical analysis is to provide an aggregation of results across a range of outcomes to evaluate whether residential developments are achieving the RPS B2.3 objectives and policies. It also gives an indication of trends and issues rather than explicit performance results of any particular residential standard or development.

The monitoring also looks at some elements of built form design governed by specific standards that are producing variable outcomes. This helps evaluate whether the AUP and consenting processes are effective and efficient.

The AUP policy framework and standards do not assume that infringing a standard equates to an adverse effect that must be mitigated. In processing consent applications not meeting a standard in the residential zones, an alternative response may be negotiated with the applicant to achieve a similar or better outcome than the standard. This flexibility is a feature of the AUP and the planning process. This is enabled through the Restricted Discretionary consenting process for four or more dwellings in MHS and MHU, or all dwellings in THAB and Business – Mixed Use zones. It facilitates the specific site and development conditions and outcomes to be addressed through a case-by-case basis.

In the S.35 monitoring, the number and extent of non-compliance with the standards as assessment matters were recorded (refer to the explanation of the core standards earlier in this section). This was to gauge the performance of the non-core standards and evaluate planning practice with regards to AUP efficiency.

To record data in the Excel spreadsheet, many of the measures required filtering from prescribed 'drop-down' menus. This improved consistency and streamlined data collection. For many measures, a percentage finding was used. These were usually rounded to the nearest 5-10 per cent. Where a variable was measured such as site size, density or dwelling size, the findings are bundled into cohorts or bands for the purpose of clarity and identifying trends. For example, site sizes were recorded in bands – 501-600m^2/601-700m^2/701-800m^2 and so on. Each measure was designed to provide the level of detail necessary to assess the performance of the plan.

One of the limitations of the evaluation method was that for most measures, the focus was on the majority of dwellings in a development. The 'majority' was set to be representative of 'at least 70 per cent of dwellings' within a development or parent site. The parent site refers to the site prior to subdivision or unit titling. Another limitation of the data was that the cumulative effects of non-compliance with multiple standards or measures for a development were not identified. This would have required more in-depth analysis of each development which resources did not allow for.

Specific assessment measures were designed to extract data on the exceptions in a development where this is important. There were also measures that sought to understand the validity or scale of an identified issue. For instance, 'how many dwellings in the development had south facing outdoor living spaces' expanded on a measure regarding the 'proportion of dwellings on a site with east, west or north facing outdoor living spaces'. This provided more accurate statistical data and valuable qualitative information.

Resource consent database

The resource consents database records resource consent decisions through data entry processes in the Plans and Places Department. This database was used to calibrate the RPS B2.3 monitoring data against the rest of urban Auckland. This was to determine whether the findings from the monitoring sample is representative of all residential development across Auckland.

The calibration exercise essentially looked at the remainder of residential developments (1 – 3 dwellings per consent) which met the monitoring parameters (that is, consented between April 2018

and December 2020, and not affected by an overlay or precinct)[2]. Data was extracted only for the residential zones relevant to this monitoring.

The limitations of this data set were that non-compliance with the core standards are accurately recorded but less so for the non-core standards. This is because the non-core standards are an assessment matter that could be satisfied through mitigation measures to achieve the purpose of a standard. Given that mitigation satisfied the standard, these were not necessarily recorded as non-compliances in this database.

The non-compliance with the Height Limit and Height in Relation to Boundary (HIRB) core standards are used for calibrating the findings in this research. The non-compliance rate for these standards were similar to those seen in the monitoring sample - within 5 per cent . This provides some confidence that the findings in this report are likely to reflect what is happening across residential development in the MHS, MHU and THAB zones.

This calibration method has not been undertaken for developments in the Business – Mixed Use zone as there was insufficient data.

Site visits

An important aspect of the residential monitoring was evaluating the development quality of the finished (or near finished) buildings. Achieving quality building appearance to the street frontage is a key urban design principle and underpins many AUP provisions. This is because the quality of the building design and site (such as landscaping) have a significant influence on the street amenity, character and neighbourhood safety.

The site visits occurred between February – May 2021. On-street reviews were undertaken for 49 developments by teams of planners and urban designers (see areas outlined in black in Figure 2). Site visits to developments in Papakura are not shown as a group in Figure 2 because these were more dispersed. No sites were entered due to lack of landowner permission, however reference to site plans and visibility into some sites was possible. The quality of street frontages are an important aspect of the AUP provisions and could be assessed without entering a site.

Sets of consent plans were taken to each development to provide the team with detailed information on the site layout and internal arrangements of dwellings. It also provided the opportunity to see whether the plans (and imagery) were an accurate depiction of the final development.

Each development was discussed by the team using site visit assessment criteria to ensure consistency and minimise subjectivity. Refer to Appendix C for the site visit assessment form. A concluding qualitative result was agreed by the team for each development. Collectively the results provide a 'snapshot' of development quality across different zones, locations, building scales and typologies. All photos used in the monitoring report were taken during site visits.

No site visits were undertaken to residential developments in the Business-Mixed Use zone due to resource limitations.

Issues and trends

Over the past 2-3 years, Auckland Council staff, politicians, local boards and the public raised issues and identified emerging residential trends. Alongside the S.35 indicators and measures, further measures were developed to see whether these issues or trends were valid and to understand the scale and effects of issues. As discussed in the methodology section of this report, a key limitation

[2] The methodology and limitations to this data source are set out in greater detail in the overarching monitoring report.

was the lack of resources to conduct resident surveys. This would have revealed residents' lived experiences and attitudes towards perceptions of quality and help quantify what is a reasonable benchmark for 'high quality built environment' in the context of a 'live' housing market.

Appendix B contains the full list of observations and issues raised by councillors, local boards and the public that are summarised below:

- need for a more equitable planning system – s.35, wider concerns
- level of intensification and cumulative effects of higher density developments – S.35
- subdivision and effects of smaller site size – wider concerns
- large number of dwellings per site – S.35
- building height – inconsistent with zone and community expectations – S.35, wider concerns
- increase in building bulk – S.35
- need for quality building design for all housing typologies – S.35
- loss of privacy and access to sunlight – within site and adjoining sites – S.35, wider concerns
- excessive earthworks – S.35
- inadequate landscape area, tree cover and vegetation – S.35
- council consenting processes – S.35.

In many cases, these issues complement the AUP B.1 issues and contribute to the evaluation of the AUP's effectiveness and efficiency. All these issues are considered during the analysis and some guide the intent of recommendations.

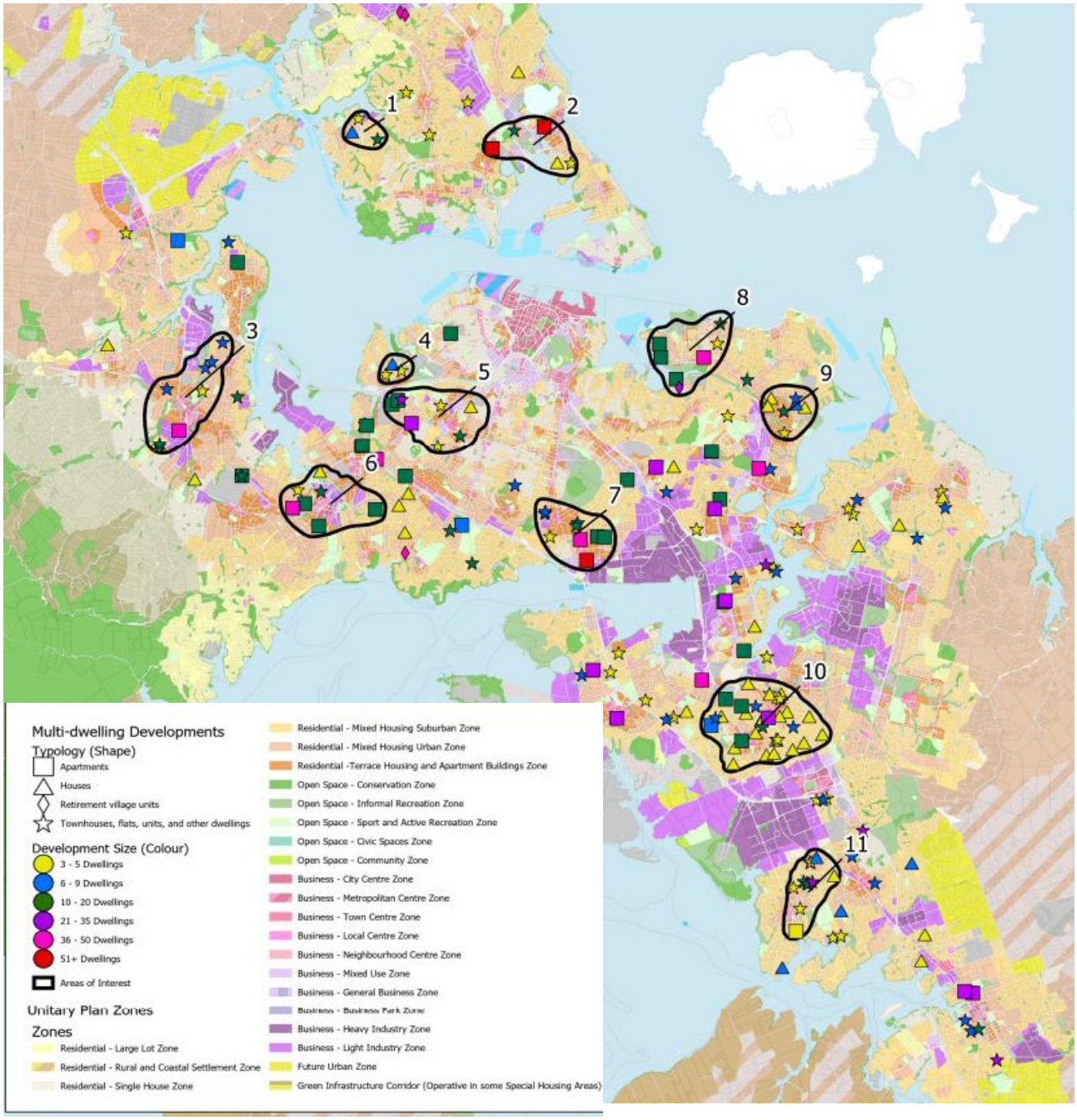


Figure 2. The black loops circle development clusters that were the focus of site visits. The key provides information on the types and size of developments.

Explanations, limitations and caveats

- All references to 'residential development' or 'development' refer only to the samples unless otherwise stated.
- Residential developments in this analysis are defined as 'four or more dwellings' – this aligns with the Restricted Discretionary activity status for the level of development.
- All references to the 'residential zones' refer only to the MHS, MHU or THAB zones unless otherwise stated.
- Medium scale developments are defined as 4-9 dwellings and large scale as 10 or more dwellings. This differentiates between the two forms of council processing and the increase in complexity.

- Data in this report is not intended to be scientifically accurate. The purpose of the data is primarily to provide qualitative evidence to evaluate plan effectiveness and efficiency in addressing the B2 Urban Growth and Form issues, achieving the RPS B2.3 and specified B2.4 objectives and policies. In addition to this, the findings also provide evidence on the extent of issues and trends identified through observations.
- Where statistical findings are represented as percentages, they are rounded up or down to the nearest 5 per cent. It should be noted that the rounding up or down of percentages has meant results may total more or less than 100 per cent.
- The data in this report can be referred to for Section 32 reports but should not be relied upon as the sole evidence.
- For references to the 'majority' in this report, assume a finding of at least 70 per cent. This this threshold was considered to provide a clear indication of an outcome or finding.
- Any reference to the data in this monitoring report for other purposes must also include supporting information regarding the data sources, methodology and these caveats.
- Unless otherwise specified, assume findings are for the residential zones. Specific references are made to Business – Mixed Use zone findings.
- The monitoring report does not consider any implications for the AUP by the introduction of the National Policy Statement on Urban Development 2020.
- This is not independent research. It presents Council's assessment of the effectiveness and efficiency of the AUP through a specific study topic (RPS 2.3 Quality Built Environment) – as it applies to a Restricted Discretionary residential development sample from four specified zones. Its purpose is to satisfy the RMA S.35 monitoring requirement. It does not consider plan performance from the perspective of the development sector or the lived experiences of residents in these new developments or residents on adjoining sites. This is a recognised limitation of the monitoring report. This could be considered in future monitoring programmes.
- This monitoring report does not include a cost-benefit analysis. Therefore, it is limited on the extent to which it can evaluate plan efficiency for this topic.
- The recommendations in this report do not take into consideration the Government proposal for Medium Density Residential Standards under the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act (December 2021). The monitoring and report had been completed before these standards were proposed in October 2021. The Government's new provisions have a significant influence on whether some of the recommendations in this monitoring report can be progressed. A review of the viability of recommendations has been undertaken in February 2022. Those recommendations that cannot be progressed are retained in the report but recognised as being superseded by the national Medium Density Residential Standards.

Findings and analysis

This section reports on the data findings, and considers how effective and efficient the objectives, policies, rules and other methods of the AUP have been in meeting the outcomes intended by the Regional Policy Statement. Where appropriate, recommendations are also provided. For the purpose of this analysis, effectiveness and efficiency are defined as:

Effectiveness is the contribution that the provisions make towards achieving the objective, and how successful they are likely to be in solving the problem they were designed to address when compared with alternatives. 'How do we know that implementing the policy, rule or method led or contributed to the outcome?'

Efficiency is an assessment of whether the provisions will be likely to achieve the objectives at the lowest total cost to all or achieves the highest net benefit relative to cost to all. Benefits and costs can be monetary or non-monetary (aligning with the definition of benefits and costs in section 2 of the RMA). A benefit or cost can be expressed as qualitative or quantitative. It may not be possible to quantify (with confidence) whether a provision is achieving a benefit relative to the cost – if information (or time) is limited. The assessment of efficiency is likely to be tailored to certain provisions. The evaluation of efficiency and effectiveness can be either qualitative, quantitative or monetised depending upon the topic. Topics like amenity values are likely to be better suited to qualitative assessment whereas water quality will be a mix of qualitative and quantitative. The evaluation will be supported by evidence.

Recommendations are proposed for each indicator in response to the findings. To better understand which recommendations are considered a higher priority than others, each recommendation can be flagged as either 'high', 'medium', 'low' or 'superseded by recent Government legislative amendments'. The Resource Management (Enabling Housing Supply and Other Matters) Amendment Act (Dec 2021) and the National Policy statement – Urban Development (July 2020), require Council to provide more intensive housing and to update the AUP accordingly. The RM Amendment Act includes new Medium Density Residential Standards. While these supersede some recommendations in the monitoring report, the findings may influence those changes required to update the AUP. The prioritisation below highlights those recommendations where a plan change or other initiative may need to be investigated and placed into work programmes.

Delivery timeframe	Action
High	Investigate a plan change as a priority. *It is considered that the plan issue should be addressed earlier than plan review stage. The issue has adverse implications on plan outcomes.*
Medium	Further investigate at plan review stage (2026) *The issue needs to be further investigated, however adverse implications arising from the issue are not seen as critical to achieving intended plan outcomes.*
Low	Further monitoring advised. *A plan issue may or may not be identified. A greater time period is needed to observe trends in data.*
Affected by recent Government legislative changes	Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

All recommendations will need to be tested fully through an RMA Section 32 assessment and be considered alongside recommendations from other topics and the Plans and Places Department work programme. As already noted, recent Government legislation may influence the validity, scope and timeframes for recommendations in this report.

Theme 1: The quality of site development, built form, appearance and setting

Theme 1 analyses site development, built form, appearance and relationship to the street and neighbours. The relevant B2.3 Quality built environment objectives and policies for this theme seek to ensure development responds to its site and surrounds. The relevant B2.4 Residential Growth objective seeks to create residential areas that are 'attractive' with 'quality development that is in keeping with the planned built character of the area'. In short, this theme assesses whether developments can bridge the fabric of existing neighbourhoods as it changes in response to Auckland's growing needs.

Relevant RPS Objective and Policies	
RPS Objective B2.3.1 (1)	A quality built environment where subdivision, use and development do all of the following: (a) respond to the intrinsic qualities and physical characteristics of the site and area, including its setting;
RPS Policy B2.3.2 (1)	Manage the form and design of subdivision, use and development so that it does all of the following: (a) supports the planned future environment, including its shape, landform, outlook, location and relationship to its surroundings, including landscape and heritage; (b) contributes to the safety of the site, street and neighbourhood; ... (e) meets the functional, and operational needs of the intended use;
RPS Objective B2.4.1 (2)	Residential areas are attractive, healthy and safe with quality development that is in keeping with the planned built character of the area.

This theme uses two indicators:

- Indicator 1 – Extent that developments respond to the physical characteristics of sites
- Indicator 2 – Extent that developments respond to the intrinsic qualities of the area and setting through the form and appearance of buildings

Indicator 1 – Extent that developments respond to the physical characteristics of sites

Measures:

- Number of sites requiring Chapter E Natural resources consents for land disturbance
- Amount of land disturbance – by volume removed
- Extent of site modification – cut, fill, retaining walls

What indicator 1 tells us

This indicator looks at the extent to which the physical characteristics of sites are modified to accommodate new residential development. The extent of earth movements on a site has many variables such as site size relative to development size and typology, modifications to natural topography to enable access or building platforms and so on. This indicator is primarily focussed on the topography of the site, which for the majority of developments had already been modified to accommodate an existing dwelling. A resource consent is required for all earthworks so the monitoring assesses the amount of earthworks. One of the implications of earthworks can be the requirement for retaining walls to stabilise cut faces where soil is removed or to support terraces where new flat areas are created.

The AUP has provisions to manage the adverse effects of land disturbance (including earthworks). It recognises that the cumulative adverse effects from a number of small earthwork sites can be significant as can single large areas of exposed earth. The Chapter E12.2(1) objective requires that 'Land disturbance is undertaken in a manner that protects the safety of people and avoids, remedies or mitigates adverse effects on the environment'.

This indicator and its measures provide an understanding of the scope of earthworks on sites within the residential zone sample. The focus is on the consequential effects of earthworks on the site with regard to the height of retaining walls. This is an issue that has been raised by Auckland Council staff, local boards and the public.

Findings

The analysis looked at the number of sites requiring earthworks. All 130 developments required some form of earthworks – even on level sites. To understand the level of land disturbance, the volume (in cubic metres) of earthworks was measured. This was not measured as a ratio of the site so provides only an indication of earthwork volumes for the sake of comparative analysis. The findings were:

- under 500m^3 – 50 per cent of sites
- 500-1000 m^3 – 20 per cent of sites
- 1000-25000 m^3 – 20 per cent of sites
- over 2500 m^3 – 10 per cent of sites.

Although the monitoring has not linked the earthworks specifically to the context of the development site size, collectively they provide an indication of the prevalence and extent of earth movements occurring on development sites. The findings showed that the majority of developments (70 per cent or more) undertook small to medium scale earthworks. The level of modification in and of itself does not necessarily represent positive or negative effects.

Site visit observations showed most developments used concrete slab foundations which require a flat site. Naturally flat sites retained the physical characteristics with most earthworks requiring no more than a surface scrape. Sites with larger volumes of earthworks tended to be sloping so the site preparation needed to create flat building platforms may have affected the site's physical characteristics. This was confirmed by some site visits where sloping sites were heavily modified with retaining walls to accommodate buildings platforms. In other instances, variation in development platforms enabled a range of housing typologies and provided effective visual and physical separation between dwellings within the site or to adjacent sites.

Some large-scale master-planned developments undertook substantial earthworks while also retaining some physical characteristics of the natural site. This included retention of natural stream courses, vegetation and topographical features. These enhanced the quality of the development.

Also investigated was the extent to which developments retained earth to enhance the site or remove the earth from the site. The measure for this was whether developers did 'cut and fill' earthworks (retaining the earth within the site), a cut and removal of earth, or brought fill into the site. The findings showed that 85 per cent of developments undertook cut and fill on sites in preparation for developments. Another 15 per cent cut and removed earth and one site brought in fill.

Sites undertaking substantial cut and fill operations often result in the need for retaining walls. The AUP standards only apply to retaining walls for fill – not for the cut walls. Depending on the retaining wall height and its location, these can produce poor quality site conditions – especially where they adjoin outdoor living spaces or block outlooks from habitable rooms. The combination of retaining walls on side boundaries with high fences above can have a significant impact – particularly shading. For example, a retaining wall of 1m with a 1.8m fence would have a combined height of almost 3m. Figure 3 shows the effects of a high retaining wall and fence on outdoor living spaces.

To gauge the scale of retaining walls in developments, their maximum heights were investigated. The findings showed:

- no retaining wall 20 per cent of sites
- less than 0.5m high 15 per cent of sites
- 0.6-1m high 25 per cent of sites
- 1.1-1.5m high 25 per cent of sites
- 1.6-2m high 10 per cent of sites
- 2.1-3m high 5 per cent of sites.

This shows the majority of developments within the samples analysed have some form of retaining wall.. Consent plans did not always show boundary fences so it was not possible to see if these would be added above a retaining wall. Site visits provided an opportunity to see the built outcomes and consequences of retaining walls coupled with 1.8m fences – particularly on side boundaries where privacy is a factor. This was the case for a number of sites seen on site visits which created poor quality outdoor living environments and outlook spaces from habitable rooms within new developments. There are currently no provisions within the AUP to assess potential shading and outlook effects from retaining walls or retaining walls combined with boundary fences.

Figure 3: This photo shows a high retaining wall combined with a fence can cause both shading and dominance effects on the amenity of the outdoor living space. However, privacy and dominance effects of the new development on the adjoining site are reduced with the change in level created by the earthworks. This shows there can be positive and negative outcomes from earthworks.

Effectiveness and efficiency of the plan

Most sites were already modified when they were developed for previous buildings. The findings showed that responses to the physical characteristics of the site are often driven by other factors and can affect other outcomes of the development both positive and negative.

Some earthworks contributed to better quality outcomes such as terraced building platforms. These were necessary to enable different housing types or provided visual and/or physical separation to improve privacy and outlooks or reduce dominance effects. This could benefit dwellings within the development site or adjoining sites. Some earthworks also caused outcomes that reduced the quality of the amenity for residents with depths of cut that required significant retaining walls. This caused negative effects such as loss of light into dwellings or sunlight to outdoor living spaces.

Observations from site visits to developments in the residential zones showed some sites also had high fences atop retaining walls – particularly on side or rear boundaries. The potential shading on outdoor living areas and the poor amenity of outlooks from living areas can impact the health and wellbeing of future residents.

Therefore, it is an omission that the AUP does not currently contain provisions to manage or assesses how retaining walls and fencing will interact. Resource Consent plans do not necessarily show the form or combined height of retaining walls and fences. Consents for the quantity of earthworks and site mitigation (including retaining walls) does not require consideration of the onsite effects, and the effects of cut walls.

The AUP's Daylight standard could be modified to apply to the proximity of structures such as the height of retaining walls or the combined height of retaining wall and fences. Alternatively, the Outdoor Living Space standard could consider the height of buildings and structures on adjoining sites or where there is a combined fence and wall.

In conclusion, the AUP is enabling site development efficiencies but in some cases, it can be at the cost of effectiveness in managing how development responds to the physical characteristics of the site – particularly those with significant retaining walls or where these are combined with high fences. This may be in part exacerbated by the issuing of land disturbance consents prior to consideration of land use consents.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be investigated as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To manage the heights of retaining walls or combined retaining walls and fences surrounding outdoor living spaces or affecting outlook spaces consider but not be limited to the following options:

- Update the AUP Fence standard to manage the total height where retaining walls and fences are combined.

  OR

- Modify the AUP Daylight standard to apply to the height of retaining walls, and retaining walls with fences where they are built on top. Investigate the scope for:

- applying the standard to retaining walls and fences where relevant, of a specified height where the combined height or height of just the cut or fill retaining wall affects the quality of daylight, sunlight, privacy, amenity, sense of space of the dwelling or where the retaining wall and or fence is at the perimeter of outlook spaces, outdoor living spaces, or if it affects the outlook of living areas and light penetration into habitable rooms.
- outdoor living spaces could be no more than 0.5m – 1.0m below the natural ground level as that is a key indicator of whether it is likely to be enclosed by fences and retaining walls.
- The term 'height' in the AUP Daylight standard would need to be redefined to allow the consideration of excavations and cuts into the ground i.e. where the boundary fence is actually at the original ground level and with the wall and outdoor living space excavated out beneath that. For instances, a 2m fence and a 2m wall 'beneath' the ground level creating a 4m top-to-bottom effective height. Currently the AUP considers this to be only 2m high.
- identifying an appropriate separation space such as using a built height to special depth ratio (e.g. 2:1) between the façade of the dwelling and the opposing retaining wall/fence. Also
- The Outdoor Living Space standard could consider the height of buildings and structures on adjoining sites or where there is a combined fence and wall exceeding a specified maximum height.
- Consider a standard requiring horizontal stepping of fences and walls.

High priority

- Grant resource consents for land disturbances at the same time as land use consents. The separation of bulk earthworks from the activity which the earthworks are required for, prevents any ability to influence the scale of earthworks and hinders ability to change building designs when platforms have already been established. *Medium priority*
- Investigate a new standard in the AUP Chapter E12 Land disturbance – District.

  For instance, a new E12 standard could be developed and applied in conjunction with updated AUP Outlook standards for all zones and the Outdoor Living Space standard for residential zones District. This could support outlook and outdoor living spaces to achieve good quality outcomes (daylight, sunlight, privacy, spaciousness, quality amenity) where adjoined by retaining walls and fences constructed on top of them. *Medium priority*
- investigate the application of a maximum retaining wall height or/and length where negative effects on the built form or site amenity can be identified. *Medium priority*

To manage land disturbance outcomes more effectively in residential developments, undertake further research to consider the following:

- Investigate whether there is a causal link between the scale of earthworks and the application of the rolling height limit. *Low priority*

Indicator 2 – Extent that developments respond to the intrinsic qualities of the area and setting through the form and appearance of buildings

Measures for residential zones and Business – Mixed Use zone

Built form:

- Site size and shape (influence of frontage width)
- Height and extent of non-compliance (by zone)
- Number of storeys (by zone)

- Building coverage and extent of non-compliance (by zone)
- Number of Height in Relation to Boundary (HIRB) non-compliances

Appearance and response to surroundings:

- Variation in roof form or roof ridgeline
- Variation in façade/s – modulation with recessions and protrusions
- Continuous building length
- The percentage of dwellings within a development that had the primary living outlook facing towards adjoining sites
- Whether windows and balconies were located and offset to avoid direct views into adjacent dwellings and private outdoor spaces
- Whether dwellings respond positively to the street – including orientation, façade treatment and minimal garage or carpark dominance

What indicator 2 tells us

In addition to delivering on the RPS 2.3 Quality built environment objectives, this indicator addresses RPS Issues B2.1. where growth seeks to:

(1) enhance the quality of life for individuals and communities

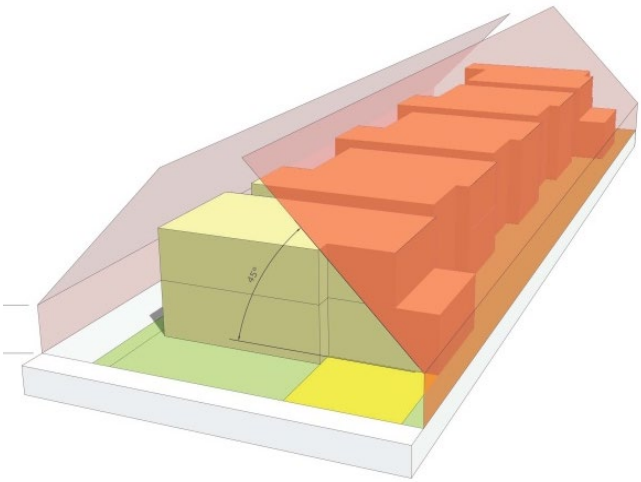
(6) maintain and enhance the quality of the environment, both natural and built

The monitoring also evaluated aspects of B2.4 Residential growth topic. This included the extent of intensification to achieve a quality compact urban form as well as attractive, healthy and safe housing with a range of choices to meet the diversity of Aucklanders needs.

The 'built form' aspect of this indicator provides an insight into the design, form and scale of development in the residential zones. Data on site size was not collected for the Business – Mixed Use zone sample.

Auckland's existing residential areas are historically very large urban blocks. Consequently, there are at least as many rear sites as there are front sites (often there are more rear sites than fronts). Many rear sites are also larger and include more marginal land. The strong focus on residential developments fronting streets and public open spaces results in less consideration for rear sites developments where there may be negligible or modest effects on streets.

This can be contrasted with new greenfield residential subdivisions where blocks are often smaller and where rear lots are far less prevalent. Most sites get the guaranteed spatial amenity and rhythm of street widths for outlook. This also helps limit how long building rows can get.



The design, form and scale of development is dictated by a combination of factors including the site size and shape, building coverage, height limit and the height in relation to the boundary. Collectively these create the envelope within which buildings can be constructed.

Figure 4 illustrates the building envelope for an 18m wide x 60m deep site with an 8m height limit using the Height in relation to boundary (HIRB) standard in the MHS zone. In the residential zones, the building coverage and height limits progressively increase with the THAB zone supporting more intensive development near centres and transport corridors.

Figure 4 Diagram shows a building envelope using the HIRB (red) applied to a site with an 18m width – illustrates how building bulk at upper floors is managed by this standard.

The second aspect of the indicator considers the appearance of development. To minimise subjectivity in the assessment of appearance, the measures focus on elements of design (as opposed to the *stylistic aesthetic*s of a development) that contribute to well-designed housing. These elements draw from Council's Auckland Design Manual which provide guidance on best practice housing design. Site observations were also valuable for assessing the quality of development.

The third aspect of this indicator considers how well building design responds to the surroundings. This includes:

- the appearance of building form when viewed from the street
- how a development responds to adjoining sites – considering the existing dwelling and the potential form of future higher density developments should that site be redeveloped. Visual privacy between sites was a key aspect of this.

Findings

Site width, size and shape

In residential zones, Auckland's subdivision pattern is characterised by long narrow sites. Another common site form are rear sites accessed down driveways.

The size and shape of sites influences the amount and form of multi-dwelling development. An Auckland Council GIS analysis of site widths in the residential zones showed the most common site width is between 15-20m and a shape factor is usually a dimension ratio of 2.5:1 or 3:1. This means that a site with a frontage width of 18m will have a depth of around 45m.

Findings from the monitoring sample showed the most common site sizes were:

- 600-800m^2 – accounting for 10 per cent of developments
- 800-1100m^2 – accounting for 40 per cent of developments.
- 3000-4000m^2 – accounting for 10 per cent of developments

The remaining 40 per cent of site sizes not accounted for above, were disparate and ranged widely from 500m^2 – 25,000m^2.

There were very few rear sites in the residential sample. One of the issues with rear sites or buildings at the rear of sites is many of the standards and assessment criteria influencing quality design are focussed on buildings positively contributing to streets. Without a street frontage, these design criteria do not apply to developments on rear sites so the AUP assessment for quality can be lower than on front sites.

Although information on site amalgamation was not specifically collected, observations when reviewing the data showed that most of the parent sites analysed were individual lots, typically with one house. The AUP has no influence on site amalgamation. Large scale developers sometimes amalgamated sites. Within the sample:

- 70% of developments were single sites
- 10% of developments were two amalgamated sites
- 10% of developments were 3-4 amalgamated sites
- 10% of developments were multiple amalgamated sites or large-scale sites with multiple houses in a single land parcel ownership (the majority of these were Kainga Ora developments – turning low density state housing neighbourhoods into comprehensive medium-density housing).

Site width is also a key determinant on the type and amount of housing, access and orientation of dwellings. The most common site widths in the sample were:

- 15-18m site width – 35 per cent of developments
- 19-25m site width – 25 per cent of developments.
- 30-40m in nearly 15 per cent of developments – many of these were corner sites.

Figure 5: The limited width of this site influenced the number of street facing dwellings and the site arrangement of buildings around vehicle access and parking areas. The central driveway is the primary access to rear carparking and a row of terraces at the rear of the site.

On narrow sites, building to the full height limit in the MHU and THAB zones is often constrained by the height in relation to boundary (HIRB) standard. This is a significant issue in the THAB zone and for apartment developments seeking more height on narrow sites.

Wider sites give developers more design flexibility, the ability to concentrate height in the centre of the site, away from side boundaries and limit the risk of limited notification. These sites are sought after by developers – particularly in THAB zones.[3]

Corner sites are popular for more intensive residential development. The AUP height in relation to boundary standard does not apply to street frontages so taller buildings can be built towards the two street boundaries. Nearly 30 per cent of developments in the sample were located on street corners. Observations from site visits confirmed that corner sites were popular locations for apartments and terraces.

[3] July 2021 *Herald-One Roof* article. https://www.oneroof.co.nz/news/39711

Built form

Height

Height is another key determinant of built form. This is a core standard for developments with four dwellings or more and for all dwellings in the THAB zone. The AUP sets height limits in metres rather than storeys. This enables more design flexibility which may include more floors to use the site more efficiently – particularly on sloping sites. Conversely, the zone descriptions refer to building height by the number of storeys because this is how most people experience height. The flexibility enabled by using meters can result in the number of storeys varying within the height limits.

The monitoring looked at both height in metres and storeys. The three residential zones also allow for 1m extra roof height to encourage better design (and avoid flat roofs).

Translating the AUP height limits to storeys generally produces two storeys within the 8m height limit in the MHS zone, three storeys within the 11m height limit in the MHU and up to five storeys within the 16m height limit in THAB. In the Business – Mixed Use zone 6-7 storeys are possible within the 18m height limit.

The combined findings across the three residential zones showed 3 per cent of developments in the sample were one storey, 65 per cent were two storeys and 30 per cent were three storeys. Only 2 per cent of developments in these zones were between 4-6 storeys. This contrasts with the Business – Mixed Use zone where more height and less restrictive height to boundary standards enabled 60 per cent of developments to achieve 4-6 storeys (up to 18m)

The key findings by zone were:

- MHS – 90 per cent of developments were two storeys or 8m.
- MHU – 60 per cent of developments were two storeys (8m) and 35 per cent were three storeys or 11m.
- THAB – 25 per cent of developments were two storeys (8m), 60 per cent were three storeys (11m) and 10 per cent were between 4-6 storeys (up to 18m)
- Business – Mixed Use – 30 per cent of developments were 2-3 storeys (11m); 60 per cent of developments were 4-6 storeys (up to 18m); 10 per cent of developments were 7-11 storeys (up to 35m).

These findings show the majority of developments are 2-3 storeys in all the residential zones. This reflects the dominance of terrace housing and 'walk-up' apartment building typologies (typically three floors). This contrasts with the Business – Mixed Use zone where the majority of developments are taller apartment buildings with lift access. As a result, there is no 'clear' delineation in terms of built form, especially with regards to height, between the residential zones. This suggests that the current provisions (in combination with how the development sector is responding to them) are delivering developments which are largely similar irrespective of zoning. The limitations of the reporting programme means that it does not examine how the development sector responds to the provisions – which is another key factor.

Less than 10 per cent of developments in the residential zones did not comply with the height limit and most were for less than 1m. Data from the resource consents database showed this finding is consistent with the 5 per cent of height standard non-compliance seen in commensurate developments across Auckland. This shows that height limits were largely complied with in all residential zones.

This could be for two reasons. The first is that the activity status of infringing the height and the HIRB standards mean that as core standards, they must be complied with or may be subject to notification depending on the effects of the non-compliance. The second is building height trends observed from findings across the different residential zones suggest that the relationship between site width and HIRB standards (see below) has a stronger influence on building height than the height limit itself.

In the Business – Mixed Use zone, height is measured differently to the residential zones. In this zone, 18m is the occupiable building height plus an additional 2m unoccupiable building height for roof forms that enables design flexibility. The habitation of this additional 'unoccupiable height', is often contentious in applications for developments in this zone. Around 20 per cent of developments in this zone infringed the height standard by up to 1m. Another 20 per cent of developments infringed the height limit by more than 2m to accommodate more floors. Most of these were located near the city centre or metropolitan centres where greater height is enabled.

There are other issues worthy of further investigation regarding height in the Business – Mixed Use zone. For instance, the costs and delay associated with limited notification can affect a developer's decision to not infringe height, even if it was of a typology or scale that was attractive to the market. . Another issue is around the time and costs of larger scale development. Additional height may be necessary to achieve a viable development but the uncertainty of notification is too great a risk. It is indicative of a very sensitive market where there are very fine margins.

Height in relation to boundary standards

The AUP 'height in relation to boundary' standard (HIRB) is a core standard that must be complied with for developments of four dwellings or more. The purpose of the standard in the MHS and MHU zones is to manage the height and bulk of buildings at boundaries to maintain a reasonable level of sunlight access and minimise adverse visual dominance effects to adjoining sites.

In the THAB zone, the purpose of the standard is to minimise the adverse effects of building height on adjoining sites (i.e. dominance and shading) and reduce the overall visual dominance of buildings at upper levels. There are two issues concerning the HIRB and Alternative Height in relation to Boundary (AHIRB) standards. The first is the extent of non-compliance with the HIRB and the use of the AHIRB. The second is the performance of the HIRB standard to minimise dominance and shading effects (THAB) and maintain sunlight access to immediate neighbours (MHS/MHU). The findings showed 60 per cent of developments (across all three residential zones) in the sample, did not comply with the HIRB standard. Analysis of the council's resource consents database showed this finding is consistent with 55 per cent non-compliance with the HIRB standard seen in commensurate residential developments across wider Auckland. While the quantum of non-compliance is significant, the extent of infringements for each site was not considered significant in consenting processes. It is likely that developers want to avoid notification and therefore comply with the HIRB standards where possible. Small variances are likely to be considered low risk when the consent is sought.

The AHIRB standard allows for more generous building scale for the first 20m from the street boundary. The purpose of the AHIRB, is to enable the efficient use of the site by providing design flexibility where a building is located close to the street frontage, while maintaining a reasonable level of sunlight in the MHS and MHU zones and a reasonable level of daylight access in the THAB zone. The findings showed that 85 per cent of developments complied with this standard. This indicates that the standard is effective at encouraging building bulk towards the front of the site.

The second issue is the performance of the HIRB and AHIRB as standards for managing effects (such as visual dominance, loss of privacy and shading or loss of daylight) on adjoining sites in residential zones. Members of the public have raised concerns regarding the effects of new development on

sunlight access to neighbouring sites. Winter sun was considered the most important for residents' health and energy efficiency (e.g., lighting, passive heating of dwellings and drying washing outside). Access to sun is also important for dwellings within development sites.

The MHS and MHU zone assessment criteria for the AHIRB standard consider shading at the equinox for four hours of sunlight to be retained between the hours of 9am – 4pm for varying proportions of the outdoor space on the adjoining site. In the THAB zone, a 'reasonable' amount of daylight access to the immediate neighbours is stated in the purpose statement for the AHIRB standard but there are no parameters for assessing it. Without this, new developments in the THAB zone may not sufficiently mitigate effects to the same extent as the other residential zones. Any changes to the standard would also need to consider its application to developments on sloping sites.

In terms of the performance of the standard, observations from the analysis of shading diagrams in some developments showed that sunlight admission to adjoining sites was more restricted in mid-winter by new developments (buildings or structures) than at the equinox. An analysis of 2-3 storey or 8-11m developments on sites with narrow widths of less than 20m showed that non-compliance was minor for 2-3 storey buildings at the equinox. However, if those same developments were assessed against the winter solstice, the effects on adjoining sites would be more significant. At the equinox the 4pm afternoon sun angle (at 30 degrees) is equivalent to the sun angle at noon on the winter solstice. Shading on outdoor living spaces can also be caused by high fences.

The diagrams below show the difference in shading effects on the adjoining site and on dwellings within the site between a complying 3 storey building (11m) in the THAB zone at the 22 Sept equinox and 22 June winter solstice. The AUP does not have assessment criteria regarding shading of adjoining sites in the THAB zone.

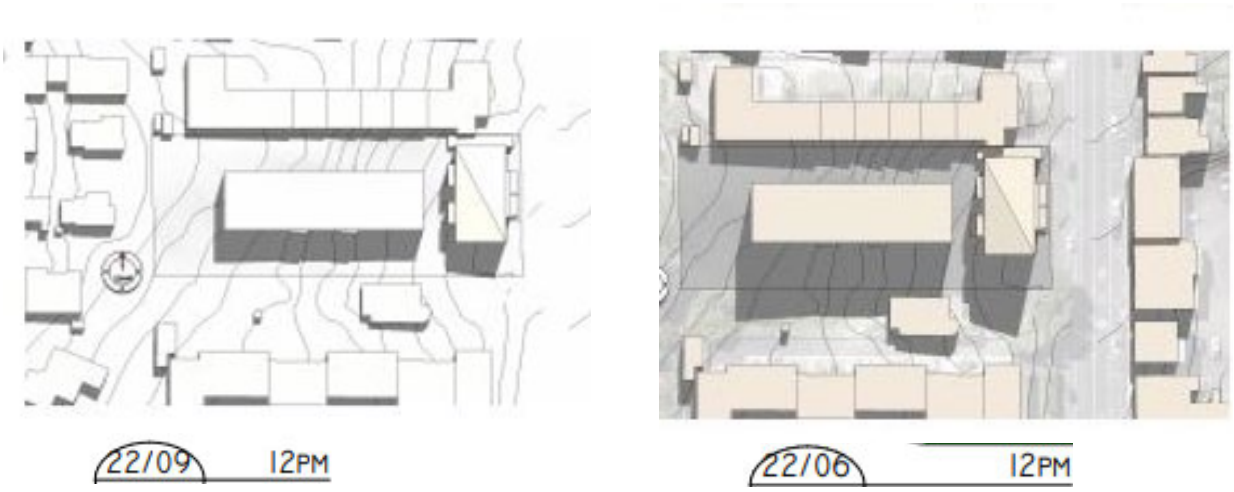


Figure 6 The shadow diagrams for this HIRB complying three storey apartment building in the THAB zone show the extent of shadow on the adjoining site at the equinox (22 Sept) and winter solstice (22 June).

Some of the legacy district plans had provisions requiring assessment for mid-winter sun for dwellings within the site. For example, the Waitākere District Plan design guidelines for apartments specified the following[4]:

[4] http://www.aucklandcity.govt.nz/council/documents/districtplanwaitakere/text/text/urbandesignrules.pdf

"habitable rooms and outdoor spaces allow for solar admission and sun access during the shortest winter day (As a guide habitable rooms for at least 70 percent of the units should receive sun access for a minimum of three hours between 9 am and 3 pm on the winter solstice (June 21);"

Other legacy district plans in the Auckland region (e.g. Manukau, Auckland, Waitākere) used 'recession planes' with angles tailored to different boundary orientations (north, east, west, south) of development sites. These were designed to manage dominance and shading effects of new development on adjacent sites. The AUP's HIRB and AHIRB standards do not have the flexibility of these methods to respond to this level of site condition.

In the Business – Mixed Use zone, the HIRB standard was not applicable to 60 per cent of the residential developments. This is because it is only applied where a site abuts a residential zone. Of those development sites subject to the HIRB standard, 35 per cent complied with it and 5 per cent infringed it. This zone relies primarily on a setback standard that steps the building 6m away from the side and rear boundary when above 27m in height.

Building coverage

The purpose of the building coverage standards is to manage the extent of buildings on a site to achieve the planned suburban (MHS, MHU) or urban (THAB) character of buildings surrounded by open space to varying degrees according to a zone's intensity. Building coverage is a key standard that governs the bulk of buildings – in combination with the height and HIRB/AHIRB standards.

The diagram below shows the relative differences in building coverage between residential zones. Most legacy district plans applied a maximum 35% building coverage to suburban zones. This is the same as the AUP Single House zone.

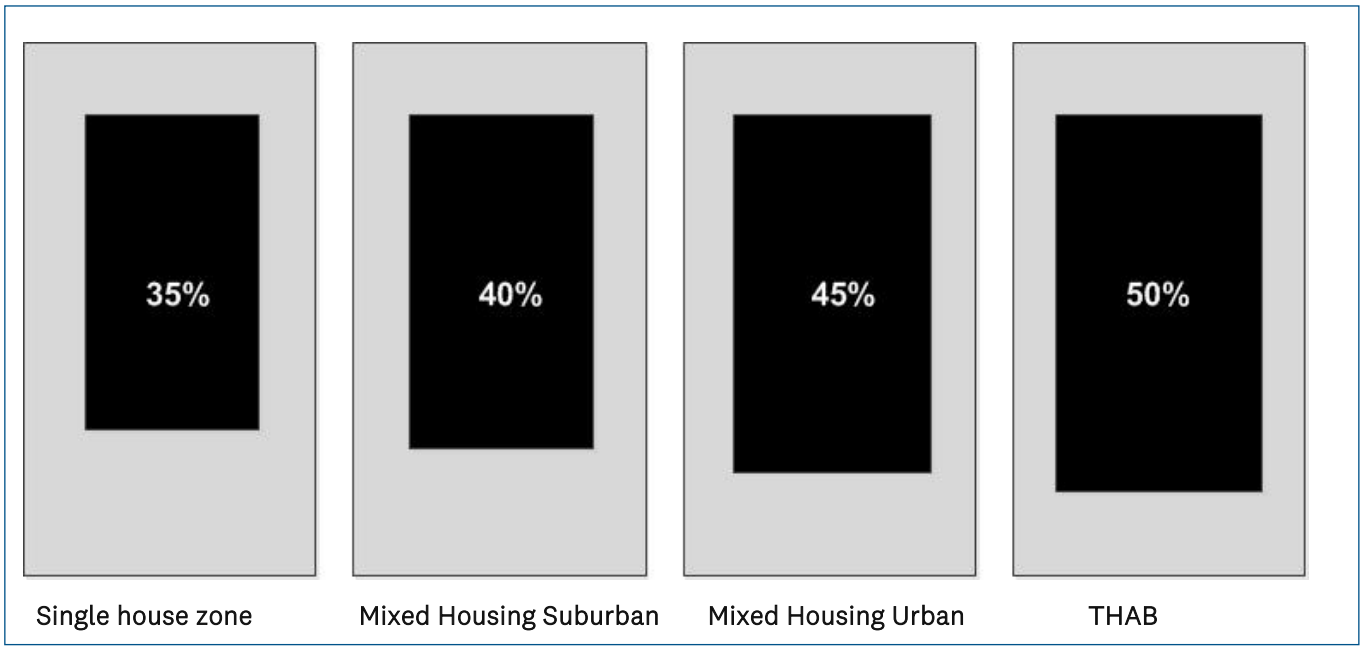


Figure 7. This diagram shows the percentage of building coverage (black area) for each residential zone applied to a theoretical 600m² site with an 18m site width and 33m site depth (space around the building is shown by the grey area). This illustrates the relative difference in building to open space ratio between the zones enabled through the building coverage standard.

Building coverage in the AUP is measured using the net site area. The AUP standards for the maximum building coverage vary according to zone (MHS 40 per cent of net site, MHU 45 per cent of net site, THAB 50 per cent of net site).

The findings on the building coverage standard are summarised for each zone below:

Zone	Findings
MHS	• 65 percent of developments complied with the 40 percent building coverage standard • 15 percent infringed the standard by up to 5 percent. • 20 percent infringed the standard by between 5-10 percent.
MHU	• 75 percent of developments complied with the 45 percent building coverage standard • 5 percent infringed the standard by up to 5 percent. • 10 percent infringed the standard by between 5-10 percent • 5 percent infringed the standard by between 11-15 percent.
THAB	• 65 percent of developments complied with the 50 percent building coverage standard • 5 percent infringed the standard by up to 5 percent. • 20 percent infringed the standard by between 5-10 percent. • 10 percent infringed the standard by between 11-20 percent.

The findings for the residential zone sample show that non-compliance with the building coverage is increasing the size of buildings relative to surrounding open space. Non-compliance of 5 percent or more would create building scales commensurate with more intensive residential zones. Although the effects of not meeting the quantitative specification for this standard were not considered significant, the cumulative effects of larger scale buildings and less surrounding open space have the potential to influence the planned built form of the residential zones.

There are no specific requirements in the AUP directing where the building bulk is located within the site. However, the HIRB and yard standards usually ensure there are setbacks from boundaries. Buildings can also be designed with central courtyards or other building forms that create the appearance of bulkier building form while still complying with the standard. This shows that building bulk is not always caused by greater building coverage.

Building coverage is not a core standard for 4 or more dwellings so mitigation can be negotiated. Non-compliance with the building coverage standards enables bigger floor plates with consequently bulkier buildings relative to open space – especially where height limits are more generous. This can exacerbate the cumulative effects of larger scale buildings on planned built form as noted above.

Infringements to the building coverage standard that encroach on the amount of private open space can affect compliance with other standards. For instance, a reduction in open space could compromise the amount of outlook space or outdoor living areas. The AUP is not effective at managing the effects of consequential encroachment by building coverage on landscape area and site amenity. However, infringements to landscape area or outdoor living space is considered under separate assessments and can address issues caused by a reduction in open space.

The effects of progressive increase in building coverage towards the higher density residential zones could have a significant influence on the character of an area with buildings that are bulkier with less surrounding open space than in the past. By way of comparison, under the legacy district plans, most residential areas in Auckland applied 35 per cent building coverage to a defined net site area for each residential zone.

Further to this, the 35% building coverage standard in legacy district plans was in relation to a set net site area e.g. a 500m^2 vacant lot, with most plans requiring a minimum site size. Now the coverage is in relation to a parent site through the land-use led approach in the AUP, which after subdivision and the creation of child sites results in much higher building coverages. This is discussed further below.

The lower ratio of built area to open space enabled in the past (which still characterise most existing neighbourhoods) can appear a stark contrast to developments with 40-50 per cent building coverage enabled by the AUP.

The findings show that the zone standards in the AUP can be said to be efficient in terms of enabling land use, scale and density. Neighbourhood character will continue to evolve and align more closely with the zone descriptions as more intensive development in the form of terrace housing and apartments occur.

The Business – Mixed Use zone does not have a building coverage standard. Side yards and other standards that manage the developable site area and are only applied where sites abut residential zones.

Building coverage per site following subdivision

The outcomes from the land-use led subdivision approach enabled by the AUP were evaluated to understand the extent to which a zone's building coverage standard would still apply to the newly created sites. In this analysis, the 'parent' site refers to the total site prior to subdivision and a 'child' site is the product of the subdivision of the parent site. Most calculations for assessing standards in resource consents are applied to the parent site, which would include for example, space set aside for public roads or jointly owned access lots created following subdivision. These may be for the 'gross' site – the total site or the 'net' site.

For a resource consent in the residential zones, building coverage is calculated using the net site area of the parent site. This is done prior to subdivision into smaller 'child' sites following completion of the development. Those developments which exceeded building coverage tended to produce subdivided sites which also exceeded the zone standard. The findings showed building coverages for some subdivided 'child' sites were between 60-70 per cent of the site. This was particularly evident in mid-terrace dwellings. The amount of net site building coverage per dwelling indicates the level of intensity that some developments are achieving.

To evaluate the extent of this, the child site with the highest building coverage for each development was recorded. The child site with the highest building coverage was typically mid-block in a row of terraces. This evaluation was not applied to apartments as these are unit titled with a common share of the parent site (a third of MHU developments and half the THAB developments were exempt).

The key findings were:

Zone	Findings
MHS	• 95 percent of developments had at least one subdivided 'child' site that exceeded the maximum 40 percent building coverage for that zone. • Following subdivision, building coverages ranged from 41 percent to 95 per cent for a child site. • The most prevalent (65 per cent of the sample) had child sites with building coverages between 41 percent – 60 percent. This is greater than the maximum building coverage for the MHU and THAB zones.
MHU	• 90 per cent of developments had at least one subdivided site that exceeded the maximum 45 per cent building coverage for that zone. • Following subdivision, building coverages ranged from 46 per cent to 55 per cent for a child site. • The most prevalent (65 per cent of the sample) had child sites with building coverages between 46 per cent – 60 per cent of the site.
THAB	• 40 per cent of developments had at least one subdivided site that exceeded the maximum 50 per cent building coverage for that zone. • Following subdivision, building coverage ranged from 51 per cent to 70 per cent of the site for a child site.

This demonstrates the effectiveness of the plan to enable intensification and provides data on the size of sites following subdivision. Infringements to some standards may have implications for the functionality of dwellings on smaller sites.

Appearance

The AUP relies on assessment criteria rather than standards for building appearance. These include attractiveness and safety of the street and visual dominance. For four or more dwellings there are specific matters of discretion including building intensity, scale, location, form and appearance. Auckland Council also provides design guidance in several forms. Developments with more than 20 dwellings are assessed by specialists including urban designers. Large scale developments may be reviewed by the Auckland Urban Design Panel who are a group of industry experts who provide independent advice to developers. Council's Auckland Design Manual also provides design guidance.

The monitoring analysis of developments in the residential zones considered a range of features that contribute to the appearance of buildings, reduce visual dominance effects on adjoining residential sites, and create attractive and safe streets. These are:

- Variation in façade/s – modulation with recessions and protrusions
- Variation in roof form or roof ridgeline
- Continuous building length

The variation in façade design using modulation with recessions and protrusions to create more visual interest was evident in 80 per cent of developments. A further 15 per cent of developments had partial variation in façade design.

Figure 8: This apartment development shows good variation in façade design and roof modulation.

The findings showed that 60 per cent of developments had variations in the roof form or roof ridgeline and 25 per cent had partial variations. This is particularly desirable in terrace or townhouse developments. The remaining 15 per cent of developments had no variation in roof form but the majority of these were apartment buildings.

Continuous building length can be extensive in multi-dwelling developments of terraces and to a lesser extent, apartments. This can create large-scale wall-like buildings which, if lacking appropriate design elements, can result in overly dominant building forms, a non-human scale environment and undermine the future planned quality of built form anticipated for a zone in the AUP. There are no standards specifying how long a building can be.

The findings show:

- 50 per cent of developments had building lengths of 20m or less
- 25 per cent had building lengths between 21-30m and
- 15 per cent had lengths between 31-40m.
- 10 per cent of building lengths were greater than 40m and one of these was over 60m.

Figure 9: This 11 dwelling terrace housing development on a 809m^2 site in the THAB zone has a site width of 15m and 54m depth. There is no on-site parking, so a footpath provides access to dwellings and the majority of terraces face the adjoining site. There are three buildings of different lengths - 6.5m, 21.4m, 17m with two spaces of 1m and 1.4m between the three buildings.

The findings reflect the residential monitoring sample which had approximately 50% of developments as smaller scale developments of 4-9 dwellings. Larger scale developments were more likely to have longer building lengths. Building lengths greater than 40m (i.e. measured perpendicular to the street, which occurs frequently given Auckland's historic site dimensions) can influence privacy, dominance and shading effects on adjoining sites and neighbourhood character. The significant length of some buildings highlights one of the problems with developing on long narrow sites, with the average Auckland site length being 45 metres. This is particularly evident with terrace housing developments. Excessive building length can be a greater issue for terrace housing than apartment developments as the latter can achieve yield via height.

Figure 10: A wide street frontage enables rows of terraces to face the street with individual entrances and landscaping. Short building lengths and spaces between buildings enable daylight to more rooms within dwellings.

Different measures were used to evaluate appearance in the Business – Mixed Use zone. Visual dominance created by the bulk and height of apartment buildings was analysed in terms of façade quality from all aspects. These were evaluated using the following criteria – the presence of façade modulation, arrangement of windows, balconies and architectural elements. There are effective assessment criteria in the Business – Mixed Use zone. Refer to Appendix D.

Based on the inclusion of these elements, the analysis showed that 50 per cent of buildings were considered to have attractive facades on all four sides. This is important as the scale of apartment buildings means they are visible from a multitude of public and private viewpoints. The remaining 50 per cent of developments were considered to be partly designed to be viewed from a multitude of viewpoints and included two or three facades with windows, façade modulation or attractive wall treatments.

Specialist reports by council's urban designers were extracted from consent files to determine whether there was support for developments in the Business – Mixed Use zone. Not all developments underwent this level of scrutiny due to the limitations on resourcing. Auckland Council's Urban Design Panel provided another level of scrutiny – usually for the largest or more significant developments.

A challenge for the AUP and the planning process is the separation of personal preferences when controlling for building appearance. The AUP uses subjective terms like "attractive" which are difficult to define as it can be highly personal. A more objective and neutral assessment such as "visual interest" "variation" or standards governing continuous surface planes (i.e. mandating modulation) might be more effective. Even with refinements to the AUP, there will continue to be uncertainty on what constitutes a quality appearance through the design, application and consenting process.

Response to surroundings

Ensuring a good level of privacy for dwellings within a site as well as those on adjoining sites is a concern for many residents in the residential zones. The RPS qualifies the 'intended use' and 'planned built character' which may suggest that change is to be expected with more intensification. The residential provisions such as yards, HIRB and Outlook Space are intended to manage the effects of new development on the privacy of adjoining sites. The consenting process evaluates the specific site and adjoining site conditions and the proposed development design to determine whether reasonable privacy is being achieved. The orientation and location of windows and location of outdoor living space are assessed.

Many developments on long narrow sites result in living areas being designed with outlooks that face towards adjoining sites on the side boundaries (and often over driveways too). While they comply with the AUP Outlook Space standard, this can create a sense of privacy loss on the adjoining site. This can affect visual and acoustic privacy. The analysis looked at the percentage of dwellings within a development that had the primary living outlook facing towards adjoining sites.

The findings showed that half of the developments analysed had between 50 per cent to 100 per cent of their dwellings facing adjoining sites. A quarter of all developments were designed to avoid living area outlooks facing adjoining sites.

Figure 11: This development has four dwellings with the principal living area and outdoor living space in the form of a balcony at the first level, overlooking their driveway and facing the adjoining site.

The AUP Outlook Space standard requires dwellings in the residential zones to have a reasonable standard of visual privacy between habitable rooms of different buildings, on the same or adjoining sites. To assess whether building designs were providing adequate privacy, the analysis looked at whether windows and balconies avoided direct views into adjoining dwellings and private outdoor spaces. The AUP has assessment criteria to assess the extent to which the height, bulk and location of the development maintains a reasonable standard of sunlight access, privacy and minimises visual dominance to adjoining sites. The assessment criteria for the AHIRB looks at the extent to which

direct overlooking of a neighbour's habitable room windows and outdoor living space is minimised to maintain a reasonable standard of privacy, including through the design and location of habitable room windows, balconies or terraces, setbacks, or screening.

The monitoring investigated some of the effects of new development on adjoining sites such as privacy. The findings showed that 75 per cent of developments designed the majority of dwellings to avoid direct views from windows into adjacent dwellings and their private outdoor spaces. A further 20 per cent partially achieved this outcome. This was better achieved when the principal living area, outlook space and outdoor living spaces were at ground level. It was more challenging to retain privacy between dwellings and adjoining sites when the principal living area, outlook space and outdoor living area in the form of a balcony were at the first floor or above. When balconies face side boundaries, there can be privacy issues if the balcony is too close to the boundary. This is because mitigation is more challenging to achieve compared to ground level indoor and outdoor living spaces where a fence or landscaping can provide privacy.

The quality of a building's appearance from the street contributes to the amenity of the neighbourhood. The analysis looked at whether dwellings responded positively to the street – including orientation, façade treatment and minimal garage or carpark dominance.

The findings showed that 70 per cent of residential zone developments had dwellings with facades fronting the street and with minimal garages or carparking visible. This contributed to a more attractive street environment. A further 20 per cent partially achieved this outcome.

Comprehensive evaluation of built form quality - from site visits

Site visits to 49 developments in the MHS, MHU and THAB zones provided the opportunity to evaluate whether quality developments anticipated by resource consents were actually being delivered. Developments were appraised from the street against a set of site criteria that aligned with the monitoring indicators and measures. Site visits were undertaken by a team of planners and urban designers. Refer to Appendix C for site appraisal criteria. This method relied primarily on observations and group discussions to determine whether the combined form, scale and appearance of a building were demonstrating quality outcomes appropriate for the site, neighbourhood and zone.

The ratings spanned from 'very good' to 'unanticipated outcomes'. Unanticipated outcomes signalled that there were other issues, such as site conditions, topography, and orientation that affected the overall quality of the development.

- MHS zone – 60 per cent of developments were rated as 'good', 35 per cent were rated as average
- MHU zone – 45 per cent were rated as 'good' or 'very good' , 40 per cent were rated as average
- THAB zone – 35 per cent of developments were rated as 'good' or 'very good', 20 per cent were rated as average

Figure 12: These photos show residential zone developments from site visits that were assessed as being good or very good (they are not shown in any particular order).

All developments visited had some merit but those that were considered below par and displayed unanticipated outcomes were primarily in the MHU zone (15 per cent of developments) and the THAB zone (35 per cent of developments). In these zones, there were often issues around site conditions (site proportion, topography, orientation), intensity of development (housing typologies at scales that were incompatible with the site) and effects (privacy, shading, dominance) on dwellings within the site, on adjoining sites or the street interface.

The findings showed that more intensive zones had a greater disparity in the quality of developments. In the MHU and THAB zone, there were issues regarding the intensity of development, scale and proximity of development fronting the street, effects on adjoining sites or the street interface.

There were no site visits to Business – Mixed Use zone developments due to resourcing constraints.

Effectiveness and efficiency of the plan

The extent to which the AUP 'maintains and enhances the quality of the environment, both natural and built' (RPS B2.1. Urban Growth and Form issue (6)) is variable. The analysis considered how the site characteristics influence built form and the standards which collectively manage building bulk in the three residential zones. It also looks at the appearance of residential development. The plan

varies in its effectiveness to achieve quality built outcomes with different standards and development conditions.

In the residential zones, the application of a generic set of residential standards to multiple housing typologies in varying scales to Auckland's existing subdivision pattern of long narrow sites or rear sites is limiting the plan's effectiveness. Site width, shape, size and slope have become key determinants of quality outcomes in many developments, particularly in zones where there is a no density approach to development.

One of the challenges is the extent to which standards can be applied to achieve quality outcomes on long narrow sites, rear sites or sloping sites. Site characteristics can exacerbate issues with excessive building length, the ability to achieve height limits with the restrictions of the HIRB standards and effects on neighbouring sites. The design of apartments and terrace housing or medium and large-scale developments within the constraints of the city's subdivision pattern maybe more effective with standards tailored for these housing typologies.

Height and height in relation to boundary

The findings have shown that there is general compliance with the height limit as well as building heights in the sample - being generally consistent with the zone descriptions. Specifying height limits in metres can enable an extra storey in response to site conditions (such as slopes) and more design flexibility. However, the discrepancy between building height being measured in metres and the zone descriptions referring to height in storeys is potentially leading to confusion as sometimes site conditions (such as slopes) can enable an extra storey within the height limit.

The Height in Relation to Boundary (HIRB) standard aims to manage the effects of dominance and shading on adjoining sites. There is less compliance with the HIRB standard indicating that either this development standard is less effective or there could be market pressures to achieve greater development potential. The findings showed 60 per cent of developments in the sample (across all the MHS, MHU and THAB residential zones) infringed the HIRB.

This finding was calibrated against commensurate developments across Auckland in the council's Resource Consent Database. The extent of non-compliance with the HIRB standard from the monitoring sample (60%) are consistent with the findings from council's Auckland-wide database (55%). The likely cause of non-compliance is the challenge of achieving the permitted height with housing typologies that are poorly suited to the constraints of Auckland's typically narrow long sites. This occurs particularly in developments of three storeys or higher in the MHU and THAB zones. In many cases, the infringements were small. This is probably because non-compliance with the HIRB standard is subject to notification.

The extent to which the AUP manages shading, daylight or dominance effects on adjoining sites through the HIRB standard is limited. The standard does not have the dexterity of the rules, methods or assessment criteria that were in the legacy district plans to respond to different site conditions or compass orientation. Furthermore, MHS and MHU zone assessment criteria apply to the sun's equinox rather than the winter solstice when sun is at its lowest angle. In the THAB zone, daylight access and reducing visual dominance effects to immediate neighbours are the only consideration – not shading effects. Due to the scale of new development in the residential zones, inadequate management of the effects on adjoining sites could impact on existing dwellings as well as reduce their viability for future quality redevelopment. This can affect the health, safety and wellbeing of residents living in sites within new residential developments as well as those in adjoining sites.

Appearance

This monitoring uses a number of architectural design elements to objectively evaluate the appearance of developments. Elements include modulation of building facades, variation in rooflines and the dominance of carparking. The majority of developments included variation in the façade design to create more visual interest. Most also had some form of variation in rooflines. Site visits confirmed that the majority of residential developments were achieving average to good outcomes in their appearance – particularly when viewed from the street.

The length of buildings was investigated because terraces and apartments can create large-scale wall-like buildings. This can affect adjoining sites and influence neighbourhood character. The Proposed Auckland Unitary Plan (PAUP) proposed a standard to limit building length to manage the length of buildings along side and/or rear boundaries and the separation between buildings on the same site. The purpose of the standard was to visually integrate the building into the surrounding neighbourhood. This standard was not included in the AUP.

This analysis has shown that 25 per cent of developments have continuous building lengths greater than 40m. Limiting building length can alleviate the effects on privacy, dominance and shading on adjoining sites.

Site visits evaluated developments from the street against a set of site assessment criteria by a team of planners and urban designers. The findings showed that the majority of developments in the MHS and MHU zones were producing average to good or very good outcomes to demonstrate the AUP's effectiveness particularly regarding street frontages. Those developments that were considered below par and displayed unanticipated outcomes were primarily in the MHU zone (15 per cent of developments) and the THAB zone (35 per cent of developments). In these zones, the effects of building length were often exacerbated by issues around site conditions (site proportion, topography, orientation), intensity of development (housing typologies at scales that were incompatible for the site). In some cases, the effects of long and continuous building lengths (such as privacy, shade, dominance) on adjoining sites or the street interface were more apparent in developments with more height and greater numbers of dwellings.

Responding to surrounds

This section reflects on whether new developments in the residential zones are 'enhancing the quality of life for individuals and communities' (RPS B2.1 issue (1)). To do this, the monitoring looked at how developments responded to surroundings. This included adjoining sites and the street. Site visits enabled developments to be comprehensively evaluated, taking into consideration their appearance and interface between adjoining sites and the street.

The AUP's core standards for the MHS, MHU and THAB zone developments of four or more dwellings (e.g., height, HIRB, yards) are subject to notification tests. These core standards were selected by the IHP for this purpose. However, the monitoring has shown that with the level of intensification occurring, these standards are not always managing the effects on adjoining sites as efficiently as the legacy district plans. This may in part be due to the limitations of the AUP core standards which to be effective in managing effects on neighbouring sites, need to include other standards in the assessment. These are not identified as 'core' standards in the AUP. For instance, in assessing the HIRB, sunlight access to adjoining sites could be a core part of the assessment of effects in the MHS and MHU zones. The AUP measures shading at the equinox rather than the winter solstice when living areas most need the sun.

The IHP limited the number and scope of core standards to minimise possible constraints on enabling development. The findings for the residential zones showed that half of developments in the sample had between 50 to 100 per cent of their dwellings facing adjoining sites. The majority of dwellings were designed to avoid direct views from principal living area windows into adjoining dwellings and private outdoor spaces. This was usually achieved by locating the principal living area outlook and outdoor living space at ground level with a perimeter fence. Where these were located at the first floor or higher and included a balcony, privacy to adjoining sites was more difficult to achieve. Habitable rooms (such as bedrooms) often overlooked adjoining sites from upper floors of dwellings.

The quality of a building's appearance from the street contributes to the amenity of the neighbourhood. The analysis looked at whether dwellings responded positively to the street – including orientation, façade treatment and minimal garage or carpark dominance. Seventy per cent of developments had attractively designed facades fronting the street with minimal garages or carparking visible. A further 20 per cent partially achieved this outcome.

The residential zones in the AUP have a set of common standards for the majority of residential development regardless of site conditions, scale and development typologies. The effective application of AUP standards becomes more challenging when applied to medium to large scale residential developments with typologies such as terrace housing and apartments that require additional considerations to respond well to Auckland's existing subdivision pattern – which was premised on a single standalone house with a garden.

It can be a challenge to achieve quality outcomes if the site size and configuration of the site, scale of development and housing typology are not compatible. These factors, combined with the intensity and scale of development enabled by the AUP's unlimited density provisions do not always produce quality outcomes.

The zone standards in the MHS, MHU and THAB zones enable intensive medium to large scale development. However, this can be difficult to achieve when the standard for building coverage (and other elements such as driveways) leave inadequate space on the site to provide for landscaping of a scale to provide privacy or increased setbacks from boundaries. The AUP is achieving efficiencies by maximising building bulk through building height, HIRB, and building coverage at scales that reflect the zone intensities. However, the level of non-compliance with the other standards has the potential to offset these gains with the loss of privacy and other effects on adjoining sites.

The spaciousness of sites and streets in the more intensive residential zones has become progressively reduced as the scale of developments increase. While this is not in of itself a positive or negative effect, issues arise when developments occur without consideration of the effects of shading, loss of privacy and adequate quality landscaping or well-designed building frontages to the street. Cumulatively, these matters can potentially result in negative outcomes for residents on adjoining sites and the neighbourhood.

The recommendations seek to respond to the issues and achieve better outcomes to achieve the RPS objectives. The cumulative effect of small non-compliances with multiple standards is unknown. While each infringed standard may be mitigated and therefore deemed to comply or the effects are considered minor, there is concern regarding the extent to which the amount of mitigation across multiple sites potentially undermines the effectiveness of the package of AUP residential provisions

The following recommendations also draw from findings in other sections of the monitoring report. This is because very few standards are applied in isolation to the wider package of provisions.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

General plan improvements

To address the level of non-compliance with standards in the residential zones, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Review and consider increasing the number and scope of standards that are subject to notification for four or more dwellings to emphasise and prioritise their compliance in developments. ***Medium priority***
- Strengthen residential objectives, policies, matters of discretion and assessment criteria to ensure clarity and align with outcomes sought by purpose statements and standards. ***Medium priority***
- Update the current notification rules for the residential zones to enable use in conjunction with earthworks and other incidental activities that need to be undertaken to enable most residential developments. Currently the non-notification clauses are not an incentive because they are unable to be used in most cases. ***Medium priority***
- Review standards to ensure the purpose statements are being delivered by the standard. Where necessary, either the standard or the purpose statements should be updated. ***Medium priority***
- The statutory weight of the 'purpose' statements for each standard should be made explicit in the AUP to give them the same weight as policies. ***Medium density***
- Review some AUP definitions to update in order to respond to issues, new contexts, technologies and conditions, expand scope, clarify meanings, application and/or intent. ***Medium priority***
- Further research is needed on the effects of development of terrace and apartment typologies on sites where site width, proportion and size are problematic. ***Medium priority***
- A cost benefit analysis is required to determine the appropriateness of the existing standards in the AUP e.g., setbacks, design and appearance of side walls and possible standards that could be added such as managing the length of the building on such sites. ***Medium density***
- Publication of practice notes, guidelines and guidance to provide clarification on aspects of the AUP and encourage quality built environment outcomes. ***Medium priority***

To address poor quality terrace housing and apartment developments, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Two sets of standards – one for apartments and one for terraces. This could apply to buildings of 2 storeys or higher. It could include standards for building separation controls, design of side/party walls, height relative to street width, setbacks or HIRB, yard controls, minimum site width, outlook provisions, outdoor living, waste management requirements. ***Affected by recent Government legislative changes***

- The application of the terrace and apartment standards for developments could apply to MHS, MHU and THAB zones – residential and business mixed use zone. *Affected by recent Government legislative changes*

To address issues arising from historical site dimensions with building typologies enabled through the residential zones, further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Require a minimum site width applied at the site frontage for developments of three storeys or higher to achieve a better ratio of built form to the site and street – for all housing typologies. *Affected by recent Government legislative changes*
- Apply a building shape factor based on a ratio of built form width to height to achieve better proportioned buildings – particularly on street frontages. This could encourage more attached dwellings in areas with greater height limits and reduce the predominance of buildings that are out of scale with their site and surroundings. *Affected by recent Government legislative changes*

Height

To determine whether height should be the main distinction between zones, review the zone objectives, policies, and description. Undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Refer to metres and possible number of storeys in the zone description or update the standard to explicitly indicate that another storey is possible within the height limit – including the additional allowance for a 1m roof form. *Affected by recent Government legislative changes*
- Update the height standard to indicate the flexibility enabled by the rolling height or/and extra 1m roof allowance (both enable an extra floor). *Affected by recent Government legislative changes*
- Update assessment criteria to more accurately evaluate the visual dominance of developments seeking an extra storey above the height limit. This is to ensure development is mitigated through approaches such as design, response to topography, extent of excavation, building setbacks, existing or proposed landscaping / tree planting. *Medium priority*
- Limit earthworks (through land disturbance consents) that enable additional building height to be achieved to the extent that the majority (or maximum proportion) of the site (and dwellings) are below natural ground level. *Medium priority*
- Retain the rolling height measurement but add parameters to manage the scope of its application. *Medium priority*

Building in relation to boundary

To manage the effects of bulk and high building coverage in the residential zones, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Update assessment of the HIRB and AHIRB in MHS and MHU zones using the winter-solstice (not equinox) for solar access to assess shading on adjoining properties and specify period of the day or the number of hours of sunlight should be achieved to dwellings within the site and on adjoining sites. Shading diagrams would become a special information requirement for the zone. *Affected by recent Government legislative changes*

- Replace the AHIRB with other standards that force street facing buildings and avoids windows and balconies overlooking adjoining sites with strong design controls to minimise the scale and avoid blank featureless side walls. *Affected by recent Government legislative changes*
- Look at a new standards to replace AHIRB for apartments or in the THAB zone depending on site width and shape and orientation. *Affected by recent Government legislative changes*
- Update the Business Mixed Use zone provisions with building and yard setbacks from the boundary. *Medium priority*
- Reconsider the THAB setback provisions to minimise the adverse effects of building height on adjoining sites (such as dominance and shading) and reduce the overall visual dominance of buildings at upper levels. *Affected by recent Government legislative changes*

Building coverage

To reduce the extent of non-compliance with building coverage in the residential zones, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Investigate the cumulative effects of widespread non-compliance with building coverage. This includes environmental, functional, visual and amenity effects on-site within the development site, the 'child' site, on adjoining sites and at a neighbourhood scale. *Affected by recent Government legislative changes*
- Building coverage should be a core standard – it has a fundamental influence on building bulk, impervious surfaces, landscape area and building proportion relative to the site, street and zone character. *Affected by recent Government legislative changes*

Building length

To manage the extent of building length in the residential zones, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Develop a new standard to provide for a maximum limit on continuous building length. Further investigation is necessary to establish the length. The following options could be considered:
  - a maximum building length for multi-dwelling developments with a separation of a specified amount between buildings to provide adequate visual separation.
  - apply a building length ratio (e.g. relative to the site length and width).
  - limit the maximum number of dwellings in a block of terraces with a specified separation distance between blocks to provide adequate visual separation.
  - Consider different building lengths for 1-3 storeys compared to 4+ storeys as taller buildings have greater impacts. For instance, 1-3 storey building lengths could be acceptable at 40m, but for 4+ storey buildings length/depth could be limited at 20m to mange their bulk, massing, dominance and shading effects.

  Affected by recent Government legislative changes

Theme 2: Building Auckland's planned built form with more intensive housing

Theme 2 investigates the range of housing typologies and the quantum of residential development to accommodate the city's growing and diverse population. It also looks at land use efficiency and the implications of higher density development. The B2.1. issues most relevant to this theme, seek to:

(1) enhances the quality of life for individuals and communities

(2) support integrated planning of land use, infrastructure and development

(3) optimise the efficient use of the existing urban area

(5) enable provision and use of infrastructure in a way that is efficient, effective and timely

(6) maintain and enhances the quality of the environment, both natural and built

Relevant RPS Objective and Policies	
RPS Objective B2.3.1 (1)	A quality built environment where subdivision, use and development do all of the following: (b) reinforce the hierarchy of centres and corridors; (d) maximise resource and infrastructure efficiency;
RPS Policy B2.3.2 (1)	Manage the form and design of subdivision, use and development so that it does all of the following: (a) supports the planned future environment, including its shape, landform, outlook, location and relationship to its surroundings, including landscape and heritage;
RPS Objective B2.4.1 (1)	Residential intensification supports a quality compact urban form
RPS Objective B2.4.1 (2)	Residential areas are attractive, healthy and safe with quality development that is in keeping with the planned built character of the area.

Two indicators consider the type of housing being built, the level of intensification and whether development is contributing to the planned built character anticipated for each zone.

- Indicator 3 – Building the planned built form with intensification reinforcing the hierarchy of centres and corridors
- Indicator 4 – Maximising land and building resources and infrastructure efficiency

Indicator 3 – Building the planned built form with intensification reinforcing the hierarchy of centres and corridors

Measures

- Building typologies – by zone
- Number of dwellings per consent (pre-subdivision)
- Whether development is consistent with the planned built character anticipated for its zone

What indicator 3 tells us

This indicator looks at the types of multi-unit developments with four or more dwellings being built in each of the zones. It also looks at the intensity of development. These influence the planned built character of the neighbourhoods. The monitoring considered five residential development typologies:

- Standalone houses
- Terraces (three or more attached dwellings)
- Duplex/townhouses (two attached dwellings)
- Apartments
- Mix of typologies in different versions (apartments and terraces, terraces and duplexes, terraces and standalone houses, duplexes and standalone houses, and terraces, duplexes and standalone houses).

This indicator also investigates the number of dwellings per site enabled by the AUP through its unlimited density provisions to the extent it affects the built form (see indicator 4 below for density in terms of number of dwellings). Neighbourhoods are changing through an increase in apartments and terraces in medium and large-scale developments.

Each residential zone has a description of the planned suburban or urban built character anticipated. The MHS, MHU and THAB anticipate higher density housing. Refer to Appendix D for the zone descriptions.

The monitoring provides a snapshot of the type and density of residential development occurring in the more intensive residential zones. The amount of new residential development in these more intensive zones is starting to produce street environments that allude to the future planned form of Auckland.

Indicator 4 is linked to indicator 3, it looks at whether the AUP provisions are effective in producing housing that uses land, resources and infrastructure efficiently. The focus is on the level of intensification and considers some of the factors that can restrict yields for residential site development. As identified in Theme 1, two factors that have a fundamental influence on the type and amount of housing are the site size and width at the street.

Findings

Building typologies by zone

Analysis of the sample from the MHS, MHU and THAB zones showed there was an even split across the five development typologies investigated. This shows there is a good range of housing typologies to meet the diverse needs of Aucklanders. The AUP zone descriptions specify the types of housing anticipated for each zone, so this was also analysed. It should be noted that lower density

developments of 1-3 dwellings were not included in the sample. Therefore, the comparative analysis is based on the types of medium to high density housing for each zone.

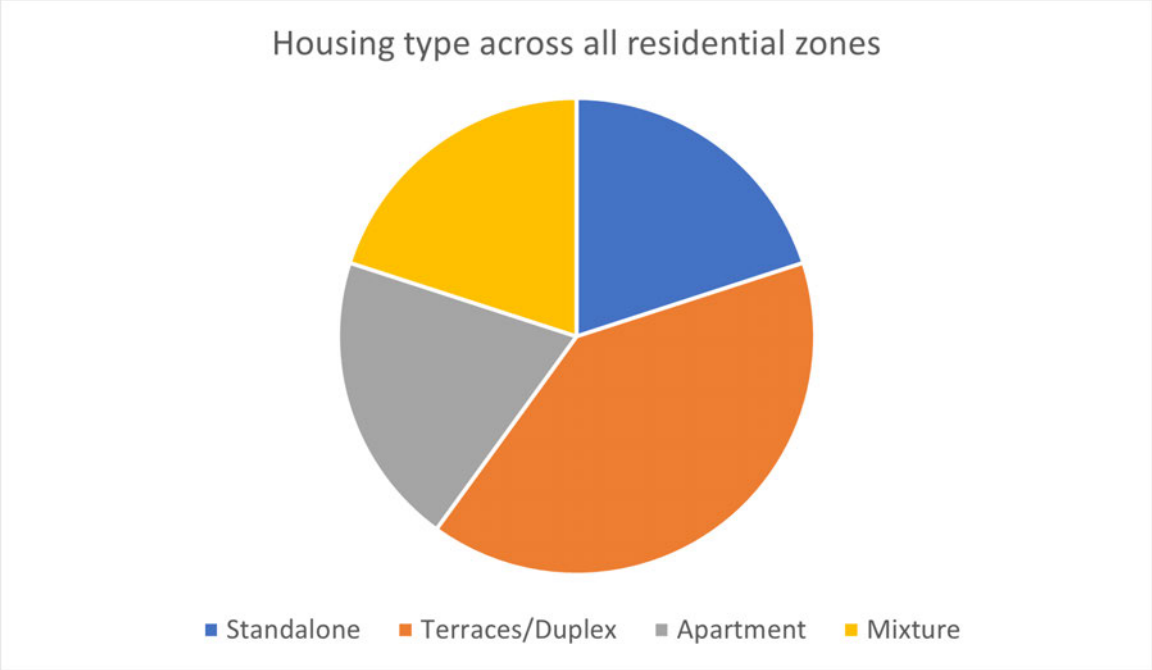


Figure 13: Prevalence of different housing typologies in the residential zone sample.

In the Mixed Housing Suburban zone, the AUP anticipates a suburban built character with standalone houses and attached housing (townhouses, terraces or apartments). The findings confirmed that the MHS zone was the location for the majority of standalone housing – accounting for 30 per cent of all residential developments in the zone sample. There were generally between 4-6 standalone houses on parent sites which had previously accommodated a single house. In this zone, around 20 per cent of developments comprised of duplex/townhouses, 20 per cent were terrace housing and 20 per cent were a mix of housing typologies. Apartments were less common in this zone, accounting for less than 10 per cent of developments.

The MHU and THAB zones are anticipated to have an urban built form with more intensive housing and the findings generally support this.

In the MHU zone, the AUP anticipates fewer standalone dwellings and more terrace and apartment development. In this zone nearly 25 per cent of developments were terraces and 25 per cent were apartments. Less intensive developments with duplexes/townhouses accounted for around 15 per cent and standalone houses were about the same (15 per cent). The remainder – 20 per cent of developments were a mix of housing typologies.

The AUP's most intensive residential zone, THAB had the largest number of apartments, accounting for nearly 50 per cent of developments in the sample. Around 20 per cent of developments had terraces and a further 10 per cent were a mix of apartments and terraces. Just 10 per cent of developments had only duplexes/townhouses but another 10 per cent had a mix of terraces and duplexes. Less than 5 per cent of developments were for standalone housing.

In the Business – Mixed Use zone, the AUP anticipates a mix of apartments and commercial buildings. The majority (80 per cent) of developments in the sample were for apartments. A new building typology emerged with some apartment developments also incorporating terrace housing for the first

1-2 floors of the building with direct access to the street. Other developments had a mix of apartment and terrace housing blocks. Around 10 per cent of developments were for terraces alone.

These findings show that the housing typologies are consistent with the AUP zone descriptions for each zone.

Planned suburban or urban built character

The monitoring relied on site visits to evaluate the planned suburban or urban built character in the three residential zones. The observations from site visits are discussed and issues identified in this section.

There were similarities in the housing typologies irrespective of zone. For instance, most terraced housing was based on 4-5m wide terraced houses and these were 2 storeys for 2 -3 bedroom units, or three storeys for 3-4 bedrooms. This suggests that the form of this typology is influenced by market demand and price point sought by the developer. There was more variance with the form of apartments.

Regardless of zone, most developments were in locations currently characterised by 1-2 storey housing on spacious landscaped sites. The majority of sites were in brownfield areas. This often presented a stark contrast to new intensive developments with two or more storeys for building typologies such as terraces or apartments. The MHS, MHU and THAB zones allow between 5 -15 per cent additional building coverage above the allowances under the legacy district plans. The spatial relationship between the built form and site size created tensions between existing and new development in some zones. One of the challenges of the monitoring was envisioning new developments within neighbourhoods of buildings of a similar scale and type in the future.

The MHS zone anticipates predominantly two storey developments that retain some of the spatial qualities that characterise suburban neighbourhoods. Most developments were two storey with at least one or two dwellings fronting the street at a scale and form anticipated by that zone. Quite a few site visit locations already had several intensive developments which provided a better understanding of the planned built character in the area.

Observations in the MHS zone, showed two storey dwellings were generally consistent with the current local neighbourhood character. This character will change as more intensive development occurs. The intensity of site development in terms of the number of dwellings on the parent site sometimes brought a new scale to these neighbourhoods. The spatial qualities that would typically be achieved through landscaped outdoor living areas or front gardens was often limited. Some developments relied on driveways and parking areas to achieve a ‘sense of space’. Other developments were designed with limited consideration for a similar scaled development on the adjoining site in future.

The type and form of residential developments in the MHU zone anticipates predominantly three storey terraces and apartments. In this zone, new development was a mix of two and three storey buildings. Site size and width was a likely determinant of whether a building was capable of being constructed to three storeys. Larger sites and corner sites usually achieved three storeys in this zone.

The THAB zone anticipates 5-7 storey buildings. As with the MHU zone, larger sites or corner sites were popular locations for developments of this scale. Developments on corner sites were less constrained by the HIRB and other AUP standards. This is because the HIRB does not apply to street edge site boundaries and developments can also benefit from using the street space for locating the dwelling principal outlook space standard (6m).

Visualising the future planned built form from the AUP zone descriptions can be a challenge. On the site visits it was more difficult to envision the future planned form of the MHU and THAB zones which anticipate greater heights and densities. This was especially difficult where a new development of terraces or apartments of three or more storeys were located in areas of predominantly single storey standalone housing.

Site visits provided opportunities to see whether new development had begun to change the local low density character to the planned built character anticipated for a zone. This was particularly evident where there was cumulative new development MHU zone in Mt Albert (Figure 14).

Figure 14 Photo shows the AUP planned built form with terraces and apartments in the MHU zone.

In both the MHU and THAB zones, the spatial quality of sites became progressively reduced by the scale of developments experienced in these locations and zones. There is only a 5 per cent difference in the building coverage between each of the zones but the additional bulk as well as height, more intensive building typologies and building proximity to the street resulted in a marked visual difference – especially with cumulative development.

In the Business – Mixed Use zone, 85 per cent of the developments were consistent with the future planned character. The remaining 15 per cent of developments were deemed to be partially consistent with the zone. Of the 15 per cent, developments tended to be under-developed with either lower heights or/and were terraces rather than apartments.

Effectiveness and efficiency of the plan

The B.2.3.1 Objectives 1(b) seek to reinforce the hierarchy of centres and corridors; and (d) maximise resource and infrastructure efficiency. The RPS B2.1 issue regarding growth that (1) enhances the quality of life for individuals and communities; and (6) maintains and enhances the quality of the environment, both natural and built is more challenging to achieve.

The AUP zone descriptions have been effective in specifying the types of housing anticipated for each zone. The monitoring shows there is a wide range of housing options to meet the diverse needs of Aucklanders.

The AUP has been effective in achieving residential intensification at levels promoted through the zoning principles and zone standards to reinforce the hierarchy of centres and corridors. The analysis showed the lowest densities were in the MHS zone with a clear transition of intensity through the MHU and THAB zones to the highest density in the Business MU zone. This also achieves the B2.4.1(1) objective seeking residential intensification to support a quality compact urban form. There is a general trend in developments in the MHS, MHU and THAB zones of increasing building bulk (as expressed through building coverage), but less clearly with height, with most developments at 2-3 storeys. While the zone standards broadly achieve the intensification enabled by the zone objectives in terms of typology i.e. terraces and apartments, they are less effective in achieving the planned character through height and spaciousness.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To better define the character distinctions between the MHS, MHU and THAB zones, undertake further research and cost benefit analysis to determine the appropriateness for inclusion for a plan change in the AUP review. The scope of research could consider but not be limited to the following options:

- Update the residential zone descriptions (MHS, MHU, THAB) to reflect the built form outcomes enabled by the standards. ***Affected by recent Government legislative changes***

Indicator 4 – Maximising land and building resources and infrastructure efficiency

Measures

- Number of dwellings per development
- Gross site size post- subdivision

What indicator 4 tells us

This indicator expands on the findings in Indicator 3 with measures that evaluate the AUP effectiveness in encouraging efficient use of land. The measures looked at the number of dwellings per site and then focuses on theoretical density as expressed by the number of dwellings and the size of net sites created through the land use led subdivision consent. Apartments were not analysed because there are unit titles with a common share of the land and not usually subdivided. This indicator looks at whether the AUP B2.1 expectation that growth:

(2) supports integrated planning of land use, infrastructure and development

(3) optimises the efficient use of the existing urban area

Findings

Number of dwellings per development

The AUP allows for almost unlimited dwelling density within the MHS, MHU, THAB and Business MU zones. It is constrained by the building envelope (established by the height, HIRB and yards) and by the minimum dwelling size standards. The developer determines the appropriate number of dwellings dependent on a range of factors such as economic viability, site characteristics and compliance with the AUP standards.

The Proposed Auckland Unitary Plan (PAUP) allowed unlimited density in the THAB zone and set parameters around unlimited density in the MHU zone and reduced density in the MHS zone. These provisions allowed considerably more intensification than many of the legacy district plans. To do this in the MHS and MHU zones, a set of parameters stipulated minimum site sizes and widths to manage development effectively on Auckland's typically narrow site subdivision pattern. For example, in the THAB zone rules required a minimum parent site size (1200m^2) and a minimum site width (20m) and shape. In the MHS zone, higher densities were enabled with a minimum post-subdivision site size of 200m^2. These parameters were included in the PAUP to mitigate the effects on adjacent sites and achieve built quality outcomes

The Independent Hearings Panel extracted the core AUP standards (height, HIRB, etc) for managing the effects of unlimited density – from the PAUP standards[5]. However, those standards that managed the form and scale of density (and unlimited density) were not included in the AUP residential standards. These would have undermined the intent of the 'unlimited density' provisions and the IHP were satisfied that the core standards could manage effects on adjoining sites.

The number of dwellings for each consent prior to any post-development subdivision was investigated to gauge the level of intensification. To encourage comprehensive developments, the AUP enables developers to seek a land use resource consent for buildings prior to or at the same time as a subdivision consent.

The benefits of this are the land use effects and built form volume (established primarily through standards for height, building coverage and height in relation to boundary or alternative height in relation to boundary) is established, regardless of how many dwellings are contained within the building envelope. This allows council to assess all these effects rather than take a more precautionary approach when assessing a vacant site subdivision where the specifics of volume and land use effects of a future development are unknown.

Standalone houses, duplex/townhouses and terrace housing are subdivided from the parent site into smaller separate 'child' sites. Apartments are usually unit titled because they have a common share of the land.

To identify the level of density per site, the number of dwellings were recorded for each development. The key findings were:

- 30 per cent of development sites: 4-6 dwellings
- 25 per cent of development sites: 7-9 dwellings
- 15 per cent of development sites: 10-15 dwellings
- 20 per cent of development sites: 16-40 dwellings

[5] https://unitaryplan.aucklandcouncil.govt.nz/Images/Printable%20PDFs%20-%20September/Part%203%20-%20Rules/Chapter%20I/I%201%20Residential.pdf

- 5 per cent of development sites: 41-100 dwellings
- 5 per cent of development sites: 100+ dwellings.

There are several possible reasons for a predominance of medium-scale developments in the findings. The residential sample covered a three-year timeframe (April 2018 – December 2020) so developments needed to be consented and constructed within this period. Smaller developments don't usually have the complexity of large-scale developments so are faster to consent and build.

Another reason may be that developers can achieve viable development yields with the AUP unlimited density provisions in a timely manner on a typical Auckland 800-1100m^2 site. Large scale developments usually take longer with more complex site arrangements (including site amalgamations), infrastructure provision and multiple housing typologies. These projects often take more than three years to gain planning consents and complete the development.

In the Business - Mixed Use zone, the majority of developments were for apartments which achieve higher dwelling numbers per site than other typologies. The key findings were:

- 40 per cent of developments: 4-20 dwellings
- 20 per cent of developments: 21-40 dwellings
- 30 per cent of developments: 80 dwellings or more.

The Business – Mixed Use zone had larger site sizes. This appears to be a major determinant influencing the prevalence of apartment buildings with high numbers of dwellings. All the developments with 100 dwellings or more were located in close proximity to either a Metropolitan Centre (specifically Newmarket and Manukau) or the City Centre.

In terms of land use efficiency, 130 developments with a wide range of housing typologies in the residential zone sample produced a total of 2,339 dwellings. These replaced a total of 274 dwellings which were removed to make way for new development on sites. This produces an average of 8 new dwellings for every dwelling replaced. The majority of these dwellings have been built or are in the construction phase during the monitoring period.

In the Business - Mixed Use zone the calculations are more theoretical as many are yet to be constructed. There were consents for 33 developments – primarily apartments, which could produce 1,655 dwellings. Assuming an average of 1.5 dwellings per site prior to redevelopment, this would mean that 50 dwellings were replaced by 1,655 dwellings. This produces an average of 33 new dwellings for every dwelling replaced.

This demonstrates the effectiveness and efficiency of the AUP standards – and specifically the unlimited density provisions enabled for 4 or more dwellings.

Post subdivision site size

The absence of density standards enable multiple dwellings to be built on a parent site and subsequently subdivided into smaller sites. The monitoring investigated the size of sites following subdivision to evaluate land use efficiency of those developments that are not apartments in the three residential zones. The size of sites also showed the differential between the AUP subdivision standards for the minimum vacant site size which is 300m^2 in the MHU zone and 400m^2 in the MHS zone. The THAB zone has a minimum vacant lot subdivision size of 1200m^2 to disincentivise fragmentation of larger sites without a planned comprehensive residential development. Once subdivided, vacant sites must comply with the AUP standards for building coverage, height, maximum impervious surfaces, etc for the respective zone. As discussed above, the AUP envisions two pathways to subdivision: creating vacant site(s), or land use led.

The Business – Mixed Use zone incentivises subdivision in accordance with an approved land use resource consent (complying with Standard E38.9.2.1). In contrast with the residential zones, a vacant lot subdivision can be 200m^2 in this zone. The majority of developments in the Business – Mixed Use zone sample were for apartments which were unit titled and did not create new sites under the plan definition.

The calculation used for the analysis took the total area for the parent site (including driveways) and divided it by the number of dwellings. Apartments were excluded from this analysis because they share a communal land area. While this is somewhat simplistic, it gives an indication of how small site sizes can become under the AUP. For each development, the smallest site size was recorded. It should be noted, these are not actual section sizes as areas in common ownership such as driveways or communal parking were not considered. Site sizes were recorded in 25m^2 bands for example 50m^2-75m^2 for ease of comparative analysis.

The findings show the spectrum of possible subdivided site sizes ranged between 50-300m^2 with the most prevalent site size between 150-200m^2. The smallest sites were calculated between 50-75m^2. Only one site exceeded 300m^2. Most terrace developments had a number of mid-terrace sites that were consistently smaller than either the end of terrace sites or street facing sites. Below is a more detailed breakdown of the site sizes that developments are subdividing to:

- 20 per cent of developments subdivided at least one site to between 50-100m^2
- 20 per cent of developments subdivided at least one site to between 101-150m^2
- 30 per cent of developments subdivided at least one site to between 151-200m^2
- 25 per cent of developments subdivided at least one site to between 201-250m^2
- 5 per cent of developments subdivided at least one site to between 251-300m^2

Small sites are a product of the AUP unlimited density provisions and can be effective in providing large numbers of dwellings using land very efficiently. Issues arise if the effects of intensification cannot be sufficiently managed within the site and significantly affect adjoining sites, street environment or neighbourhood. For instance, the child sites created from the subdivision of a parent site often don't comply with building coverage or landscape areas. This reduces the ability to provide for viable trees/biodiversity/climate change mitigation across an area.

The ability of developers to apply for a subdivision consent concurrently with the land use resource consent is a feature of the AUP. The objectives and policies in the E38 Subdivision chapter set the framework for this form of subdivision. It is designed to incentivise comprehensive and intensive development. Another subdivision method creates 'vacant lots' and is similar to the legacy district plan subdivision rules – it does not incentivise density. This method enables the level of intensification anticipated in Auckland Plan growth models and enables the AUP unlimited density provisions.

Effectiveness and efficiency of the plan

The RPS B2.3 objectives, policies and B2.1 issues seek an integrated approach to development to achieve efficient use of resources and infrastructure in existing urban areas. The findings showed that 130 developments in the residential zone sample produced 2,339 new dwellings. Seventy per cent of developments were for between 4-15 dwellings per site, 20 per cent were for 16-40 dwellings per site and 10 per cent were for developments with over 40 dwellings. Some of these had over 150 dwellings. The new developments replaced approximately 275 existing dwellings across the sample. To illustrate how effective the AUP has been in enabling housing growth, this calculates out to an

'average' of 17 dwellings per site in this sample. In the Business – Mixed Use zone, consents for 33 developments – primarily apartments, would produce a theoretical number of 1,655 dwellings.

Across the total monitoring sample, most developments replaced 1-2 houses and some large-scale developments replaced more. In effect, this means that around 350 dwellings were be replaced with nearly 4,000 dwellings. This demonstrates that the AUP's standards, unlimited density and land use led subdivision consenting process is highly effective and efficient in supporting the Auckland Plan and AUP growth objectives. Unlimited density is a key factor in the scale of developments being seen on some sites and the desire to infringe many controls slightly to provide an additional unit can be a strong incentive for some developers. This can sometimes be to the detriment of on-site amenity such as outlook which can also affect adjoining sites.

Land use efficiencies are being achieved where zone provisions enable higher density development such as apartments or intensive terrace housing with small site sizes. Site functionality can be compromised if sites become too small. This includes communal or private space for outdoor living areas, landscaping for trees and biodiversity, rubbish bins, clotheslines, rainwater tanks, gas bottles and so on.

Objective B2.4.1 (2) seeks residential areas that are attractive, healthy and safe with quality development that is in keeping with the planned built character of the area. The absence of density provisions and the land use led subdivision is producing very small sites – particularly for terrace development in the residential zones. This is creating a number of issues including the following.

- Sites are becoming so small that they can be functionality compromised (particularly around private outdoor living spaces, no space for trees or biodiversity).
- Amenity, solar access, privacy (visual and acoustic) and other factors that contribute to quality housing and the health and safety of residents within sites as well as adjoining sites are being compromised for housing yield in some developments. This is evidenced by the large number of dwellings per site and the level of non-compliance with building coverage, landscape area and HIRB and other standards).
- There is a minimum size for the subdivision of a vacant site and a minimum dwelling size but no minimum size for a site established through the land use led consenting process.

These issues suggest that Objective B2.4.1 (2) and the RPS B2.1(1) Issue requiring the plan to manage growth to enhance the quality of life for individuals and communities may not be achieved as well as it could be with this level of intensification. Higher intensity developments do not inherently produce poor outcomes. Issues can arise from not appropriately addressing the unique consequences of several factors – housing typologies, yield and site conditions. This appears to be resulting in a yield-led response rather than the design-led response intended by the AUP. It will require a rebalancing of efficiencies to achieve both growth and quality development. The poor outcomes identified with these issues detract from the positive outcomes of the enabling aspects of the AUP to achieve growth.

The density standards ensured that there was open space available for a number of uses but this is not expressed as standards. Enabling unlimited density has highlighted that specifying outdoor service areas and other requirements like trees or sheds are important and need to be provided for in the standards.

Many of the issues regarding quality are addressed by recommendations in other themes in this report. The recommendations below are specific to the indicators in this theme and address the form and size of sites and subdivision.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To address the prevalence of very small site sizes as a consequence of land use led subdivision and unlimited density provisions in the MHS, MHU and THAB zones, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Investigate the cumulative effects of small site sizes created by land use led subdivision. This includes environmental, climate change, functional, visual and amenity effects, effects on within the site and adjoining sites. *Medium priority*
- Investigate a minimum net site size for any post-subdivision/child site created by the land-use led subdivision consenting process. This could be based on the minimum size necessary for site functionality and climate change and could include:
    - A minimum subdivision size specified for each housing typology to respond to the spatial qualities required to support good urban design, provide for household needs, provide for trees and mitigate effects.

      And/or
    - A minimum subdivision size specified for each zone to enable stronger spatial distinctions between zone character.

      And/or
    - Consider minimum site widths or sizes based on the optimum response to climate change objectives – including the application of landscape and maximum impervious area standards to the post-subdivision/child site.
    - Process developments with any post-subdivision sites below a specified minimum net site size as a discretionary activity.

    Medium priority
- Monitor the cumulative effects of intensification to determine whether effects are adequately managed within the site, adjoining sites and street. *Medium priority*

Theme 3: Supporting the health, safety and wellbeing of residents

Health and safety is a broad topic. It includes housing people well in homes that are dry, warm, safe and well-functioning. It also relates to hazard and engineering standards. Many of these aspects are prescribed by the NZ Building Code. This theme focuses on various aspects of residential developments that influence people's health, safety and wellbeing. This theme also addresses the B2.1(1) issue that seeks growth that enhances the quality of life for individuals and communities. The monitoring looked at specific standards in the residential zone provisions that contribute to the Regional Policy Statement objectives focusing on the health and safety of people and communities. In addition to this, Theme 6 also refers to pedestrian safety on driveways.

This theme analyses the size, orientation and quality of outlooks from principal living areas and outdoor living spaces. The analysis also included measures that go beyond the scope of the AUP to determine whether residential developments were providing good quality primary living areas in dwellings. For instance, measures of 'quality' included convenient access to outdoor living spaces from the dwelling, the type of outlook from the main window and whether it is orientated for sunlight. Collectively, these measures provide an indication of whether the residential zone standards are encouraging developments that support the health, safety and wellbeing of residents.

Relevant RPS Objective and Policies	
RPS Objective B2.3.1(3)	The health and safety of people and communities are promoted.
RPS Policy B2.3.2 (2)	Encourage subdivision, use and development to be designed to promote the health, safety and well-being of people and communities by all of the following: (a) providing access for people of all ages and abilities; (b) enabling walking, cycling and public transport and minimising vehicle movements; (e) meets the functional, and operational needs of the intended use;
RPS Policy B2.3.2 (4)	Balance the main functions of streets as places for people and as routes for the movement of vehicles.

This theme has two indicators:

- Indicator 5 – The extent that the health and wellbeing of residents is supported by living spaces with quality outlooks, privacy and sunlight.
- Indicator 6 – The extent that the health, safety and wellbeing of residents is supported by quality outdoor living spaces

Indicator 5 – The extent that the health and wellbeing of residents is supported by living spaces with quality outlooks, privacy and sunlight.

Measures for residential zones:

- Extent of compliance with the 6m x 4m principal living outlook space AUP standard.
- Extent of primary living space outlook non-compliance

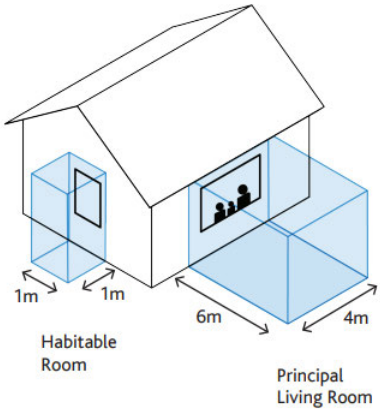
- Number of habitable rooms per dwelling complying with 1m outlook standard
- Number of habitable rooms without direct access to daylight, sunlight and natural ventilation
- Location of the primary living outlook space – street, carpark/driveway/adjoining site
- The proportion of dwellings in a development with principal living overlook spaces towards the street
- Where the principal living space overlooks the street, what is the distance between primary glazing and the street boundary
- The percentage of dwellings with privacy measures between the living outlook space and street
- Percentage of dwellings with principal living outlook space overlooking a driveway or carpark area
- Percentage of dwellings with principal living outlook space overlapping with any outlook from other dwellings within the site
- Proportion of dwellings in a development with a north, east or west oriented principal living outlook space
- Proportion of dwellings in a development with a south oriented principal living outlook space

Measures for the Business – Mixed Use zone:

- Extent of compliance with the principal living outlook space AUP standard.
- Extent of primary living space outlook non-compliance

What indicator 5 tells us

The AUP has standards and assessment criteria that set the parameters for building outlook in the MHS, MHU, THAB residential zones and Business – Mixed Use zone. The purpose of the outlook requirement is to ensure a reasonable standard of visual privacy between habitable rooms of different buildings on the same or adjoining sites. It can also do this in combination with the daylight standard to manage visual dominance effects within a site by ensuring that habitable rooms have an outlook and sense of space.



In the residential zones, the outlook space is measured from the centre of the largest window in the primary living area for a 6m depth and 4m width as shown in the diagram. The outlook space for a master bedroom is 3m and for a habitable room it is 1m x 1m in the residential zones. In the Business – Mixed Use zone, the outlook space for the principal living area is the same as the residential zones but for all other habitable rooms it is 3m.

The focus of the monitoring was to explore whether these provisions were achieving quality outcomes for the primary living area and to a lesser degree, habitable rooms. The focus on primary living outlook reflects an assumption that residents will spend longer periods of time in the primary living area and will have a larger effect on the quality of their day-to-day lives.

The monitoring programme consider the following parameters as contributing to a 'quality outlook':

- the amount of outlook space

- Compliance with the outlook space standard for primary living spaces in MHS, MHU, THAB and Business – Mixed Use zone
- Compliance with the outlook space standard for habitable rooms in the MHS, MHU and THAB zones

- the location of the outlook and what it overlooked
- privacy for the occupants of the dwelling
- solar orientation.

Analysis of outlook spaces must also recognise the standards' roles in acting as a building separation control.[6] While the main purpose of the outlook standard is to ensure privacy, it also helps to mitigate building dominance in the absence of a building separation standard.

Findings

Amount of principal living area outlook space

In residential zones, the key findings showed that the majority of developments complied with the AUP requirement for a 6m x 4m outlook space from the principal living area. The effects are evaluated (using assessment criteria) for developments of four or more dwellings where the outlook space extends over an adjoining site or overlaps with the outlook from another dwelling. If the outlook extends over the street or a driveway within the site, it is not an infringement. The level of compliance with the standard and observations from site visits indicate the dimensions – including the 6m depth - are achieving quality outcomes for dwellings. Privacy and a sense of space are successfully achieved where the outlook space is fully contained within the site.

Figure 15: The 6m x 4m principal living outlook space depth and the 20m^2 outdoor living space orientated for sunlight are located together to create a spacious and healthy living area in this development.

[6] Graeme McIndoe EIC before the AUPIHP, 9 September 2015

The findings showed that across all the zones, 70 per cent of developments complied with the principal living area outlook standards. Developments with ***all*** their dwellings complying with the principal living area outlook standard are as follows:

- 80 per cent compliance in the MHS zone
- 60 per cent compliance in the MHU zone
- 65 per cent compliance in the THAB zone

In the 30 per cent that did not have full compliance, some developments had only one dwelling infringe the standard while others had a significant proportion of dwellings infringe it.

Further analysis into the proportion of dwellings in those developments that had poor compliance was undertaken. There was a notably large group of developments that had only 20-40 per cent of their dwellings complying with the outlook standard – the rest infringed the standard. By zone, the findings showed:

- MHS – 10 per cent of developments had only 30-40 per cent of dwellings with outlooks that complied with the standard
- MHU – 15 per cent of developments had only 30-40 per cent of dwellings with outlooks that complied with the standard
- THAB – 10 per cent of developments had only 20 per cent of dwellings with outlooks that complied the standard

This lower level of compliance in some developments may be due to the outlook standard not being a core standard for four or more dwellings. Further investigations also showed a link between non-compliance increasing as the site widths became narrow in the MHU and THAB zones.

Extent of non-compliance with the principal living area outlook space

The extent of non-compliance with the 6m depth dimension across all residential zones in the sample were:

- 45 per cent infringed by 1m or less
- 40 per cent infringed by 1.1–2m
- 10 per cent infringed by 2.1-3m
- 5 per cent infringed by 3.1-4m

In context, a reduction of 1-2m represents a loss of 15-30 per cent of a dwelling's outlook space. The findings show that up to 55 per cent of developments of four or more dwelling are resulting in noticeable reductions in outlook space. The extent and location of infringements may suggest that the outlook space dimensions were close to the minimum of a viable standard within the tight constraints of typical site dimensions – particularly for terrace housing.

Site location of infringements to principal living area outlook space

The principal living outlook space is measured from the centre of the largest window in the living room. An investigation into where non-compliance was occurring in the residential zones was of interest. The findings showed that 30 per cent of developments had principal living area outlook space areas shown across adjoining sites. The extent of outlook space non-compliance across adjoining sites were:

- 45 per cent infringed the standard by 1m or less

- 40 per cent infringed the standard by 1.1 -2m
- 15 per cent infringed the standard by 2.1 – 4m

Where there was non-compliance of the standard resulting in outlook spaces across adjoining sites, these were often limited to a few dwellings. In most cases, the non-compliance occurred at ground level and the effects were mitigated with a fence or other privacy measure. However, this form of mitigation does not reduce the physical proximity of the dwelling to the site boundary or the dwelling on the adjoining site.

The AUP standard requires that outlook spaces from dwellings cannot overlap to avoid a loss of privacy. The findings showed that 90 per cent of developments were designed to avoid any overlap in outlook from principal living areas.

Issues with complying principal living area outlook space

Observations from site visits and consented plans showed a number of unanticipated outcomes from complying outlook standards.

- Principal living area outlook spaces that extended across streets were truncated by fences – some of which may have been subsequently installed after consent, affecting sense of spaciousness. The dwellings were often located close to the street due to the opportunity to extend outlook space into public space – another factor compromising privacy in some developments.
- The extent of overlooking of adjoining properties with a loss of privacy to both sites was evident from principal living areas and habitable rooms on the upper floors of buildings.
- Some dwellings had the primary living area windows (from which the 6m outlook space measurement was taken) set deep into the dwelling space but the building façade or balcony balustrade were close (e.g. 3.5m) to the boundary. The outlook standard has been a useful tool for managing spaciousness and privacy to and from adjoining sites, particularly when outdoor living spaces and outlook are on the ground floor. However, when outlook and outdoor living spaces are above the ground floor, the occupants of a new dwelling are able to overlook the adjacent site from above, and when standing at the edge of the balcony are closer to the boundary. The photo above illustrates this. The issue is that there is no outlook control related to outdoor living spaces where it is above ground. This is a common occurrence given Auckland's typically long and narrow sites. The outlook standard does not adequately manage the orientation of long buildings with living rooms and balconies directly facing neighbours rather than being contained on-site.

Figure 17. This development has dwellings with the principal living outlook spaces and outdoor living area in the form of a balcony at the first level overlooking their driveway towards adjoining sites – poor quality outlook and reduced privacy for residents and neighbours.

- Structures such as fences or sheds reduce the sense of spaciousness of principal living area outlook spaces – particularly when co-located with outdoor living spaces. These structures were often not shown on consenting plans.

Habitable room outlook

In residential zones, the AUP standard requires a minimum 3m from the master bedroom and 1m outlook from habitable rooms (such as bedrooms). The standard's purpose in combination with the daylight control, is to manage visual dominance effects within a site by ensuring that habitable rooms have an outlook and sense of space.

The monitoring programme looked at the number of habitable rooms in a dwelling that infringed the 1m standard. The findings showed 90 per cent of developments complied with the 1m outlook spaces from habitable rooms. In the few cases where the distance was less than 1m, it only applied to one habitable room in the dwelling.

Observations from site visits showed that complying outlooks from some habitable rooms did not achieve an outlook or sense of space due to the presence of high retaining walls, fences or buildings. A change to the AUP daylight standard to include building separation between structures such as retaining walls and fences could achieve better quality outlook. This is a recommendation for indicator 1.

In the Business – Mixed Use zone, the outlook space requirement is one of only three residential-specific standards. The outlook space from the principal living area is the same as the residential zones – 6m x 4m and is also measured from the centre of the largest window. Habitable rooms in this zone require a 3m outlook space.

There are several possible reasons for the lack of compliance with the outlook standard in the residential zones. The first is it is not an AUP core standard for the residential zones (for all dwellings in THAB, and 4 of more dwellings in MHS and MHU) so without the risk of notification, developers may not consider this a priority in the design of dwellings. Another is that the number of dwellings on a site may compromise the amount of space available to accommodate outlook space. Conversely, minor non-compliance may provide better overall outcomes in some circumstances. For example, by allowing a building to be placed in a way that provides better connection to the street frontage, avoiding shading on a sensitive part of an adjoining site etc.

The findings for the Business – Mixed Use zone showed 70 per cent of developments complied with the Outlook Space standard. Non-compliance with the outlook space standard for principal living areas were:

- 5 per cent of developments infringed the depth requirement by up to 1m
- 15 per cent infringed it by between 1m and 2m
- 10 per cent infringed it by between 2m and 3m.

The 3m outlook space standard in the Business – Mixed Use zone reflects the higher densities and more intensive typologies such as apartment buildings. Therefore, the 3m outlook space is applied to provide adequate privacy, ventilation, daylight and sense of space. This amount of outlook is appropriate to avoid privacy effects between adjoining sites if developed to the same intensity in the future. The 3m outlook space from habitable rooms was complied with in 55 per cent of developments and infringed by 45 per cent of developments. Non-compliance was considered minor.

To increase the number of bedrooms in dwellings, some developments (particularly apartments) were internalising habitable rooms which resulted in no exterior windows or natural ventilation. Some were intended as for purposes other than a bedroom but there was a risk that they could be used for that purpose. There is more potential for this in the Business – Mixed Use zone due to the large number of apartments. Monitoring showed less than 5 per cent of dwellings with this form of

habitable room occurred in the residential zones while this could apply to around 20 per cent of habitable rooms in the Business – Mixed Use zone. Assessing habitable rooms in apartments was complicated by labelling rooms as a study or media room – many with ensuites and wardrobes suggesting possible use as a bedroom. Ventilation and daylight access are managed by the NZ Building Code.

Location of principal living area outlook space

The AUP outlook standard does not specify where the principal living area outlook space should face. However, the quality of the outlook is influenced by the location of the principal living space outlook. The monitoring looked at various locations for principal living area outlook spaces to ascertain the range and quality of outlooks in developments. The data includes all outlooks, regardless of non-compliance.

In the residential zones, the location of principal living area outlook spaces were:

- 65 per cent of developments had the majority of outlook spaces across a ground level outdoor living space
- 20 per cent of developments had the majority of outlook spaces across balconies
- 10 per cent of developments had the majority of outlook spaces across driveways or parking areas
- 5 per cent of developments had the majority of outlook spaces across the street.

The location of principal living outlook spaces in the Business – Mixed Use zone was analysed differently to the residential zones. This is because the majority of developments were apartments and there was a greater range of outlooks from dwellings on each façade.

The findings showed the variety of outlook spaces from principal living areas as a proportion of the number of developments analysed. By way of example – 90 per cent of residential developments in the Business – Mixed Use zone sample had some dwellings with the principal living area outlook across the street. The range of outlooks are as follows (if a development includes at least one dwelling, it was allocated to the location category, hence results add up to more than 100 per cent):

- Towards the street – 90 per cent
- Driveways – 60 per cent
- Balconies – 55 per cent
- Ground level landscaping – 45 per cent
- Ground level communal space – 30 per cent
- Ground Level outdoor living space – 30 per cent
- Towards neighbouring property – 25 per cent
- Towards a railway line or motorway – 10 per cent
- Rainwater tanks or communal rubbish bins – 10 per cent

Principal living area outlook space across driveways and carparks

The AUP does not stipulate the aspect for the principal living outlook space so outlook across a driveway or parking area complies with the standard. In the residential zones, the findings showed that 10 per cent of developments had the majority of principal living area outlook spaces across driveways. There were also many developments that had a proportion of their dwelling outlook spaces across driveways or parking areas.

Where the principal living outlook space was on the first level or higher, they were often co-located with balconies (that were the principal outdoor living spaces) in both terrace housing and apartments. And in many cases, these were over driveways. Outlooks over driveways often occur because the driveway widths on large sites are 6m and the width to enable a vehicle to turn into a garage is also 6m. Both scenarios correlate with the required living area outlook space 6m depth dimension. This often achieves the most efficient spatial arrangement for the development.

A detailed analysis shows:

- 15 per cent of developments had between 30-50 per cent of dwelling outlooks across driveways or parking areas.
- 15 per cent of developments had between 60-80 per cent of dwelling outlooks across a driveway or parking area
- 5 per cent of developments had 100 per cent of dwelling outlooks across a driveway or parking area.

Observations from site visits in the residential zones showed that principal living area outlook spaces were often linked with primary outdoor living spaces on balconies on the first level or higher. In this scenario, the outlook space correlates with the 6m width driveway space. The outdoor living standard requirement for sunlight to south facing outdoor living spaces in this scenario causes driveways to be located in the sunniest site locations (which would have been better suited to ground level outdoor living spaces). This illustrates just one way the requirements of other standards can complicate the ability to achieve quality outcomes. The image below shows this a common scenario.

Figure 18. This three storey terrace development shows the outdoor living spaces (in the form of a balcony on the first level) and principal outdoor living space taking advantage of the driveway space to meet the AUP standards. The AUP requirement for sunlight to outdoor living spaces plus the requirement for a 6m outlook space from the living area has caused the 6+m wide driveway to be located in the central core of the development. The outlook spaces and outdoor living spaces (balcony) of each terrace block face each other across the driveway which can affect privacy.

In the Business – Mixed Use zone, around 40 per cent of developments avoided outlook spaces from principal living rooms facing driveways or carparks altogether. Of those developments with outlooks across driveways or carparking:

- 50 per cent had up to a quarter of their dwellings with this outlook
- 10 per cent of developments had between three-quarters to all their dwellings with outlook spaces across driveways or carparks.

Driveways and carparks offer a low-quality outlook from the principal living room for those developments. This is because these areas are usually barren concrete expanses, some with parked cars blocking the outlook as well as vehicle movements creating air pollution and noise. Privacy into living areas can also be compromised with inadequate separation from driveway activity.

Principal living area outlook space across a street

In the residential zones primary living area outlook space can extend across the street space without infringement to the standard. The proximity of the outlook to the street creates the presence of large windows or glazed doors which in turn have a significant influence on the appearance of dwellings. There are both positive and negative outcomes of large windows overlooking the street. Firstly, the positive outcomes for the neighbourhood are that large windows usually contribute to an attractive façade and increase passive surveillance to improve pedestrian safety on the street. The unintended consequence of large street facing windows can be residents' desire for privacy (and sometimes security).

Around 50 per cent of all developments had between 1-3 dwellings on the site that overlooked the street. Approximately 40 per cent of these dwellings had 4m or greater separation between the principal living space window and the street, and 20 per cent had less than 4m separation. Analysis of plans showed that many street facing dwellings had some form of privacy measure such as shutters, landscaping or fences.

Figure 19. In this terrace development, the AUP outlook standard enables the principal living area outlook space to extend over the street boundary into the street space. The photo shows terraces with a 4m outlook space from the ground level living room within the site and a further 2 metres beyond the fence, extending into the street space. The close proximity to the street can affect privacy with residents sometimes choosing to draw their blinds or use other privacy measures. A benefit of the close proximity of the internal and outdoor living areas to the street is it can feel safer for pedestrians, knowing residents may be close by.

Observations from site visits showed that dwellings with smaller distances from the street often resulted in drawn blinds or higher fences which can compromise the attractiveness of the street

frontage and passive surveillance benefits. Council has standards for fence height but these were not always complied with. Similarly, residents may subsequently erect high fences or change from semi-permeable to fully opaque fencing, after the statutory consenting process. Mitigation measures such as fences can truncate the outlook space and increase the physical proximity of the dwelling to the street boundary, exacerbating privacy issues.

Orientation for sunlight

There is no AUP requirement for the principal living outlook space in the residential and Business Mixed Use zones to be orientated to receive sunlight. However, sunny living spaces are generally considered an essential aspect of healthy homes. On the importance of staying warm and healthy in winter, the Ministry of Social Development recommends the following[7]:

> *Open windows and curtains on sunny days and close them when the sun goes down to trap heat in your home. Trim any trees that prevent sun entering your house.*

The Ministry of Health promotes healthy homes through its 'Healthy Homes Initiative'. The Ministry identifies health issues with cold, damp homes[8]:

> *Cold, damp, crowded homes can increase the risk of respiratory issues and other preventable health conditions, such as rheumatic fever and skin infections. There is strong evidence, nationally and internationally, of improved health outcomes resulting from warmer and drier homes.*
>
> *Improving housing is also an equity issue, with Māori and Pacific families being over-represented in low-income households in areas of poorer quality and crowded housing.*

Ensuring living areas in dwellings have access to sunlight to be warm through passively heating homes and to support a range of health benefits. It also supports climate change objectives to reduce reliance on energy use for heating, clothes driers, etc.

In the residential zones, the monitoring looked at whether the outlook spaces for principal living areas were orientated to receive sunlight for at least part of the day in midwinter. The analysis estimated the potential for sun, based on the proportion of dwellings in a development with principal living outlook spaces with a northern, eastern or western orientation. The results showed:

- 75 per cent of developments orientated all their living areas for sunlight.
- 15 per cent of developments had most (80-90 per cent) of their living areas orientated for sunlight
- 10 per cent of developments had 70 per cent or fewer living areas orientated for sunlight.

Those developments that had some living areas facing south generally minimised that number to less than 20 per cent of the dwellings. While some sites will create south facing dwellings due to practicalities of development, around 5 per cent of developments had the majority of their dwellings with living areas facing south.

One of the reasons why the majority of principal living areas receive sunlight could be market desirability. Another possibility is that most principal living areas directly access the outdoor living space. The AUP requires the outdoor living space to have solar access for a specified period measured from the equinox. The co-location of these spaces has additional benefits for solar access to the primary internal living spaces. There is a risk that when adjoining sites are developed with a

[7] https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/brochures/keeping-warm-healthy.html
[8] https://www.health.govt.nz/our-work/preventative-health-wellness/healthy-homes-initiative

similar form and intensity, the location of new buildings could cause shadowing on outdoor living areas and outlook spaces on these developments.

Effectiveness and efficiency of the plan

The incorporation of a specified outlook space for principal living areas and habitable rooms in the AUP is an effective and efficient method for securing quality living outcomes for 70 per cent of developments in both the residential zone and the Business – Mixed Use zone samples. While this is a generally positive finding, one third of developments had dwellings that did not comply with the standard.

The analysis also showed that dwellings complying with the standard were not exempt from poor quality outlook spaces. This included principal living area outlook spaces across driveways or parking areas. Those with outlook spaces facing the street were often truncated by fences with residents seeking privacy which in turn compromises the privacy and sense of space envisioned by the purpose of the standard. Principal living area outlook spaces facing adjoining sites – particularly above ground level – can compromise the privacy (visual and acoustic) for the adjacent dwelling and neighbours (existing and future). It is important to note that the effects associated with outlook as experienced by residents on the site (i.e. not effects on adjacent neighbours) is difficult to accurately measure without surveys (which were beyond the scope of this monitoring).

Modifications to the principal outlook standard could achieve the following:

- Ensure the level of spaciousness signalled by the AUP is not compromised – even a small reduction in dimension has a significant effect on the spaciousness of the outlook
- Better quality of outlook spaces from principal living areas
- Improve privacy of street facing principal living area outlook spaces
- Improve privacy between principal living area outlook spaces and the adjoining site
- Integrate the principal living outlook space with the ground floor outdoor living space through alignment of dimensions
- Orientation of principal living area outlook for solar access. This needs to be considered in light of an adjoining site being developed with a similar built form and intensity.
- Prevent structures such as fences that encroach on principal living area outlook spaces in complying or infringing developments.
- Outlook spaces could be orientated towards the front or back of the site to avoid overlooking adjoining sites.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To improve the quality of outlook spaces in the MHS, MHU and THAB zones, undertake further research and cost benefit analysis. The scope of research could consider, but not limited to, the following:

- Require the outlook standard to be a core standard where it is not already. *Affected by recent Government legislative changes*
- Outlook spaces could be orientated towards the front or back of the site to avoid overlooking adjoining sites. *Medium priority*
- Align the outlook living space with 6 x 4m dimensions and 6m minimum depth with an increased ground level outdoor living space of 24m^2. An exclusion for apartments may be necessary where ground level conditions differ to other housing typologies. *Affected by recent Government legislative changes*
- Clarify the statutory weight of purpose statements to be equivalent to policies and include explicit reference to this weighting in the AUP. Refine policies for clarity and more consistent alignment with standards as these are used for assessing consents. *Affected by recent Government legislative changes*

To address issues concerning privacy and a sense of spaciousness principal living area outlook space standard in the MHS, MHU and THAB zones, undertake further research and cost benefit analysis. The scope of this research could consider but not be limited to the following options:

- Retain the method of measurement from the centre of the largest window in principal living area but where the window is set back from the primary façade, require measurement from the building façade or balcony edge (to be determined). This is to achieve privacy between dwellings and the adjacent sites and retain a sense of spaciousness where the outlook is compromised by being measured from windows set into the building. The purpose statement would also need to be updated to recognise its additional purpose of achieving better privacy between sites.

  Or

- Principal living area outlook space above ground level facing towards adjoining sites could have specified minimum yard separation (e.g., 5m) between façade of the building or balcony balustrade (whichever is closer) and the boundary. This would replace the outlook measure from the largest area of glazing for this circumstance.

  Or

- Review the dimensions to determine whether a change (including an increase) may achieve better outcomes such as spaciousness and privacy as envisioned in the purpose of the standard. *Affected by recent Government legislative changes*

To improve the quality and functionality of the principal living area outlook space in the MHS, MHU and THAB zones, undertake further research and cost benefit analysis. The scope this of research could consider, but not limited to, the following options:

- Update the principal living area outlook space standard to:
  - Exclude outlooks over driveways, private ways or parking areas for the first three levels of a building (this includes ground level but above this, the negative effects of driveways are mitigated with greater separation and more expansive outlooks). *Affected by recent Government legislative changes*
    Or
  - Require a design response where driveways are designed with similar characteristics to streets with setback from the driveway edge, landscaping/trees and other qualities to improve privacy, a sense of space and amenity. *Affected by recent Government legislative changes*
- Co-locate principal outlook space with outdoor living spaces where at ground level (for housing typologies excluding apartments). Consider aligning the dimensions of the principal living area

outlook space with the outdoor living space - 6 x 4m (24m^2). *Affected by recent Government legislative changes*

- Limit the number of dwellings (as a percentage) in a development with south facing principal living space outlook. *Affected by recent Government legislative changes*
- Require a specified amount of area in the principal living area outlook space to be devoid of structures or household infrastructure (align with same requirement for outdoor living space). *Affected by recent Government legislative changes*
- For separation between buildings or structures, update and apply the daylight standard in conjunction with the outlook standard to ensure appropriate building separation. This could reduce shading and improve privacy on between dwellings. This standard could be updated to include retaining walls and structures such as fences. *Medium priority*
- The AUP currently require greater setbacks for south facing outdoor spaces. This principle could be applied to all outlook spaces. *Affected by recent Government legislative changes*

To improve compliance and the quality of the principal living area outlook space in the Business – Mixed Use zone, undertake further research and cost benefit analysis. The scope of this research could consider but not be limited to the following options:

- Replacing the zone's existing Outlook space standard with the Outlook space standard used in the City Centre and Metropolitan Centre zones. The key differences with the Outlook space standards in those zones are that:
    - the Outlook space applies not from the glazing but from the 'face of the building', so you can't reduce the distance of a building to a boundary by recessing the glazing within the face of the building. Notably, the standard explicitly states that the outlook space does not apply from the room's window (H8.6.32(4)) *Medium priority*
- For principal living room outlook space progressively increase the outlook space depth as the building height rises – as follows:
    - 6m outlook space depth at heights 0-10m,
    - 10m outlook space depth at heights 10-16m, and so on.

  This will ensure adequate daylight to those dwellings at the lower storeys and could encourage buildings to face the street. This also futureproofs the quality of outlook space in dwellings from adjoining sites if they are developed to the same intensity. *Medium priority*

Indicator 6 – The extent that the health, safety and wellbeing of residents is supported by quality outdoor living spaces

Measures

- Form of primary outdoor living space – ground level space, balcony etc.
- The adequacy of balcony size where they are the primary outdoor spaces – relative to the number of bedrooms.
- Degree of non-compliance (m^2) to the size of the primary outdoor living space.
- Access to outdoor living space.
- Outdoor living space orientated for sunlight.
- Whether outdoor living spaces were overshadowed by buildings or structures such as fences at noon in mid-winter.
- Structures in the primary outdoor living space.

What indicator 6 tells us

The AUP requires residential developments in the MHS, MHU and THAB zones to provide a primary outdoor living space in the form of a ground floor area or balcony with minimum dimensions. The purpose of the outdoor living area is to provide spaces for people to enjoy the outdoor environment within their homes. The AUP requires dwellings to have a space that is of a functional size and dimension with access to sunlight and is accessible from the dwelling. It must also be separated from vehicle access and manoeuvring areas. The standards specify the following.

- The dimensions for the ground floor outdoor living space are $20m^2$ with a minimum dimension of 4m. This can be split between a balcony and ground floor outdoor living space.
- For a studio or one bedroom dwelling, $5m^2$ and a minimum dimension of 1.8m is required for a balcony.
- For two bedroom or larger dwellings, $8m^2$ with a minimum dimension of 1.8m is required.
- Dwellings can internalise the area ($5m^2$) that would have been used for an outdoor living space.

A range of factors were used to determine the elements that comprised a 'quality' outdoor living space. These included:

- type and size,
- how residents access their primary outdoor living space,
- the functionality of the space,
- amount of overshadowing.

There is no AUP requirement for an outdoor living space for residential developments in the Business – Mixed Use zone. However, many developments did provide outdoor living spaces, so these follow the residential zone analysis.

Findings

Type and size of outdoor living spaces

In the residential zones, 80 per cent of dwellings have ground level open spaces – usually in the form of a garden or courtyard. Balconies were the primary outdoor living space for approximately 20 per cent of developments – mainly in the more intensive MHU and THAB zones.

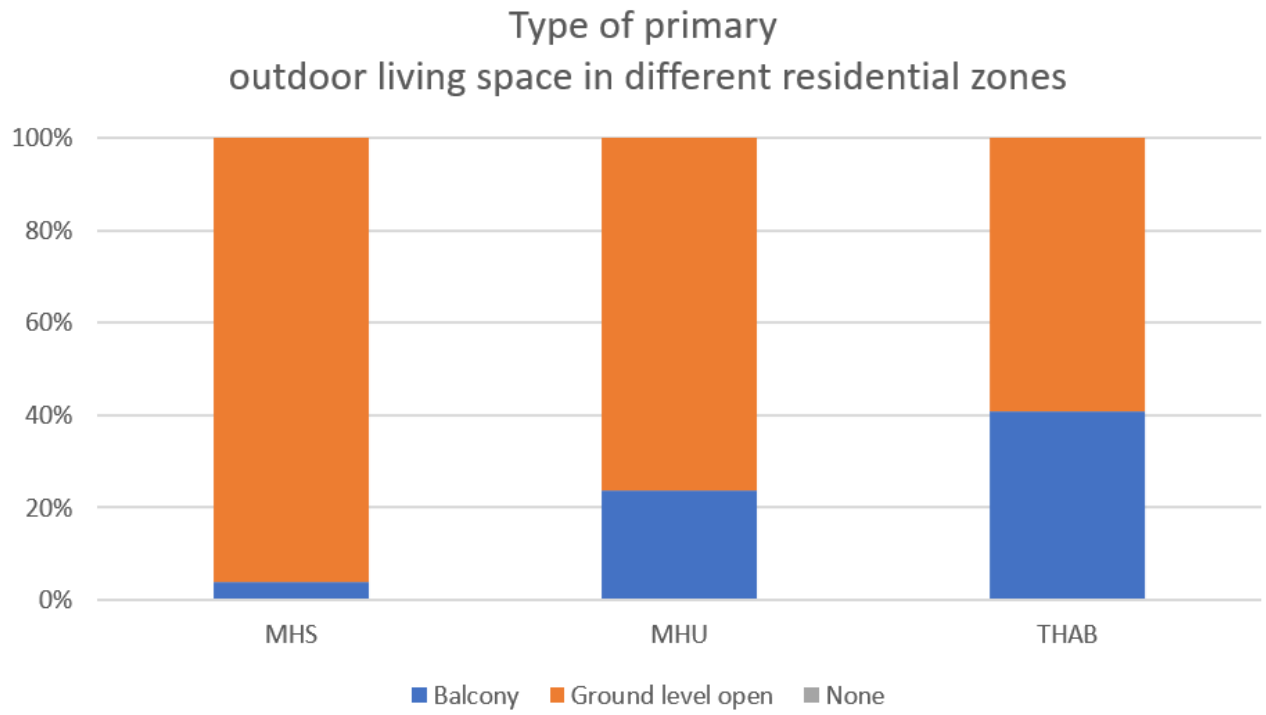


Figure 20. This graph shows the types of primary outdoor living spaces for each residential zone. Those zones with more apartment buildings have a greater proportion of balconies for the primary outdoor living space.

For ground level primary outdoor living spaces, the findings showed:

- 80 per cent of developments complied with the standard
- 10 per cent infringed the size although most were for a shortfall of less than 5m^2
- 10 per cent of developments infringed the dimensions.

For balconies that are the primary outdoor living spaces in dwellings with two or more bedrooms, the findings showed:

- 25 per cent of developments infringed the minimum area although the majority of balconies were no less than 6m^2 in size.
- 35 per cent of developments provided more than the minimum size with balconies with most around 10m^2.

Balcony sizes were also evaluated for their functionality. This was based on the number of bedrooms to gauge the number of occupants potentially using the space. The findings showed:

- 50 per cent the balconies were considered an adequate size
- 30 per cent were considered a generous size
- 15 per cent were judged to be inadequate.

In the Business – Mixed Use zone, where the AUP does not require any outdoor living space, 95 per cent of residential developments did provide outdoor living spaces for the majority of dwellings. These were in the form of:

- 80 per cent had balconies
- 10 per cent had ground level outdoor living spaces
- 5 per cent had sunrooms (usually these were semi-enclosed glazed spaces)

The large number of balconies in the Business – Mixed Use zone residential developments is consistent with the predominant apartment typology. To evaluate whether balconies were adequately sized, the minimum balcony standards in the residential zones were applied as they represent a balance between ensuring positive residential amenity and helping to achieve intensification anticipated by the AUP (for example there are no balcony requirements in the Business – Mixed Use zone).

The findings showed that 70 per cent of balconies in the Business – Mixed Use zone sample were of an appropriate size and proportion for the size of dwelling. The remainder were considered too small, or the proportions and shape limited their functionality. The majority (90 per cent) of developments had outdoor living spaces accessed from the living room and 5 per cent of developments had outdoor living spaces accessed from the kitchen. In addition to private outdoor living spaces in the Business – Mixed Use zone, around 20 per cent of developments also provided communal outdoor living spaces.

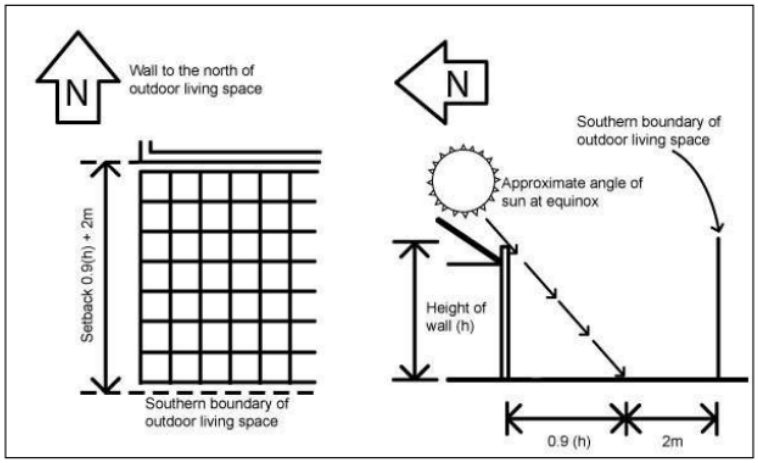
Access

Between 2016 and 2019, the AUP outdoor living standard in the residential zones also required outdoor living spaces to be accessed directly from the primary living areas. In the sample, nearly 90 per cent of outdoor living spaces were accessed from the primary living areas in dwellings.

In January 2020, Plan Change 16 removed the requirement for direct access between the primary living area and the outdoor living space. The findings showed the emergence of access to outdoor living spaces from dining rooms, kitchens, bedrooms and halls. More recent observations (beyond the data collection period) show access to outdoor living spaces from garages and other spaces such as laundries is becoming more common. The disconnection between primary indoor and outdoor living spaces reduces the functionality and amenity of both spaces. This is because the sense of space, use and enjoyment, access to sunlight and daylight in living areas to create an 'indoor-outdoor flow' relies on a direct access to the outdoor living space in the form of a balcony or ground level space.

Sunlight

The AUP requires sunlight to the primary outdoor living spaces for south facing units to be considered for consents. The diagram is extracted from the residential standards.



Where outdoor living space is provided at ground level and is located south of any building located on the same site, the southern boundary of that space must be separated from any wall or building by at least 2m + 0.9(h), where (h) is the height of the wall or building, For the purpose of this standard south is defined as between 135 and 225 degrees.

Beyond this, the AUP focuses on minimising external effects of development on adjoining sites. Standards only address whether a proposal will affect sunlight access to the outdoor living space of a neighbouring property.

The AUP standards currently require only *daylight* access for living areas and bedrooms in new developments between buildings on the same site and is managed together with the outlook provisions. The distinction between daylight and sunlight is important because they affect the quality of residents' health, safety and wellbeing. Daylight and solar access have many benefits including vitamin D for health, passive heating for the dwelling, reduction in the use artificial lighting, heating and the need for clothes driers, supports plant growth and mental health and well-being.

The monitoring looked at whether dwellings were orientated for sunlight. The findings showed that 90 per cent of developments had the majority (70% or more) of dwellings with principal living spaces orientated towards the north, east or west. However, many developments had a few dwellings with outdoor living spaces that were either orientated to the south or would become overshadowed by buildings or structures in mid-winter. This was particularly evident where outdoor living areas were surrounded by 1.8m fences sitting atop high retaining walls. While cognisant of the realities of having some south facing dwellings, observations reveal there are instances where such overshadowing effects could have been avoided or mitigated.

Further analysis looking at whether structures or buildings could overshadow even a portion of outdoor living spaces in developments at noon in mid-winter. This is the coldest time of year when indoor and outdoor living spaces most need the sun to provide passive heating, enable washing to dry outside (to avoid dampness inside), reduce energy use with less lighting requirements during the day and support residents wellbeing, The equinox – currently used for AUP sunlight assessments is a time of year with plenty of sunlight and daylight so it is not achieving the outcomes needed to support residents health or reduce the effects of climate change by reducing energy use. It should be noted that these findings were estimated as very few consent plans included shadow diagrams.

The proportion of dwellings across all developments in the residential zone sample with primary ground level outdoor living space likely to be overshadowed by buildings or structures at the noon winter equinox were:

- 70 per cent of dwellings had all outdoor living spaces designed to avoid overshadowing
- 15 per cent of dwellings lost up to half the sunlight to outdoor spaces due to overshadowing
- 10 per cent of dwellings lost more than half the sunlight to outdoor spaces due to overshadowing.

This shows that a quarter of outdoor living areas in the sample could have compromised sunlight access in winter. The analysis did not consider the effects of new development on adjoining sites at the winter solstice.

Overall, the findings suggest that the outdoor living space requirements for sunlight are succeeding to the extent that it is ensuring access through the orientation of outdoor living spaces for most dwellings for at least half the year (spring, summer and autumn between equinoxes) in new developments.

An additional benefit of sunny outdoor living spaces was that most principal living spaces were connected to their primary outdoor living area and consequently would also receive sunlight. This is not necessarily the case for the outdoor living areas in sites in the THAB zone. This is because there are no assessment criteria for assessing sunlight on outdoor living areas of adjoining sites.

Function of primary outdoor living spaces

Primary outdoor living spaces were assessed for their functionality. The purpose of the primary outdoor space is for the occupants to use it for living. The Outdoor Living Space standards in the residential zones seek to ensure that they are of a functional size and dimension, have access to sunlight, and are accessible from the dwelling. The AUP requirements for these spaces did not factor in space for utilities like rubbish bins, hot water cylinders, heat pump units, water tanks, sheds, etc. Collectively, these items can take up a large portion of the area leaving no space for the area's intended purpose of providing for outdoor living. Typical dimensions are set out in the table below.

Typical dimensions of common utilities

Utilities	Area required (m^2)
Refuse, recycling and food waste bins (council collection)	1.4m^2
Rainwater tank	2000L = 1.8m^2 - 2.5m^2 2500L = 2.4m^2 3000L = 3.85m^2 6000L = 3.5m^2 7000L = 3.24m^2
Hot-water cylinder	0.24m^2
Storage shed	2.3m^2
Drop-down washing line	2.86m^2
Total (and per cent if everything is located within a 20m^2 outdoor living space)	8.6m^2 (43 per cent) - 10.65m^2 (53 per cent)

Consent plans were analysed to see whether structures such as water tanks and storage sheds were shown within the primary outdoor living space. Around 5 per cent of dwellings had at least one structure and 15 per cent had 2-3 structures occupying the outdoor living spaces at ground level. Many structures such as storage sheds and water tanks are added by new owners after the development is completed. There are no restrictions on this. The effect of such additions is a reduction in the size and dimensions of the primary outdoor living space compromising the purpose for this AUP standard.

Observations from site visits were that a sense of spaciousness was more evident when the outdoor living area was co-located with the principal living outlook. This generally created a better sense of spaciousness. Site visit observations also showed these spaces can become consumed with additional household infrastructure – particularly rubbish bins, hot water tanks, heat pump units, sheds and water tanks. This reinforced the potential issue associated with the unintended consequences of reducing the functionality of outdoor living spaces 'by a thousand cuts'. Collectively, this changes the function of the outdoor living space to a service court.

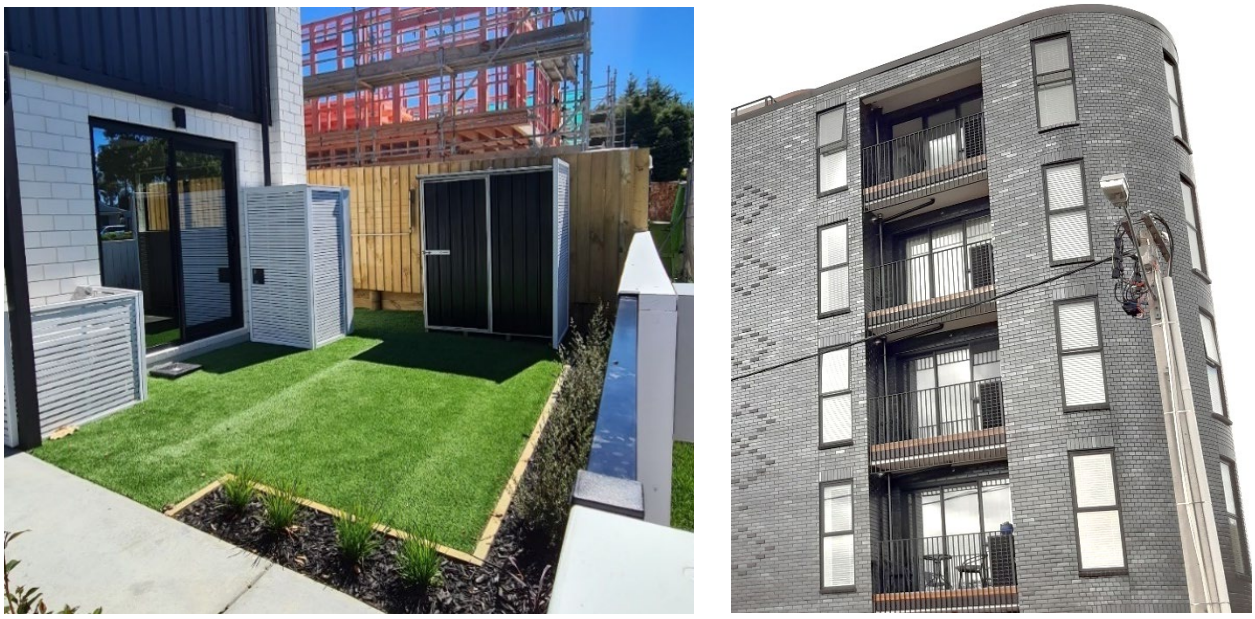


Figure 21: The useable space of the ground floor outdoor living area is reduced by the presence of a heat pump, shed and water tank. In this site, the items are screened. The useable space on the balcony in the apartment building is reduced by the external heat pump unit.

This issue is difficult to control during resource consents as plans may not necessarily reveal the level of encroachment on outdoor living spaces. Many of these items also appeared to have been added by residents following completion.

A potential effect of the continuing trend of reduced private outdoor living space functionality is additional pressures on our parks and open spaces to accommodate family needs for outdoor living spaces. Conversely, compromises in primary outdoor living space may produce more desirable outcomes in terms of typology and site layout. For example, for apartments, the requirement is for a 20m^2 ground floor outdoor living area, while in the same development a 5m^2 balcony is deemed appropriate. This discrepancy demonstrates how a single package of residential standards in the MHS, MHU and THAB zones is designed to apply to a range of different housing typologies. The standards are primarily focussed on provision for standalone houses, townhouses and terraces. However, they also provide for apartments which can have different requirements in terms of access, functionality, safety, and amenity.

Privacy

Another observation from site visits was the location of outdoor living spaces and the way it influenced the level of privacy – for the occupants and in some cases, adjacent sites. Sites with multiple dwellings with outdoor living spaces abutting adjacent sites often reduced privacy on those sites – especially when outdoor living areas were balconies at higher levels. This is exacerbated by long blocks of attached terrace houses or apartments abutting a site with a single dwelling. While visual mitigation may be achieved with a 1.8m fence, acoustic mitigation is less achievable – particularly for balconies at upper levels. In circumstances where the outdoor living spaces from multiple dwellings occurs, the acoustic effects on adjacent sites can be cumulative. Perceived visual dominance and level of privacy are most evident when a development is the first site to intensify under the AUP standards. Higher intensity typologies and densities were most jarring when juxtaposed against traditional single house suburban development, even if the zone outcomes envisioned such changes.

Figure 22: Three storey apartment development with complying outdoor living areas in the form of balconies and ground level courtyards facing the boundary may affect privacy on the adjoining site.

Street interface

Where outdoor living spaces fronted streets, most developments had fences. Some complied with the AUP fence standard but many did not – and may have been constructed by residents seeking more privacy following completion. The dominance of high fencing had the effect of significantly reducing the quality of the public realm by cutting off the connection of the street with developments. Conversely, those developments with a height separation between the public footpath and the outdoor living space achieved good connectivity to the street while maintaining privacy by avoiding the blank façade effects of high fencing. These observations reveal the importance of considering the realities of post-consent use in affecting the public realm (and sense of place); the issue of privacy is intrinsically linked with how a development will mature in the context of the wider urban fabric.

Figure 23. This development shows how privacy is achieved for the ground level apartments when there is a height separation and landscaping between the primary outdoor living area and the public footpath.

Sustainability

The type of landscaping influenced the quality of outdoor living spaces in terms of visual attractiveness as well as functionality (i.e. maintenance considerations). While many plans showed landscaped, well-planted outdoor living spaces, observations from site visits revealed many were areas of grass, artificial lawn, paving or combination of these. Those with grass were often not mown as most occupiers would not own a lawnmower for such a small area or have a place to store it. Some developments anticipated the burden outdoor spaces could put on residents, ensuring well-designed, planted landscaping that required minimal maintenance.

Effectiveness and efficiency of the plan

The performance of primary outdoor living spaces shows a trend that the AUP is not performing as well as it could for the health and wellbeing of residents. Particularly, the effects from utilities (heat pump units, hot water cylinders, sheds, water tanks or other items) constraining the amount of private space for children to play and residents to use for passive recreation, gardening or other uses. The AUP requires sunlight to outdoor living spaces at the equinox but not in mid-winter when residents most need sunlight for their health (eg., vitamin D) and wellbeing.

The AUP seeks to provide outdoor living areas as spaces for people to enjoy the outdoor environment within their homes. The findings and observations show that there is still a noticeable amount of development with low quality primary outdoor living spaces. This mainly relates to:

- utilities and structures locating in primary outdoor living spaces at ground floor or on balconies, significantly affecting their functionality
- where outdoor spaces are located on a street frontage there can be tension between privacy and high fencing to primary windows/sliding doors, which can compromise the quality of the public realm
- 15 per cent of balconies in the residential zone sample are too small or with proportions/shapes limiting their functionality and 30 per cent in the Business – Mixed Use sample were inadequate.

- access to primary outdoor living spaces from assortment of rooms, reducing functionality of both spaces
- 25 per cent of primary outdoor living spaces could have compromised sunlight access during mid-winter in the residential zone sample
- cumulative effects where multiple primary outdoor living spaces facing the same adjoining site can reduce that development's privacy and privacy of the adjoining site
- the effects of overshadowing in mid-winter by new developments on adjoining sites can compromise the quality and functionality of outdoor living spaces.

The AUP identifies primary outdoor living space as a key component of delivering high-quality built environments. Findings from the monitoring program reveal that the performance of developments consented under the AUP's current provisions fall short of its own aspirational goals. This suggests that planning intervention is needed.

The majority of apartment developments in the Business – Mixed Use zone provided balconies for dwellings. While this is not a standard, this indicates the strong market preference for outdoor living spaces. This supports the health and wellbeing of residents.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To improve the functionality and quality of primary outdoor living spaces, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Co-location of outlook with outdoor living spaces where at ground level. ***High priority***
- Require outdoor living spaces to be directly accessible from the principal living space at any level. ***High priority***
- Limit the percentage of dwellings in a development with a south facing aspect. ***Superseded by Medium Density Residential Standards***
- Do not allow fences or retaining walls within the primary outdoor living space. ***Medium priority***
- Require the location of hot water cylinders, rubbish bins, rain tanks, sheds, heat pump units, etc to be shown on consent plans – including screening of some items. ***Medium priority***
- Increase the size of ground level outdoor living space (eg. 24m^2) to accommodate additional dwelling infrastructure such as hot water cylinders, rubbish bins, rain tanks, sheds, clotheslines, heat pump units, etc. These items should be located to ensure a specified area (e.g. 20m^2) of living space without structures. ***Superseded by Medium Density Residential Standards***
- Require co-location of utilities and services in communal areas in apartments to avoid impacting the functionality of communal or private outdoor living, while recognising the unique characteristics of the apartment typology. ***Medium priority***

- Specify the number of hours of sunshine at the winter solstice to the outdoor living space and require shadow diagrams in plans to ensure buildings and structures do not overshadow these spaces in mid-winter. *Superseded by Medium Density Residential Standards*

To manage the effects of primary outdoor living on adjoining properties, undertake further research and cost benefit analysis. The scope of research could consider but not be limited to the following options:

- Where outdoor living spaces with balconies are above ground level, require balconies to face over the street or into the site or to the rear of the site to avoid overlooking adjacent sites. This could apply to all zones including the BMU zone. *Affected by recent Government legislative changes*

  OR

- Where balconies face towards an adjoining site, a yard space of a specified depth (e.g. 6m) be applied between the edge of the balcony and the side boundary to manage visual and acoustic privacy between the dwelling and the adjacent site. This could apply to all zones including the BMU. *Superseded by Medium Density Residential Standards*
- Specify the number of hours of sunshine at the winter solstice to the outdoor living spaces of adjoining sites and require shadow diagrams in plans to ensure buildings and structures do not overshadow in mid-winter. *Superseded by Medium Density Residential Standards*

Improve the consistency of ground floor outdoor living space requirements to be the same as outdoor living spaces provided above ground floor in apartment typologies. Undertake further research and cost benefit analysis. The scope of research could consider but be not limited to the following options:

- Align ground floor outdoor living space and balcony requirements for apartment typologies ($8m^2$). *Affected by recent Government legislative changes*
- The Outdoor Living Space requirement could be a set amount per dwelling, with discretion for that to be provided in one area with the unit, in a separate on-site open space (possibly communal), or a mix. For instance, for apartment buildings with balconies there would be a need for communal space or facilities somewhere. That would give the standard greater technical rigor and legitimacy. *Affected by recent Government legislative changes*

OR

- The Outdoor Living Space for ground floor units should be brought into line with above ground units, and other standards like outlook / landscaping used to create greenery around the ground level. *Affected by recent Government legislative changes*
- Include an Outdoor Living Space standard for residential units in the Business - Mixed Use zone to support the health and wellbeing of residents. This zone provides for the most intensive housing outcomes of all the zones being monitored. *Medium priority*

Theme 4: Providing choice through a diversity of housing

Theme 4 focuses on whether development provides choice for all Aucklanders to meet their housing needs. A range of housing sizes and typologies are critical to a well-functioning city that encourages a diverse population and urban fabric that allow communities to change in place. This theme responds to the B2.1(1) Issue seeking growth that enhances the quality of life for individuals and communities.

Relevant RPS Objective and Policies	
RPS Objective B2.3.1(1)	A quality built environment where subdivision, use and development do all of the following: (c) contribute to a diverse mix of choice and opportunity for people and communities; (e) are capable of adapting to changing needs;
RPS Policy B2.3.2 (2)	Encourage subdivision, use and development to be designed to promote the health, safety and well-being of people and communities by all of the following: (a) Providing access for people of all ages and abilities
RPS Policy B2.3.2 (3)	Enable a range of built forms to support choice and meet the needs of Auckland's diverse population.
RPS Objective B2.4.1 (4)	An increase in housing capacity and the range of housing choice which meets the varied needs and lifestyles of Auckland's diverse and growing population.

This theme applies one indicator:

- Indicator 7 Diverse mix of housing choice for people and a range of built form to suit changing needs

Indicator 7 Diverse mix of housing choice for people and a range of built form to suit changing needs

Measures

- Building typologies – predominant typologies for development site
- Dwelling sizes – predominant size for development
- Dwelling bedroom numbers – predominant size for development
- Percentage of dwellings in a development that have no steps or one step between dwelling front door/garage thresholds and street
- Whether there is a habitable room (that fits a bed) and toilet with hand basin at ground level or accessible level for the majority of dwellings in a development

What indicator 7 tells us

The analysis considers the types of houses that are being built in medium to large scale developments. This includes standalone houses, duplex/townhouses, terraces and apartments to meet the needs of a diverse population. Medium scale developments were defined as having 4-9 dwellings and large scale as 10 or more dwellings – some developments in the sample had over 100 dwellings.

Another aspect of the analysis was the ability of housing to meet changing needs of residents. An important consideration is whether people can access and live in their house if they experience a temporary mobility impairment through an illness or accident for example. Residential intensification is producing more dwellings that are two or more storeys high which can exacerbate this situation. Enabling people to live in their homes on the ground level (or an accessible level such as lift-accessed apartments) during a period of limited mobility rather than needing to find alternative accommodation can improve recovery and wellbeing. Each dwelling was assessed for its ability to provide a habitable room (that fits a bed) and toilet and handbasin, on the ground floor or a fully accessible level.

It is important that people can age in place or stay and recover in their homes in the event of a mobility impairment. Dwellings were assessed for the number of steps between the street and the front door or garage threshold. Enabling people to live in their homes on the ground level (or an accessible level such as lift-accessed apartments) during a period of limited mobility rather than needing to find alternative accommodation can improve recovery and wellbeing. Each dwelling was assessed for its ability to provide a habitable room (that fits a bed) and toilet and handbasin, on the ground floor.

Findings

Housing typologies

The AUP does not provide guidance on housing typologies – rather it is primarily market led. Similarly, the AUP does not have specific standards tailored for different housing typologies in the residential zones. Apartments, terraces, duple/townhouses and standalone dwellings are developed from the same package of standards and evaluated using the same assessment criteria.

The analysis showed that there was an even split between the typologies – developments with standalone houses, duplexes/townhouses, terraces, apartments or a mix of typologies within an individual development. Each category accounted for around 20 per cent of the housing stock analysed. This shows there is a good variety of residential options to accommodate the diverse housing needs of Aucklanders.

The findings suggests that there is a trend for more apartments (as a ratio of development) in the more intense residential zones. However, terrace housing/duplexes are consistently popular across all zones which may either reflect market demands or what the building sector is able to deliver.

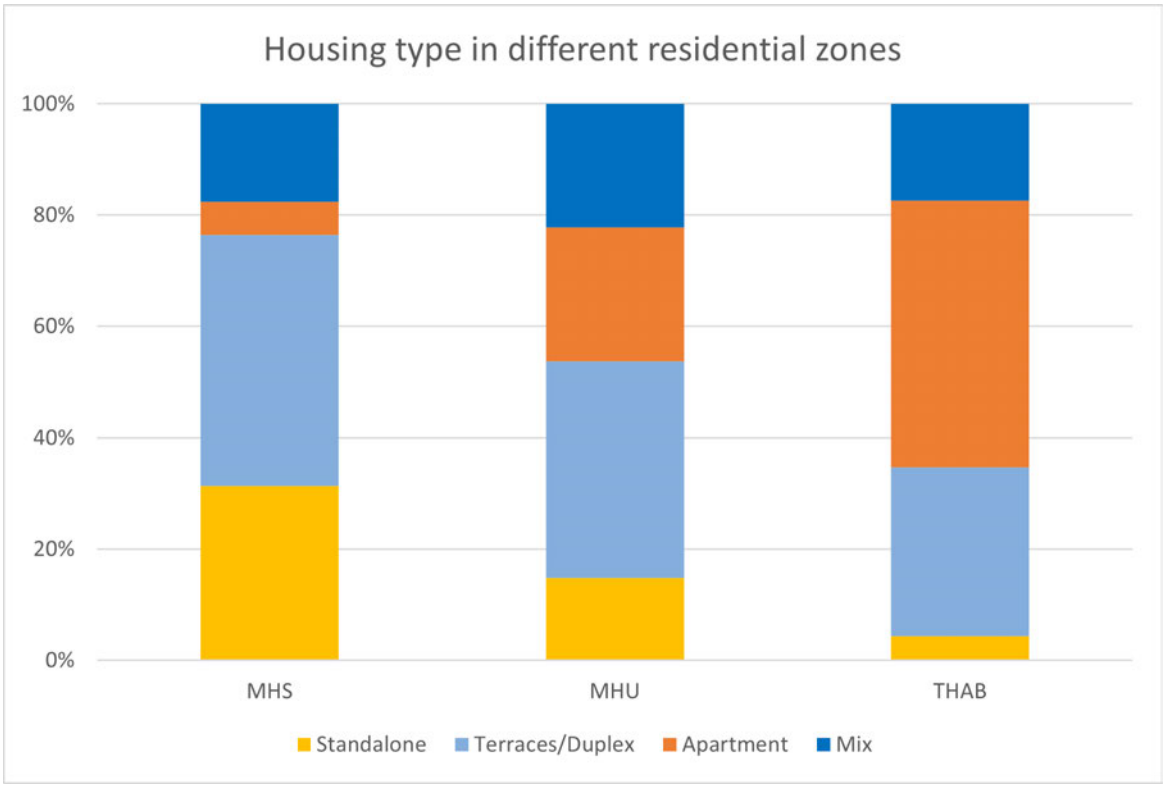


Figure 24 Housing type in residential zones Would be better to use colour in this graph it is difficult to see the different layers here.

Dwelling sizes

The AUP has standards for minimum dwelling sizes in the residential and business zones to ensure they are functional and of sufficient size to cater for, the day to day needs of residents. The size of dwellings is a major factor in providing housing choice for Aucklanders. This includes family housing as well as smaller homes. Social housing (primarily Kainga Ora developments) was also included in the analysis.

The number of bedrooms is another major contributing factor for housing choice. The analysis also looked at the predominance of one, two, three or more bedrooms in developments to see whether there was an adequate range of housing for a diversity of needs.

Dwellings of 30m^2 for a studio and 45m^2 for a one bedroom or larger dwelling were the minimum sizes for residential zones and the Business Mixed Use zone in the AUP. In the analysis, dwelling sizes were varied in some developments so the dwelling size for the majority (70 per cent or more) was recorded.

In the residential zones, the findings showed that over 90 per cent of dwellings were at least 50m^2. Less than 1 per cent of developments had dwellings that were 30-40m^2 and only 5 per cent had sizes between 41-50m^2.

A summary of the notable findings shows:

- 10 per cent of developments had the majority of dwellings sized between 61-70m^2,
- 20 per cent of developments had the majority of dwellings sized between 71-80m^2
- 10 per cent of developments had the majority of dwellings sized between 81-90m^2.
- 20 per cent of developments had the majority of dwellings sized between 151-200m^2.

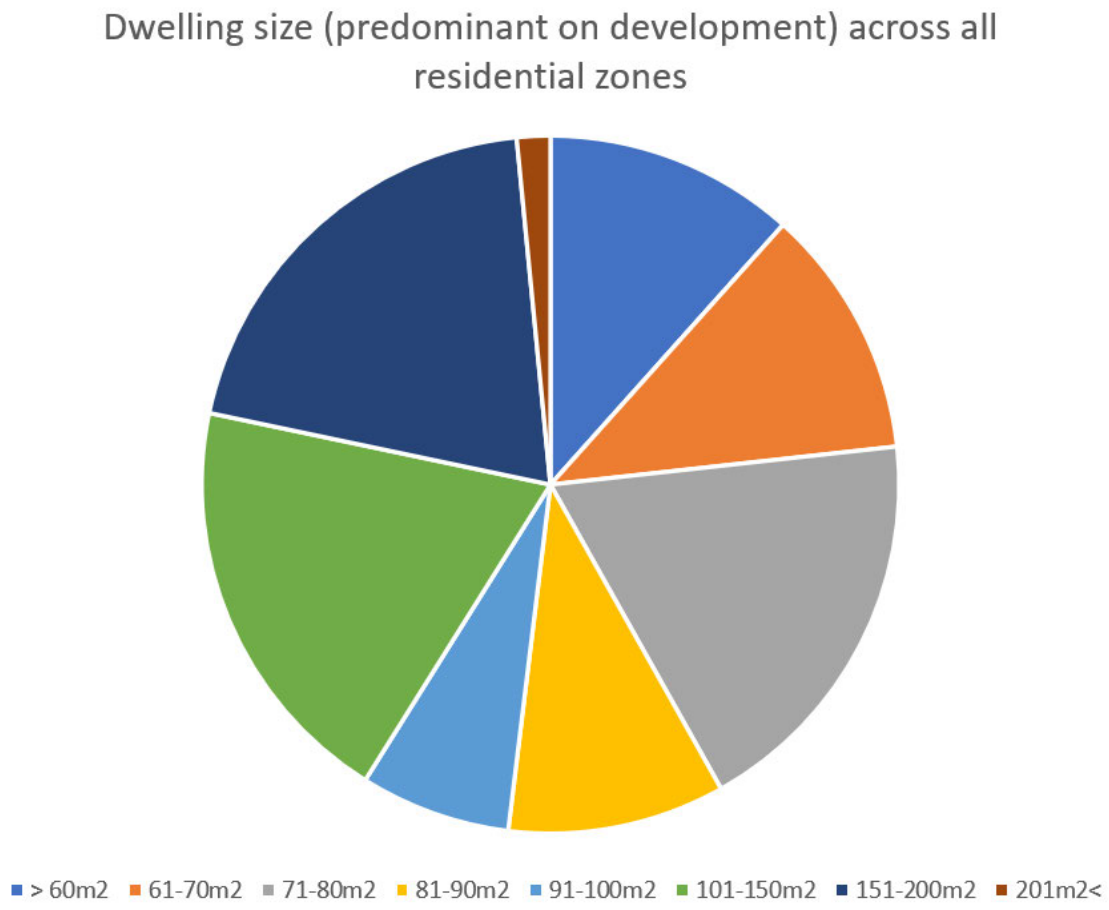


Figure 25 Dwelling size across all developments in the residential zone sample

Beyond a minimum size for studios and one-bedroom dwellings, the AUP does not specify housing size for developments. Likewise, it does not require specific housing typologies. The monitoring investigated the range of dwelling sizes to cater for the diverse needs of Aucklanders. The measures for this analysis were the size of dwellings and the number of bedrooms. Recognising that many developments had a mix of bedroom numbers, these were specifically recorded.

Only 5 per cent of developments consisted primarily of one bedroom or studio dwellings. In contrast, 25 per cent of developments had a predominance of two-bedroom dwellings and around 10 per cent of developments had a mix of one and two-bedroom dwellings. This reflects the prevalence of two-bedroom dwellings in apartments and terrace housing. The majority of apartments were sized between 61-70m^2 and the majority of dwellings in terraces were between 71-80m^2. At an Auckland-wide scale which has traditionally been dominated by three bedroom homes on single sites, this level of one and two bedroom homes improves housing choice to support the diversity of residents needs.

Around 20% of developments had a mix of 2, 3 or 4 bedroom dwellings to cater for a range of family sizes. Three-bedroom dwellings accounted for 10 per cent of housing and 4-5 bedroom dwellings accounted for 30 per cent. This reflects the prevalence of developments with larger standalone and duplex/townhouse dwellings in the sample. The findings suggests that a substantial amount of housing for families, including multi-generational families remains market attractive.

The analysis also included 28 Kainga Ora residential developments providing social housing. The majority of these were large scale developments ranging from a mix of duplexes/townhouses and

terraces to apartment buildings. They also included a range of housing sizes to cater for individuals as well as range of family sizes.

The data was recorded slightly differently for dwelling sizes in the Business – Mixed Use zone. The size of dwellings is one of only three residential-specific standards for this zone. Therefore, more detail was sought on the correlation between dwelling size and the number of bedrooms. The findings showed:

- Studios ranged between 27-38m^2 (two developments only)
- One bedroom dwelling sizes ranged between 38 -80m^2 with 70 per cent of dwellings sized between 45-60m^2
- Two bedroom dwelling sizes ranged between 56-118m^2 with 60 per cent of dwellings sized between 50-70m^2 and 30 per cent between 71-90m^2
- Three or more bedroom dwelling sizes ranged between 90-253m^2 with 45 per cent of dwellings sized between 95-120m^2 and 30 per cent between 121-170m^2.

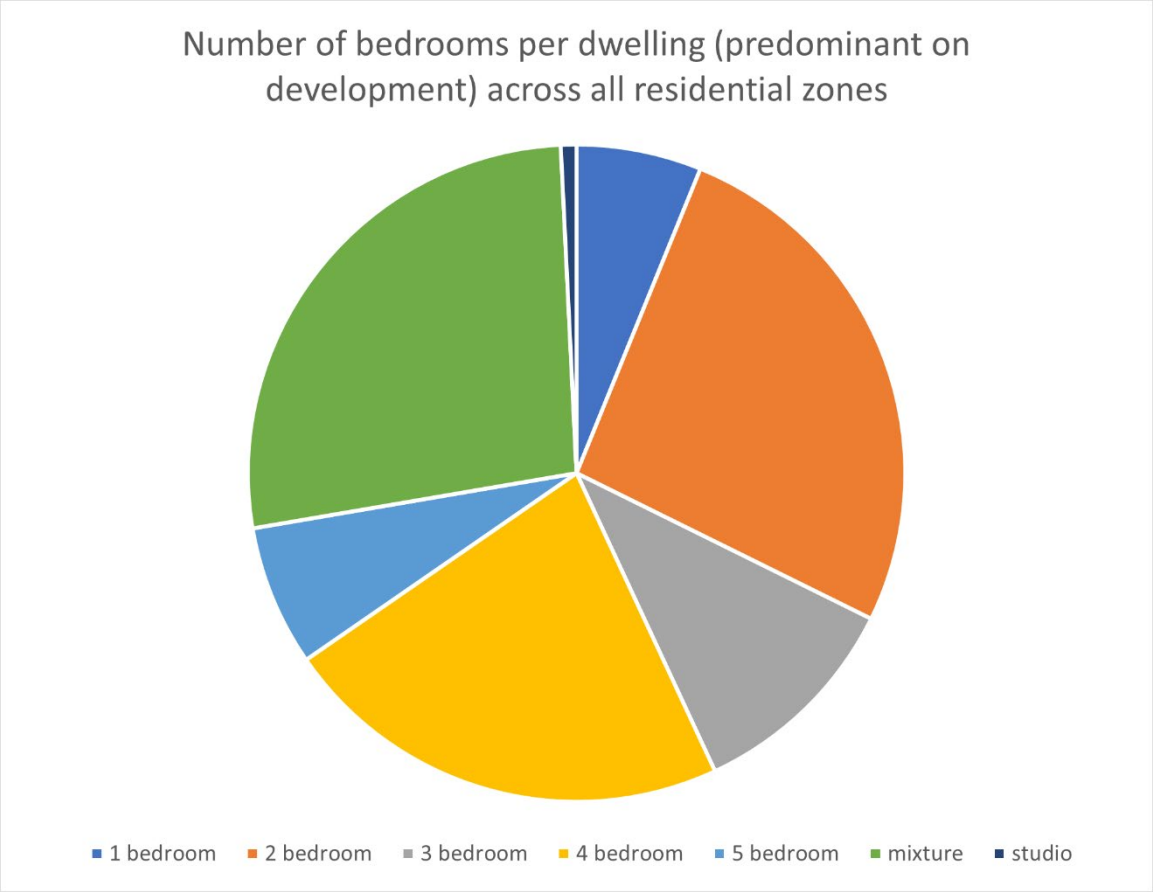


Figure 26 –Bedroom(s) per dwelling in developments in the residential zone sample

In the Business – Mixed Use zone, a potential limitation of the findings on the number of bedrooms shown on plans didn't always align with the number of rooms that could actually be used as bedrooms. This was most evident in apartment developments with some including windowless, 'bedroom-sized' rooms that were labelled as offices or media rooms. Some of these rooms also include features such as large wardrobes, which appear to enhance the likelihood that they will serve as bedrooms instead of the function they are labelled as on the plans. This posed issues for calculating dwelling sizes as an apartment might appear to be a relatively large one-bedroom

apartment, but if it included an 'office' that could actually function as a bedroom then it would be a relatively small two-bedroom apartment.

A possible contributing reason for the majority of dwellings being well in excess of the AUP minimum standards is that the commercial lending banks prefer to lend on dwellings that are at least 45m^2 in size.[9] In 2017, BNZ stated it would not lend for apartments less than 65m^2. This kind of lending policy can have flow-on effects into the building design.[10] In July 2021 ANZ announced a change to its lending arrangements for apartments.[11] Under its new rules, customers only need a 20 per cent deposit for freehold apartments that are 38m^2 or larger. Previously, any apartments smaller than 45m^2 required a 50 per cent deposit.

In July 2021 *Stuff.co.nz* also reported that 'Between 2001 and 2021, Auckland two-bedroom apartments of 50sqm to 79sqm increased in value by 157 per cent, compared to a 527 per cent increase in two-bedroom houses.'[12] This shows the potential market influences on building size and typologies.

Beyond being a regulator of housing, the AUP has no additional influence over housing supply or affordability. The monitoring does not attempt to provide in-depth analysis of the relationship between market viability and the characteristic of housing stock being delivered via the AUP rules (e.g. what sort of housing the AUP is preventing).

Preparing for changing needs

There are no provisions in the AUP for universal access homes although this had been a requirement in the Proposed Auckland Unitary Plan. While the analysis did not record the provision of universal access homes, site observations showed that very few developers provided these – Kainga Ora being the most visible in this provision.

The AUP does not require residential developments to provide a habitable bedroom, toilet and handbasin at ground level or an accessible level in dwellings. Except for apartments, the majority of new housing is 2-3 storey so internal stairs are a fundamental aspect of their design and can limit access to living facilities if they are above ground level (or without an accessible lift in the case of apartments). The AUP does not prescribe the number of steps between the street and dwellings. This analysis will examine the potential effects on accessibility emerging from the AUP's policy position.

Steps and stairs can be problematic for residents if they have impaired mobility for any period of time. Level access between the house and street enables residents to have easy and safe access into their homes – not only for potential health reasons but also for parents with prams and small children.

The analysis looked at the percentage of dwellings within a development that avoided steps or had one step between the street and the dwelling front door (or via the garage). This could at least enable a person with limited temporary mobility (not necessarily a wheelchair) to access their home. In some cases, a mobility impaired resident may need assistance from others for help with the threshold step, but at least it would be possible for them to return to their home.

The findings showed that:

[9] https://www.edgemortgages.co.nz/home-investment-loans/buying-an-apartment/
[10] https://www.stuff.co.nz/business/92709350/banks-make-buyers-jump-through-hoops
[11] https://www.stuff.co.nz/business/money/300347395/anz-move-fantastic-news-for-firsthome-buyers-broker-says
[12] Ibid

- 45 per cent of developments of 4 or more dwellings had designed all their dwellings either without steps or no more than one step into the home,
- 20 per cent of developments had at least half their dwellings,
- 10 per cent had a third of their dwellings with either no steps or one step between the street and front door threshold,
- 20 per cent of developments were less accessible with more than one step into all the dwellings.

Overall, this is a positive result given there is no AUP requirement to minimise steps. A possible reason for the large number of more accessible dwellings is the majority of multi-unit developments tend to be constructed with concrete slab floors which require a minimal step rise from external concrete paths and driveways that connect to the street.

Around 70 per cent of dwellings provided this level of accommodation. This is very positive given the large amount of multi-storey housing being built in Auckland. This means that most people would be able to recover in their home from a temporary illness, injury or other form of incapacity that restricts mobility. It provides the basic infrastructure for short-term needs. With this, washing and food preparation arrangements are available for healthcare providers to support people in their homes. Very few developments in the sample included one or two universally designed housing for people with disabilities.

The RPS seeks 'development capable of adapting to changing needs to provide for people and communities'. There is scope for the AUP to actively encourage the design of housing to be more adaptable to residents' changing needs. This includes people with temporary or permanent health impairments or disabilities, families, the young and elderly. For example, avoiding or minimising steps between the street and front door threshold, requiring a toilet, handbasin and habitable room that is accessible from the front door, including minimum widths for halls and doorways are just some ways housing can be more adaptable to residents' changing needs. It is cost-effective to design these elements into new housing but expensive to retrofit. The evidence suggests the market is already providing some elements that support adaptable living which shows economic and market viability. Adaptable housing will help deliver on RPS B2.3 objectives that support health, safety and wellbeing of residents and liveable communities.

In the Business – Mixed Use zone, the majority of the developments were apartment buildings where every unit was accessible via lifts. Most of the terraced housing developments in this zone had step free access to the front door and the walk-up apartments had step-free access for ground level dwellings.

This enabled a high level of accessibility. The findings across all housing typologies in the Business – Mixed Use zone showed:

- 80 per cent of developments, had step-free or single-step access between the street and dwelling front door,
- 10 per cent of the developments had dwellings with more than one step between the street and dwelling front door,
- 80 per cent of developments had a habitable room and toilet.

Effectiveness and efficiency of the plan

A range of housing sizes and typologies with good accessibility are key to providing choice for Auckland's diverse population needs. The findings show that the B2.3 objectives, and B2.1(1) issue which seeks growth that enhances the quality of life for individuals and communities, is being successfully addressed through the range of housing being consented. This enables residents to stay in their neighbourhoods and access appropriate housing to cater for their personal circumstances.

The AUP is effective and efficient in delivering a diversity of housing for Aucklanders. The plan provisions enable a wide range of housing types – typology, dwelling size and number of bedrooms. In most developments, the dwelling sizes well exceed the AUP's minimum standards. External factors such as the trading banks' lending criteria appear to be influencing market desirability for two bedroom and larger dwellings.

The findings show that Auckland's housing stock is generally providing for changing needs of residents despite the lack of direction in the AUP. The majority of developments analysed could provide for temporary changes in residents' mobility needs. However, the AUP could provide more direction for the design of housing to adapt to residents changing needs to support health, safety and wellbeing objectives. Inclusion of more universally designed housing for people of all ages and abilities should also be considered. The New Zealand Building Act 2004 does not provide guidance or require this form of housing in residential developments.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To increase diverse housing choice, undertake further research to provide understanding of the relationship between market viability and AUP residential provisions. This would inform other potential plan changes to residential provisions emerging from this report's recommendations. The research scope should consider but not be limited to the following option:

- Contribute to the work programme on the implementation of the National Policy Statement on Urban Development. ***High priority***

To improve the delivery of providing access for all people and dwellings capable of adapting to changing needs undertake further research and cost benefit analysis to determine the appropriateness for further planning intervention. The scope this of research could consider, but not limited to, the following

- Investigate potential AUP provisions to encourage dwellings be designed to be adaptable to changes in circumstances for residents of all ages and abilities. ***Medium priority***

Continue to work with the Ministry of Business, Innovation and Employment to develop and implement the "Building access for all" work programme. ***Medium priority***

Theme 5: Responding to climate change and environmental sustainability

This theme focuses on aspects of residential development that may help reduce the effects of climate change and contribute to environmental sustainability. Limiting the amount of impervious surfaces, managing stormwater better, provide quality landscaping and managing waste in residential developments can reduce the impact of residential intensification on the wider environment. Quality landscaping includes planting and trees for shade, carbon absorption and supporting biodiversity. Landscaping can also provide privacy, shelter or food sources, improve amenity, reduce urban heat and stormwater run-off. Some AUP standards such as the amount of impervious surface and landscaping influence the design of residential developments.

RPS Chapter B2.1. recognises that growth needs to be provided for in a way that maintains and enhances the quality of the environment, both natural and built (issue 6).

RPS Chapter B10.1 seeks to manage environmental risk and the effects of climate change. It recognises that the way the region manages land use in response to climate change will determine the resilience of Auckland's economy, environment, and communities in the future.

Auckland Council declared a climate emergency in June 2019 and have been working in partnership with mana whenua, businesses, industry, NGOs, communities, and government to finalise an action plan. The city has adopted a climate plan, Te Tāruke-ā-Tāwhiri which aims to cut emissions in half by 2030.

Auckland Council's Climate Change Action Plan promotes the following actions that are relevant to this theme.

- Action Area N3: Implement nature-based solutions in planning. Landscaping is important in achieving this – supporting the growth of vegetation in built environments.
- Action Area N2: Grow and protect our rural and urban ngahere (forest).
- Action area N5: Advocate for land use practices that deliver healthy, resilient soils.

Relevant RPS Objective and Policies	
RPS Objective B2.3.1(1)	A quality built environment where subdivision, use and development do all of the following: (f) respond and adapt to the effects of climate change
RPS Objective B2.3.1(2)	Innovative design to address environmental effects is encouraged.
RPS Policy B2.3.2 (2)	Encourage subdivision, use and development to be designed to promote the health, safety and well-being of people and communities by all of the following: (c) minimising the adverse effects of discharges of contaminants from land use activities (including transport effects) and subdivision.
RPS Policy B2.3.2 (5)	Mitigate the adverse environmental effects of subdivision, use and development through appropriate design including energy and water efficiency and waste minimisation.

This theme applies three indicators:

- Indicator 8 – Managing stormwater to mitigate adverse environmental effects
- Indicator 9 – Quality of landscaping to address the effects of increased density and climate change
- Indicator 10 – Location and appearance of on-site rubbish management

Indicator 8 – Managing stormwater to mitigate adverse environmental effects

Measures for the residential zones

- Total impervious area for developments
- Extent of maximum impervious area standard non-compliance

Measures for the residential zones and Business – Mixed Use zone

- Whether there are rainwater tanks shown on site plans

What indicator 8 tells us

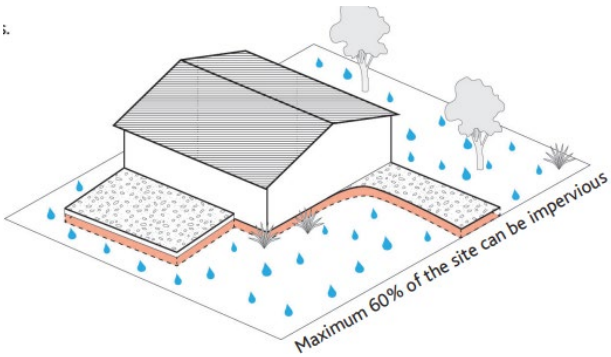
This indicator and its measures collectively provide information on how the development will minimise environmental effects caused by stormwater in the residential zones. This includes the management of stormwater runoff and supporting water quality where it enters natural environments such as coasts and streams. The Business-Mixed Use zone has an impervious surface standard that applies only to riparian yards and was not included in the monitoring. Collecting on-site rainwater is another way that stormwater run-off can be reduced and has the added benefit of providing water for gardens or other outdoor uses.

Provision of stormwater methods is linked to engineering and infrastructure standards. There are cumulative trade-offs and risks with on-site attenuation. For instance, residents need to collectively maintain their facilities. A related issue is the use of permeable pavers for access and manoeuvring spaces to help achieve compliance, but that over time these settle and may no longer achieve the permeability intended.

Findings

Impervious surfaces

In the residential zones, the AUP has a standard that specifies a maximum impervious surface area of 60 per cent for a site in MHS and MHU; and 70 per cent in the THAB zone. This includes the area of building coverage. It is calculated for the total (gross) site of the parent site. The diagram shows the impervious surface area for a site in the MHS zone.



This is a core standard for residential developments of 1-3 dwellings but not for four or more dwellings. Assessment criteria are applied to negotiate outcomes that ensure adverse effects on water quality, quantity and amenity values are avoided or mitigated. The AUP states the purpose of the standard is to manage the amount of stormwater runoff generated by a development, particularly

in relation to the capacity of the stormwater network and potential flood risks. This standard reinforces the building coverage and landscaped area standards. It also seeks to support the functioning of riparian yards, lakeside yards and coastal yards and water quality and ecology.

The findings showed that 65 per cent of developments complied with the maximum impervious area standard across the three residential zones. However, over a third of developments – primarily in the higher density residential zones exceeded the standard. The infringements were:

Zone	Infringement
MHS	• 20 per cent of developments infringed the standard – most by up to 5 per cent.
MHU	• 30 per cent of developments infringed the standard by up to 5 per cent • 10 per cent infringed it by 5-10 per cent.
THAB	• 20 per cent of developments infringed the standard.

The cumulative effects of non-compliance with the maximum impervious surface area standard over the wider Auckland region are unknown. Notwithstanding, this can create potential effects which contribute to climate change and other environmental risks, including

- Impact on flood hazards
- Loss of connection with ground water systems
- Increased runoff in both pipes and as over land flow
- Stream and coastal erosion
- Urban heat island effects
- Loss of evapotranspiration rates.

Further monitoring under the guidance of Auckland Council Healthy Waters, Infrastructure and Environmental Services would provide evidence of the cumulative effects of intensification – particularly in the MHU and THAB zones.

Rainwater tanks

Recent droughts (at time of writing) in Auckland have highlighted the opportunities from collecting rainwater on-site for exterior household uses. Along with rainwater detention tanks, rainwater tanks for external household use are also being installed to reduce non-compliance with the maximum impervious surface standard and manage stormwater. The analysis looked at site plans to see whether developments are providing these in response to the market demand for an additional water resource and/or as stormwater management measures.

To date, there is no AUP standard requiring the installation of rainwater tanks or to show water tanks on drawings. In specific cases, rainwater tanks may be required to mitigate particular site conditions to address stormwater issues. While tanks can be installed at a later date by the owner, the findings showed that nearly 45 per cent of developments had water tanks for at

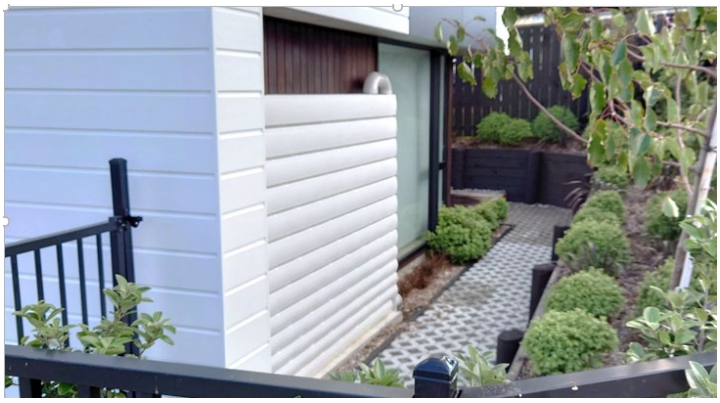


Figure 27. An example of a narrow rainwater tank integrated with the building and permeable landscaping.

least some if not all their dwellings. These were less evident in apartment developments. Auckland Council is currently preparing a plan change to make installing a rain tank easier. In the Business – Mixed Use zone, only one development had rainwater tanks.

Effectiveness and efficiency of the plan

The findings showed that a third of the sample across the three residential zones infringed the maximum impervious surface area standard. Non-compliance was more significant in the MHU and THAB zones where maximum impervious surface areas are greater. Providing rainwater collection tanks is one method for reducing the impact of stormwater run-off. The cumulative effects of non-compliance and whether alternative solutions are effective are unknown. The negative effects could have implications for climate change and the natural and built environment. Without clear evidence of the cumulative effects of more intensive residential development, it is not possible to evaluate whether the plan is effective or efficient.

Nearly half of developments showed rainwater tanks for at least some dwellings to collect rainwater. Rainwater tanks are used to being installed for exterior household uses. In some cases, they were being installed as mitigation measures to offset non-compliance with the maximum impervious surface area standard. Planning practice is being effective by encouraging the use of rainwater tanks as a mitigation measure which has the additional benefit of supplementing Auckland's water supply at the local level.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To give effect to council's Emergency Climate Change response and to address the stormwater effects of intensification – particularly in medium to large scale developments – undertake further research and cost benefit analysis. This work could consider but not be limited to the following options:

- Require the maximum impervious surface area to be a core standard for four dwellings or more. ***Affected by recent Government legislative changes***
- Modify the proportion of maximum impervious surface area relative to site area. ***Affected by recent Government legislative changes***
- Explore other solutions to avoid non-compliance with the standard. ***Affected by recent Government legislative changes***

To support the installation of on-site rainwater tanks, the Plan Change 54 Enable Rainwater Tank Installation is finalised. ***High priority***

Indicator 9 – Quality of landscaping to address the effects of increased density and climate change

Measures

- Non-compliance with the landscaped area standard
- Provision of landscape plans
- Presence of at least one tree (2m+ height) proposed in the landscape plan

What indicator 9 tells us

Landscaping of sites contributes to the ecology, reduces stormwater runoff and contributes to the site and neighbourhood character and amenity. It is also important for flooding abatement, reducing contaminant load and the urban heat effect. Softer planted landscaping and trees have an impact on reducing heat absorption and refraction.

This indicator looked at whether landscape plans were included with the consent plans and whether there was non-compliance with the AUP landscape area requirements. The monitoring did not look at tree removal prior to development.

In addition to this, the landscape plans were assessed for the presence of at least one tree proposed that would grow to over 2m. Trees support birdlife, provide shade in summer to reduce heat in the urban environment, absorb carbon and help mitigate the visual effects of more intensive housing.

The site visits provided a valuable opportunity to see the quality of landscaping and whether landscape plans had been implemented to the standard envisaged.

There is no landscaping requirement in the Business – Mixed Use zone apart from a landscape buffer if parking is provided at the front of the site. No monitoring was undertaken on this topic.

Findings

Landscape area

The purpose of the landscape area standard is to provide for quality living environments consistent with the planned urban built character of buildings surrounded by open space. It also creates a landscaped urban streetscape character. The minimum landscape area in the MHS zone is 40 per cent of the net site area, the MHU zone is 35 per cent, and the THAB zone is 30 per cent of the net site. The analysis assessed non-compliance with the total landscape area for a site – not areas explicit to front yards. The purpose of the landscape area could be updated to support biodiversity and climate change objectives given increasing residential intensities. The landscape definition also needs updating.

Nearly 35 per cent of all developments across all zones in the analysis infringed the landscaping standard. Of those 35% that infringed the standard, the extent of infringements by zone showed the following:

- 55 per cent of developments infringed the 40 per cent net site landscape area standard in the MHS zone. The majority infringed the standard by between 1- 5 per cent.
- 40 per cent of developments infringed the 35 per cent net site landscape area standard in the MHU zone. The majority infringed the standard by between 1- 5 per cent.
- 45 per cent of developments infringed the 30 per cent net site landscape area standard in the THAB zone. The majority infringed the standard by between 1- 5 per cent.

The extent of non-compliance with the landscape area standard reflects a similar level of infringement for the maximum impervious surface standard. Non-compliance of between 1-5 per cent reduction in the landscaped area in the residential zones could undermine the anticipated landscape

outcomes– especially in the MHS zone where landscape is considered an attribute to the character. The amount of landscape area and the quality of landscaping is also fundamental for achieving climate change objectives in suburban and urban areas.

The cumulative effects of this degree of non-compliance is not likely to achieve the purpose of the standard. Together with the bulk and location findings (refer to Indicator 1), this suggests a trend where maximisation of a site's development potential is reducing the AUP's intention of having distinct planned built character for the each of the residential zones.

There is no requirement for landscape area in the Business - Mixed Use zone. This could be a consideration for residential development to support climate change objectives.

Landscape plans

While the AUP does not require them, landscape plans with resource consent applications are encouraged. Around 90 per cent of developments analysed included landscape plans. Landscape plans can be a valuable resource for compliance, monitoring and enforcement of the landscape standard.

Landscape quality

To measure the 'quality' of landscaping and its value to contribute to climate change objectives, each site was assessed on whether a tree with potential growth of 2m on the parent site was provided (including in outdoor living spaces).. Trees are often sized for their location so the measure enabled flexibility. This is not a requirement of the AUP. The AUP relies on Chapter J Definitions (definition for 'Landscaped area') to provide guidance on landscaping. The AUP currently define 'Landscaped area' as:

> In relation to any site, means any part of that site not less than 5m² in area which is grassed and planted in trees, shrubs, or ground cover plants and may include:
>
> 1. One or more of the features in (a) (b) or (c) where the total land area occupied does not collectively cover more than 25 per cent of the landscaped area:
>   a. ornamental pools
>   b. areas paved with open jointed slabs, bricks or gobi or similar blocks where the maximum dimension of any one paver does not exceed 650mm
>   c. terraces or uncovered timber decks where no part of such terrace or deck exceeds more than 1m in height above the ground immediately below
> 2. non-permeable pathways not exceeding 1.5m in width
> 3. permeable artificial lawn in the residential zones, except:
>   a. that permeable artificial lawn must not cover more than 50 per cent of the landscaped area of the front yard
>   b. Permeable artificial lawn must:
>   - be permeable
>   - resembles grass in colour including a mix of natural looking green tones
>   - have piles that are a minimum 30mm pile height, straight cut (not looped pile), and of a density and form that resembles grass
>   - is resistant to ultra violet degradation, weathering and ageing during its normal service life
>   - is recyclable.
> 4. Any part of a landscaped area may be situated over an underground structure with adequate soil depth and drainage.
>
> Excludes any area which:
>
> - falls within the definition of building coverage;

- is part of a non-permeable pathway that is greater than 1.5m in width;
- is used for the parking, manoeuvring or loading of motor vehicles.

Figure 28: Observations from site visits showed poor quality landscaping and ongoing maintenance was an issue for many developments.

Figure 29 This development has a well-designed landscape with low maintenance native planting with a variety of small plants and trees that will mature and enhance the outlook spaces and outdoor living spaces of the dwellings as well as the street frontage.

Findings showed that 75 per cent of developments with landscape plans proposed a tree with potential growth of 2m or taller. Observations from site visits revealed that many sites were poorly landscaped and lacked the level of planting shown in the landscape plans. Although developments

were only viewed from the street, not many trees capable of growth over 2m appeared to have been planted or had survived much beyond the completion date. Many developments did not have space within the site or front yard to plant a tree of this scale.

Another observation from site visits was the prevalence of grass for outdoor living spaces in terrace housing which could not be maintained without a lawnmower. On these sites, storage for gardening equipment would compromise the amount of outdoor living space. Some had used artificial turf or paved the entire outdoor living space to deal with the maintenance issue. It was not known whether this was undertaken by the residents at a later date. This suggests that the design process (and analysing any future planning solutions) must consider and address the issue of practicality and maintenance.

Effectiveness and efficiency of the plan

The monitoring showed the AUP is not sufficiently effective or efficient in achieving quality landscaping. The landscape area standard was infringed by 35 per cent of residential developments in the sample. Non-compliance of between 1-5 per cent in each of the zones is likely to undermine the spatial landscape qualities promoted for each zone – especially in the MHS zone. The amount of landscape area and the quality of landscaping is fundamental for achieving climate change objectives in suburban and urban areas. These findings suggests that the purpose statement and definition for the landscaped area standard is limited and should be expanded to include provisions to support biodiversity and climate change objectives.

Observations from site visits showed there was either a lack of implementation or poor implementation and maintenance of landscape plans. There were also issues around the types of landscaping and the lack of thought for the ongoing maintenance of sites – especially terrace housing.

Recommendations on landscape outcomes will ensure site and planned character is consistent with the zone descriptions. Increasing the private and public tree cover will mitigate the effects of building dominance, reduce heat, provide shade to public footpaths, and collectively provide ecological corridors for birdlife. It will also reduce carbon and pollution between the street and living spaces creating healthier homes.

The Business - Mixed Use zone does not have a landscape standard. This recognises the diversity of uses in the zone where it would inappropriate to require landscaping. However, there could be an opportunity to introduce a standard for residential developments in this more intensive urban zone. A priority will be providing on-site amenity, improving air quality and biodiversity as well as supporting climate change objectives at a site and neighbourhood scale.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To address the lack of quality in landscaping and planting, undertake further research and cost benefit analysis to support council's Emergency Climate Change response. The scope of this research could consider but not be limited to the following options:

- Require landscape area to be a core standard to provide a strategic response to climate change action (as well as enhancing streetscapes and the public realm). *Affected by recent Government legislative changes*
- Require a landscape plan and future maintenance plan for developments of four or more dwellings. This includes landscape areas with planting designed to be easily maintained by occupants to ensure sustainability. *High priority*
- Include an ongoing maintenance arrangement on titles for subdivision through a land use consent with body corporate or residents' associations committing to the future management of common landscape areas. *Medium priority*
- Investigate expanding the depth of front yards in the MHS, MHU and THAB zones to increase the amount of landscaped area in the front yard from in all residential zones. This is to enable space for the planting of trees and shrubs (including a specification for deep soil). *Affected by recent Government legislative changes*
- Review the definition to achieve quality landscaped spaces. This would include measures to support biodiversity and climate change objectives. It should also provide clarity on what qualifies and what does not qualify as landscaping for inclusion in the quantum and minimum dimension of landscape space set out in the standard. *High priority*
- Provide incentives to encourage developers to retain existing mature trees on redevelopment sites. *Medium priority*
- Specify the dimensions of outdoor living spaces and yards to be of a size that can accommodate mature trees. *Affected by recent Government legislative changes*
- Require at least one tree planted in deep soil on the parent site of at least 4m-6m height and allow a diameter of at least 4m to provide viable natural habitats, visual amenity and contribute to climate change objectives – improved air quality, shade to reduce heat island effects and carbon absorption. *Affected by recent Government legislative changes*

  OR
- Include requirements in the standard for inclusion of a tree of a size appropriate for the site with deep soil for each dwelling or group of trees on the parent site. *Affected by recent Government legislative changes*
- Consider a landscape area standard in the Business - Mixed Use zone. This would be for residential development only. This would improve amenity, biodiversity and reduce heat island effects and improve air quality to support climate change objectives at a site and neighbourhood scale. *Medium priority*

To mitigate the effects of inadequate landscaping, undertake further research and cost benefit analysis. The scope of this research could consider the following options:

- The AUP definition of landscaping needs updating to incorporate measures to support biodiversity, amenity and climate change initiatives. Other updates include reducing the amount of hard landscaping in favour of more soft landscaping and a requirement for deep soil to support plant growth. The permeable artificial lawn could be limited as a ratio of the primary Outdoor Living Space. *Affected by recent Government legislative changes*

To ensure landscape plans are implemented, improve council planning practice – compliance monitoring and enforcement:

- Increase enforcement on the implementation of landscape plans at completion of developments. Undertake ongoing monitoring to ensure owners comply with consents. This includes retaining trees as specified on plans. *High priority*
- Landscape monitoring conditions and costs could be extended to for longer (e.g., 5 years) – especially for large scale developments. *Medium – high priority*

To increase the amount of tree cover using non-regulatory methods, council explore feasibility of the following:

- Auckland Council could supply every new dwelling with a tree capable of 2m or more mature height as part of the Mayor's 1 million trees programme. *Medium priority*
- Auckland Council and Auckland Transport could plant more street trees and maintain grass berms in higher density residential areas. *Medium priority*

Indicator 10 – Location and appearance of on-site waste management

Measures

- Is there a designated location for rubbish bins
- Is the rubbish bin screened

What indicator 10 tells us

Waste management contributes to council's broader objectives with regard to waste minimisation, emissions, net carbon, congestion, and other targets. These are contained in the Waste Minimisation Plan, Climate Action Plan, and C40 Cities Climate Leadership Group. Construction and demolition waste as major contributors of waste to landfill, as well as sustainable design and construction are all issues for the development sector. Only two aspects of domestic waste were addressed in the monitoring programme.

Effective waste management is also an essential part of well-functioning sites and urban environments. The monitoring focussed on the provision of waste storage and its visibility within the site to determine the quality of on-site waste management.

Managing household waste efficiently and effectively within sites, for collection and to meet waste reduction objectives is essential for multi-dwelling residential developments. The amount of waste storage – whether it's in individual rubbish bins or a combined collection, is a significant factor in addressing council objectives with regard to amenity, waste reduction, and traffic congestion, amongst others. Poor on-site waste management can negatively affect hygiene and safety, building appearance and pedestrian movement on public footpaths on collection days.

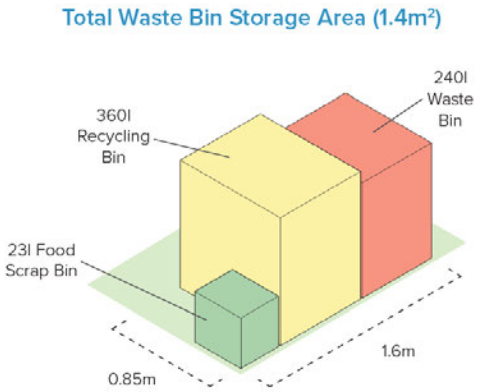
The AUP uses assessment criteria in the residential zones that require the necessary waste collection and recycling facilities. These are to be in locations conveniently accessible and screened from streets and public open spaces.

The monitoring applied two measures to assess how well developments in the residential zone sample were managing rubbish within sites.

There is a waste bylaw that applies to 10 or more dwellings. The Auckland Design Manual provides guidance through a Design Element for Waste and a practice note. Ongoing monitoring will be necessary to determine whether recent initiatives are effective at managing waste – storage and collection.

Monitoring developments from consenting through to completion provided the opportunity to assess the amount of house removal occurring – either through demolition or transportation of dwellings to other sites. This provided some insight on potential construction and demolition waste being produced as part of the development process.

Findings



The analysis showed that 70 per cent of developments had a designated area for rubbish shown on plans. This included locations next to dwellings, designated area for groups of bins or a communal bin for the development. Of these, 65 per cent were shown to be screened from view on the plans. This demonstrates a moderate level of effectiveness of the Waste Minimisation Bylaw which applies to 10 or more dwellings and the sole assessment criteria in the residential provisions.

Site visits were an opportunity to see some well managed on-site waste collection areas. Conversely, those developments without any rubbish management were often dominated by the presence of multiple rubbish bins alongside front doors that were visible from the street. Another issue identified during site visits was the propensity to locate rubbish bins in primary outdoor living spaces where there could be hygiene and safety issues. The amount of space associated with waste storage consumed the limited space and eroded the quality and safety of outdoor living areas (refer to diagram showing area needed for total waste bin storage).

Figure 30. A lack of on-site space for storing waste bins can block pedestrian walkways and clutter property entrances, creating adverse health, safety and amenity issues. Waste management collection is becoming a significant issue for multi-dwelling developments. Kerbside collections consume footpaths, forcing pedestrians onto the road.

Although not assessed specifically, site visit observations showed kerbside space issues for multi-dwelling developments. The number of waste bins were located on footpaths and obstructed pedestrian movement. This was exacerbated for rear site developments which did not have adequate site frontage and kerb space to locate bins for collection.

In the Business – Mixed Use zone, 80 per cent of developments provided for waste and recycling collection in a manner that was well screened from the street and functional for residents.

Construction and demolition waste are also major contributors of waste to landfill. The monitoring showed that approximately 270 houses were removed from sites in the residential zone sample to accommodate new development although some of these may have been relocated to other sites. Less than five sites from the sample of 130 developments in the residential zones retained existing dwellings alongside new development. Removed dwellings would have either been demolished or transported to other sites for re-use. Further monitoring and analysis would provide a better understanding of the amount of demolition waste.

Effectiveness and efficiency of the plan

Waste management is a significant issue both in terms of on-site storage, residents' access and the method of waste collection. It is also significant in terms of service, value for money, and meeting waste reduction objectives. The AUP is not sufficiently effective in providing standards needed to address the management of on-site waste or collections. The current reliance on a sole assessment criteria applying to developments of 4 or more dwellings is not effective. Council's Waste Management and Minimisation Bylaw 2019 and the NZ Building Code G15 – Solid Waste provide some rules and a strategic framework for managing waste. However, this needs to be complemented with appropriate management for the type, scale and location of the development. It should also require on-site bin storage space as well as access and space for either private or public collections (on-site or street kerb).

Inadequate space for on-site waste storage can result in the following issues:

- more collections than may be needed (noting once a week collection can require two-three trucks - one for rubbish, one for recyclables, one for food scraps)
- more inconvenience for residents
- more cost to residents
- more impact on amenity and safety with on-site collection with rubbish trucks close to dwellings and sharing pedestrian access ways.

There are amenity, space, hygiene, safety and operational aspects of waste management that affect the quality and functionality of residential developments. Consent plans and observations from site visits showed that there is insufficient consideration for waste management in many developments. There is also a disparity between commitments to waste management in resource consents and lack of implementation of access and facilities on site. This can be compounded with the increase in scale of developments. The management of waste affects both private and public health environments.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part

of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To improve waste management to benefit functional, operational, urban design, environmental and health outcomes in residential and business zone developments undertake further research and cost benefit analysis to determine the appropriateness of the issue for inclusion for a plan change in the next 1-2 years. The scope could consider, but not limited to, the following.

- Undertake further investigations based on issues experienced by Auckland Council's Solid Waste Planning unit. *High priority*
- Develop a new standard for managing residential waste on all residential zone sites – including but not limited to bin storage location, screening, hygiene, access and collection of waste bins. The standard should also include a minimum separation distance between dwellings and communal waste storage areas for hygiene safety (including odour). There should be consideration for how rubbish would be collected within the site using private collections or on street public collections (including for rear sites), and public street kerb space for council streetside collections relative to the scale of development. Responsibility for waste management by residents through consent conditions would assist with compliance. Monitoring and enforcement provisions may also assist with compliance. *Affected by recent Government legislative changes*
- Require a waste management plan for sites of four dwellings or more in residential zones and all residential developments in the Business – Mixed Use zone. This would specify but not be limited to bin storage space requirements, access, location, hygiene (eg a minimum separation distance between dwellings and communal waste storage), screening, collection of rubbish bins. Plans would also show how rubbish would be collected. This could for private waste collections on-site or on the street or council streetside collections with consideration for public street kerb space relative to the scale of development. *High priority*
- Investigate new or improve other tools such as bylaws, greater use of council's practice guidance notes for waste management, training, compliance etc for managing waste in multi-dwelling developments. *High priority*
- Undertake further monitoring of residential construction and demolition waste which are major contributors of waste to landfill. *Medium priority*

Theme 6: Supporting safe access and travel choice

Theme 6 analyses the safety and functionality of site access and circulation for pedestrians and vehicles. It also looks at the safety issues and opportunities of new developments on public streets and places. The AUP recognises that growth needs to be provided for in a way that:

(1) enhances the quality of life for individuals and communities; and

(2) supports integrated planning of land use, infrastructure and development.

The relevant B2.3 Quality built environment objectives and policies for this theme seek developments that enhances the health and safety of people and communities. The policies focus on ways developments promote walking, cycling and public transport, and minimise vehicle movements. This theme assesses whether developments have achieved the balance between safe sites and streets for people and achieve the functional requirements of vehicles.

The monitoring looked at the MHS, MHU and THAB zones for Indicators 11 and 12; and partially looked at the Business – Mixed Use zone for Indicator 12. Data was collected on the type or parking because this affected vehicle circulation and was an important factor in determining the relationship between a development and the street. The number of car parks for each development was not assessed because it was not considered an indication of quality housing or urban environments.

Relevant RPS Objective and Policies	
RPS Objective B2.3.1(3)	The health and safety of people and communities are promoted.
RPS Policy B2.3.2 (2)	Encourage subdivision, use and development to be designed to promote the health, safety and well-being of people and communities by all of the following: (a) providing access for people of all ages and abilities; (b) enabling walking, cycling and public transport and minimising vehicle movements; (e) meets the functional, and operational needs of the intended use;
RPS Policy B2.3.2 (4)	Balance the main functions of streets as places for people and as routes for the movement of vehicles

There are two indicators for this theme.

- Indicator 11 pedestrian safety within the residential developments.
- Indicator 12 pedestrian safety in the movement network

Indicator 11 – Pedestrian safety within residential developments

Measures for developments in the residential zones

- Separate footpath between the street and the dwellings (including alongside driveway)
- Footpath width

- Whether footpaths are located in the reversing space of cars
- Dwelling front door opens directly onto private way or parking

Measures for developments in the residential zones and Business – Mixed Use zone

- Type of vehicle parking

What indicator 11 tells us

Indicator 11 focuses on the safety of pedestrian access between the dwelling and the street in the residential zones. Pedestrian safety is a particular concern given the high incidence of driveway accidents involving pedestrians (particularly children). The vehicle access and parking arrangements influence the site layout, access to dwellings and level of pedestrian safety.

A separate footpath between the street and the dwellings (including alongside the driveway or private way) provides greater safety for pedestrians than a driveway shared with vehicles. The quality of the footpath is important. Where footpaths were provided, these were either the same surface and level as the driveway or separated with a raised footpath and kerb or of separated by landscaping. The width of the footpath is also a factor in its safety. Footpaths less than 1m wide are generally too narrow, especially if a parent is walking with a child or if people need to pass each other.

Another measure recorded the type of car parking provided as this can influence pedestrian safety. The monitoring assessed whether footpaths were located in the reversing space of cars – particularly when manoeuvring out of parking areas. Some developments had dwelling front doors opening directly onto driveways or parking areas.

Findings

Pedestrian safety within residential developments

The AUP Chapter E27 Transport does not require a separate footpath from the driveway where it serves less than 10 parking spaces in the residential zones (E27.6.4.3.2). Along with a minimum width of 3.5m, the standard E27.6.5. specifies:

> (1) The design and location of the proposed facility shall provide connections to existing pedestrian and cycling routes and facilities.
>
> (2) The width of the path is designed to accommodate the anticipated number and type of users.
>
> (3) The surface of the path is designed to safely provide for the anticipated number and type of users.

For developments with 10 or more parking spaces, driveways are required to have two-way movements, be a minimum 5.5m width and include a 1.0m pedestrian access for rear sites which may be located within the formed driveway. In the Business – Mixed Use zone, the width is 1.5m for footpaths with 10 or more parking spaces. The definition for landscaping restricts the width of non-permeable pathways (such as concreted paths) within the site to 1.5m.

The findings showed that 35 per cent of developments in the residential zone sample did not have a separated footpath. In these developments, the footpath was an assumed shared space with the driveway and for many, provided the only access to some dwellings. The findings are tempered by two factors in the monitoring – the large number (50 per cent) of developments in the sample with less than 10 dwellings and the minimal parking provisions for these developments – commonly one

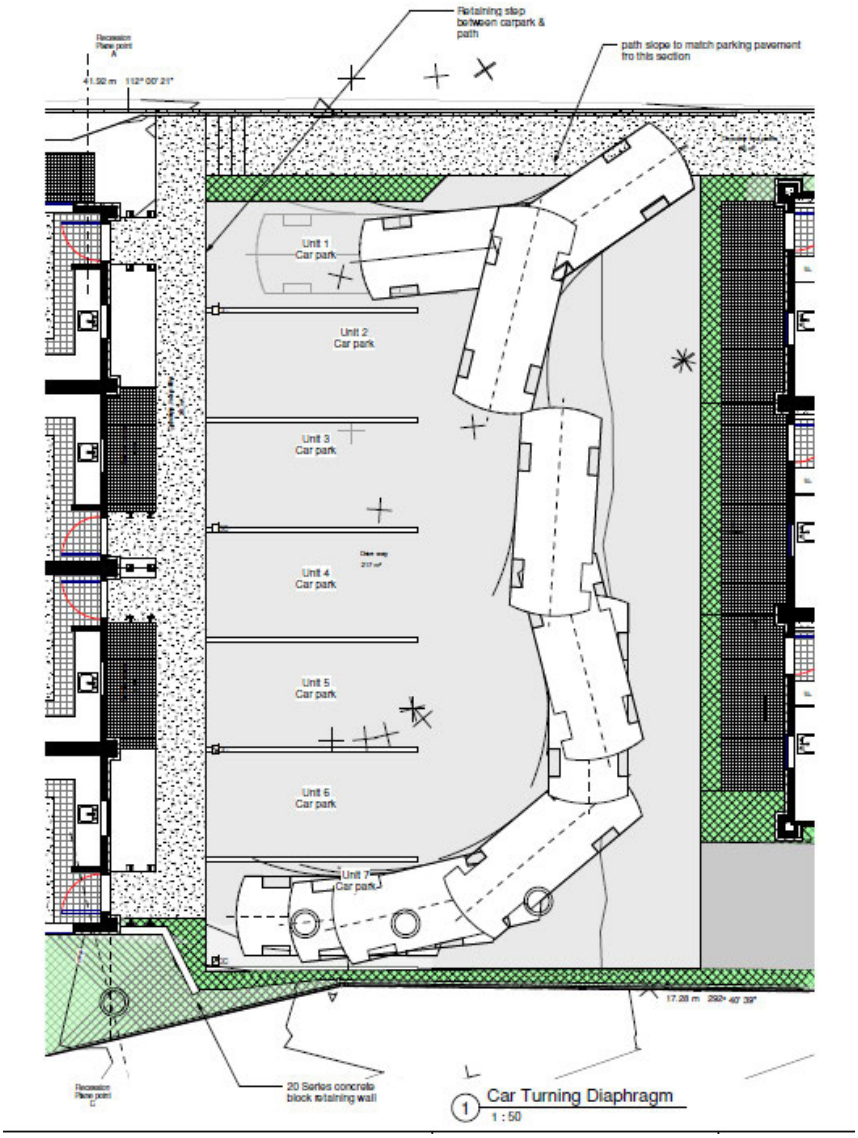
per dwelling. Many of these developments would have fallen below the 10 parking space threshold for the AUP requirement for a footpath.

The findings showed 65 per cent of developments contain footpaths separated from the driveway for access between the street and the front doors of dwellings. Of these, one quarter had a well-separated formed footpath that was raised with a kerb or a landscaped buffer from the driveway. The remainder shared the same driveway level but used a change of surface (colour or material such as paving) to denote the footpath zone. The width varied:

- 10 per cent of developments had footpaths less than 1m wide
- 45 per cent were 1m wide
- 45 per cent were over 1m wide.

The results of the investigation into footpaths located in the potential reversing space of cars was concerning. The findings showed:

- 45 per cent of footpaths were located in the reversing space of cars
- 5 per cent of footpaths were partially located in the reversing space of cars
- 50 per cent of footpaths were designed to avoid the reversing space of cars



There are no standards or guidance in the AUP to prevent this problem. The diagram illustrates how one development in the sample proposed manoeuvring space that compromises the safety of pedestrians on the footpath.

The types of parking provided for residential developments can also influence pedestrian safety. The monitoring recorded the parking typology that applied to the majority of the development. Monitoring in the MHS, MHU and THAB zones showed:

- 40 per cent of residential developments had parking integrated within individual dwellings such as an internal garage or an attached carport.
- 15 per cent had individual parking pads (usually adjoining to the dwelling)
- 30 per cent of residential developments had communal parking areas

- 10 per cent had a mix of parking types (typically some dwellings with garages and an area of communal parking for others)
- 2 per cent had underground carparks
- 4 per cent had no car parking.

Monitoring in the Business – Mixed Use zone showed

- 20 per cent had no parking
- 35 per cent had underground or enclosed basement parking
- 20 per cent ground level communal parking
- 20 per cent had a mix of parking types

The findings showed a diversity of carpark provision with developers responding to market and site conditions. The removal of internal garages from the dwelling generally resulted in designs that used the site more efficiently and internal layouts enabled ground floor living areas to be better connected to outdoor living spaces.

The increasing number of developments with communal carparks was significant. It also signals the increase in more complex pedestrian movement within the site as people access their vehicles – often carrying goods or managing children between their vehicle and their home.

Site visits provided the opportunity to assess the effectiveness of footpaths within sites in the residential zones. Those footpaths that were level with driveways, relying on a change of colour or surface quality did not provide the same level of pedestrian safety as those with a formed and raised footpath with a kerb.

Figure 31. Development with front doors opening directly onto a communal parking area and vehicle manoeuvring space. The designated footpath area (dark grey paving adjacent to the dwelling on left), directs pedestrians into the reversing space of cars enroute to the front doors of dwellings.

Dwelling front doors that open directly onto driveways or parking can also pose risks to pedestrian safety – particularly children. This measure was applied to developments where ***any*** of the dwellings had front doors opening onto driveways or parking areas. There are no standards or assessment criteria in the AUP to manage this. The findings showed that:

- 20 per cent of developments had one or more dwellings with front doors opening onto a driveway or carpark.
- 80 per cent of developments were designed to avoid dwellings with front doors opening onto a driveway or carpark.

The majority of developments avoided designing dwellings with front doors opening directly onto a driveway which suggests this is not onerous for developers. This probably recognises the safety concerns for residents and their visitors. There are significant safety and amenity benefits for dwellings to be designed to avoid this.

Effectiveness and efficiency of the plan

The plan is not adequately managing on-site pedestrian safety effectively or efficiently. This is with respect to pedestrian access and circulation within the site. In addition to this, a number of developments had front doors opening directly onto driveways or parking areas that could risk pedestrian safety.

The analysis showed there are safety issues for pedestrian access in developments with parking for four or more dwellings. Some forms of parking such as centralised communal parking areas are not adequately designed for pedestrian safety within the site. These often fell below the AUP threshold (based on the number of car parks) requiring a footpath.

The width and design of pedestrian accessways was variable. Nearly half of developments provided the minimum footpath width of 1m required by the plan. However, 45 per cent provided footpaths greater than 1m width which suggests that this is not necessarily onerous for the developer.

The quality and design of footpaths was also variable with most complying with the plan standard and incorporating a footpath zone within the same surface as the driveway. The form of footpath influenced pedestrian safety – particularly where they were located adjoining to vehicle manoeuvring spaces. Observations from consent plans and site visits showed these footpaths did not provide the same level of pedestrian safety as a raised footpath with a kerb (like a typical public street footpath) or a landscaped buffer from the driveway.

The findings showed 20 per cent of developments have one or more dwelling with front doors opening directly onto a driveway or parking area. This is a safety concern for residents and their visitors. Given the majority of developments avoided this, it suggests that it is not onerous for developers to achieve better safety and amenity benefits for residents.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)
Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To improve pedestrian safety on access ways into developments, continue with the proposed plan change for private way and driveway access, undertake further research and cost benefit analysis. The scope could consider but not be limited to the following:

- addressing pedestrian safety for developments of four or more dwellings with car parking (of any scale or type) *Affected by recent Government legislative changes*
- require a safe separate raised footpath (with kerb) of a specified width with adequate space for two people to pass (e.g. 1.5-1.8m). *Affected by recent Government legislative changes*
- avoid dwellings with front doors opening directly onto a driveway or parking areas. *Medium priority*

To improve consistency between different sections of the AUP in the Transport Chapter specifications and landscape definition for non-permeable footpath widths, undertake further research and cost benefit analysis to determine the appropriateness for inclusion for a plan change. The scope of research could consider but not be limited to the following options:

- Additional criteria in the transport provisions to:
    - Address site access or transport limitations which can require substantially more on-site vehicle access and manoeuvring space. *Affected by recent Government legislative changes*
    - Assess whether it is a rear site or a front site - the safety issues are different for these site conditions. Pedestrian access and amenity into multi-unit rear sites need to be reviewed to prioritise pedestrian safety. *Affected by recent Government legislative changes*

Indicator 12 – Pedestrian safety in the movement network

Measures for the residential zones:

- Number of vehicle driveways into site
- Number of dwellings served by vehicle private ways or driveways
- Front doors or entry porches visible or access (e.g. paths) visible from the street
- Dwellings with passive surveillance from a habitable room window at any level overlooking the street

Measures for the Business – Mixed Use zone:

- Ground floor activities
- Amount of ground floor glazing estimated to evaluate the quality of the street frontage

What Indicator 12 tells us

The interface between dwellings and the street is key to achieving positive experiences in the public realm– particularly around legibility (such as finding the front door) and making streets safer. This includes providing passive surveillance with windows, balconies or outdoor living areas that overlook the street, using crime prevention through environmental design (CPTED) principles.

This indicator looks at the effects of the development on pedestrian safety in the public street environment. The number of dwellings served by a driveway and types of parking provided

information on the potential volume and type of vehicle movements on a private way (such as owner access as well as visitors, couriers etc.).

All vehicles cross the footpath at the street kerb to access driveways so understanding the potential vehicle movements can inform possible future safety measures. This would be in addition to the AUP provisions for driveway sightlines and standards for vehicle crossings over public footpaths.

The number of vehicles crossing the public footpath is a risk for pedestrian safety. The potential number of vehicle movements to and from a development can provide an insight into the amount of additional traffic generated by intensification within in our neighbourhoods. The monitoring looked at the MHS, MHU and THAB zones and used the number of vehicle crossings for each development and the number of dwellings these serve as measures to consider pedestrian safety on the street and the effects of development in the movement network.

The presence of front doors or visibility of their access via a path was a measure used to evaluate the legibility of dwellings for a visitor. This is another aspect of residential design that enhances a development's connection to the street environment and community.

Findings

Vehicle crossings over public footpaths

Chapter E27 Transport provides for one vehicle crossing per 25m of frontage or part frontage (E27.6.4.2.1). This applies whether there is a footpath or berm. The findings for residential developments in the MHS, MHU and THAB zones showed:

- 80 per cent of residential developments had one vehicle crossing
- 5 per cent had two crossings
- 5 per cent had 3-6 crossings
- 10 per cent did not have any vehicle crossings

This shows that more intensive residential developments are producing the same number of vehicle crossings as typical single dwelling development would. This is a positive outcome as public footpaths are not fragmented by multiple vehicle accessways. However, the number of vehicles served by a vehicle crossing can be significant. The findings show:

- 60 per cent of developments had a driveway serving 4-10 dwellings
- 20 per cent had a driveway serving 11-20 dwellings
- 10 per cent had a driveway serving 21-30 dwellings
- 5 per cent had driveway(s) serving 31-50 dwellings
- 5 per cent had driveway(s) serving 51-100+ dwellings

There is potential for a significant number of traffic movements on driveways over public footpaths – particularly when considering deliveries and other commercial activities in addition to residents' vehicle movements. Analysis of crash data for pedestrians, cycles and vehicles resulting from increased vehicle movements on driveways would need to be undertaken to identify the extent of safety issues.

Passive surveillance of the street

Passive surveillance by dwellings overlooking the street is an important aspect of personal safety for pedestrians. To measure this, the percentage of dwellings in a development with passive surveillance

from a habitable room window at any level overlooking the street was recorded. Those developments on rear sites without street frontages were excluded from the assessment.

- 70 per cent of developments had up to half their dwellings overlooking the street – although most commonly it applied to one third of dwellings overlooking the street. This reflects Auckland's typical narrow sites which enable two or three dwellings to face the street.
- 15 per cent of developments had between 60-90 per cent of dwellings overlooking the street
- 15 per cent of developments had all the dwellings overlooking the street. These tended to be in large comprehensive terrace developments designed to face the street.
- The most common room in dwellings to overlook the street were living areas (65 per cent), bedrooms (20 per cent) and kitchens (15 per cent).

Visible access to front doors makes streets feel safer by giving pedestrians a sense that help is accessible if needed. It also makes it easy for visitors to access the dwelling. The number of developments with street facing dwellings with visible front doors, entry porches or pathways to the front door visible from the street were recorded. The findings for the residential zones showed that:

- 70 per cent of front doors or access to them in street facing dwellings were visible,
- 20 per cent were partially visible,
- 5 per cent were not,
- 5 per cent were rear sites so this measure could not be applied.

In the Business – Mixed Use zone, residential developments had 70 per cent of front doors visible and 30 per cent partially visible. Many of these developments were apartments so this would have been a visible single-entry door or porch.

In the Business – Mixed Use zone, the building and street interface is quite different with both commercial and residential activities possible. These activities have quite different requirements for the street interface. There are no AUP standards for street frontages in this zone. However, the AUP does restrict discretion when assessing resource consents to 'the extent of glazing provided on walls fronting public streets and public spaces and the benefits it provides in terms of:

i. the attractiveness and pleasantness of the public space and the amenity for people using or passing through that space

ii. the degree of visibility that it provides between the public space and the building interior

iii. the opportunities for passive surveillance of the street from the ground floor of buildings.'

This provides an indication of how the AUP is seeking a quality street amenity that is safe for pedestrians.

The findings show:

- For ground floor activities:
  - 40 per cent of developments had commercial uses on the ground floor
  - 60 per cent of developments had dwellings on the ground floor. In business zones where there are no front yard setbacks.
- The amount of ground floor glazing was estimated to evaluate the quality of the street frontage – including pedestrian safety on public streets:
  - 55 per cent of developments, approximately half the street-level façade consisted of glazing.
  - 30 per cent of developments had approximately three-quarters of the façade glazed,

- 20 per cent of developments, had around one quarter of the façade glazed.

The amount of glazing at ground level reflects the extent of residential activity and the challenges associated with privacy.

Effectiveness and efficiency of the plan

The interface between the street and dwellings provides both safety and amenity benefits. More intensive housing increases the number of residents, pedestrians and vehicles. Providing for the safety of pedestrians with issues such as increased vehicle activity and the desire for privacy in residential developments is a challenge.

The findings for the residential zone sample showed that for most developments, the level of intensification did not increase the number of vehicle crossings compared to the number that existed prior to development. Only 10 per cent of developments in the sample had two or more vehicle crossings. This shows the AUP transport chapter provisions which seek to minimise the number of vehicle crossings across a public footpath, are effective and efficient.

Although the number of vehicle crossings are very economical, the potential number of traffic movements (e.g. resident vehicles, deliveries and other commercial activities) using driveways pose more of a risk to pedestrians on public footpaths and pedestrians entering sites. Analysis of crash data would be necessary to identify whether there are safety issues.

As discussed above, all developments fronting streets were designed to optimise passive surveillance with windows or/and balconies overlooking the street. Most front doors for street facing dwellings were visible or partially visible from the street. This demonstrates that the AUP is effective and efficient in ensuring that dwellings in residential zones are well-designed to provide passive surveillance of the street.

In the Business – Mixed Use zone, the building and street interface is influenced by the presence of commercial and/or residential activities – particularly at the ground floor. Approximately 60 per cent of developments in the sample had residential activity on the ground floor and the remainder had commercial activity. The range of ground floor activities possible in this zone makes the visibility of front doors to apartment buildings essential for residents and visitors. The findings showed that front doors (or porches) were either fully or partially visible.

While there are no standards for street frontages in this zone, the AUP assesses the extent, attractiveness and passive surveillance from windows fronting public streets and public spaces. The amount of ground floor glazing was estimated to evaluate the quality of the street frontage – including pedestrian safety on public streets.

The findings showed that most residential developments have at least a quarter of the street-level façade as windows. Only 30 per cent had the majority of ground floor facades glazed and these were ground floor commercial activities. The amount of glazing at ground level reflects the extent of residential activity in developments and the challenges associated with privacy. The plan is less effective achieving ground level passive surveillance in residential development in this zone.

Recommendations

High priority – Investigate a plan change as a priority.
Medium priority – Further investigate at plan review stage (2026)

Low priority – Further monitoring advised.
Affected by recent Government legislative changes - Recommendations may be progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation.

To improve the ground floor interface between residential development and the street in the Business – Mixed Use zone, investigate a range of design solutions including glazing at ground floor level that achieves privacy for residents while maintaining passive surveillance of the street.

- Undertake further research to provide design guidance for inclusion in the Auckland Design Manual and the next review of the AUP. *Medium priority*

To determine whether driveways and private ways serving four or more dwellings are creating traffic levels on vehicle crossings over public footpaths pose a safety risk to pedestrians. *Affected by recent Government legislative changes*

Conclusion

The regional policy statement for B2.3 Quality built environment has a broad reach – seeking quality outcomes across all scales and types of development – site, street, block, neighbourhood and city. It sets a framework for considering the role of the built environment in supporting people's health, safety, well-being, choices, accessibility and travel. It also recognises the need to innovate, maximise resources, have efficient infrastructure and adapt to climate change. These are particularly important considerations for residential development which is the predominant form of development in Auckland.

The findings from the monitoring have helped determine the extent that the AUP has enabled these outcomes. It has also identified trends and issues that could be addressed through the Unitary Plan. The monitoring assessed how well new residential developments respond to the site, street, neighbourhood and area to gauge whether the future built form anticipated for the various zones is being achieved. Although not central to the review, the individual performance of planning rules has been necessary in part, to understand or address monitoring outcomes, emerging issues and trends.

The wide scope and depth of the monitoring for this topic has meant it is challenging to draw a single conclusion on the performance of the AUP to achieve the B2.3 Quality Built Environment objectives and policies. The breadth of the analysis produced specific conclusions and recommendations for each indicator. These complement the overall conclusions in this section of the report. The conclusions for each indicator can be referred to for more detail – including recommendations, when reading the overall conclusion.

This overall conclusion identifies those areas where the AUP is achieving exceptionally and is most effective and efficient. It also highlights some significant issues and emerging trends. These are not necessarily all shortcomings of the AUP. Some are potentially caused by a lack of regulation or intervention by the AUP or other statutory or non-statutory methods.

Auckland Unitary Plan successes

The monitoring analysis has shown that the AUP is both effective and efficient in many aspects of development in the residential and the Business – Mixed Use zones. The main successes of the plan are:

- Supporting growth

The AUP and planning practices have been effective in achieving residential intensification at levels promoted through the zoning principles and zone standards to reinforce the hierarchy of centres and corridors. Analysis of the sample showed the lowest densities were in the MHS zone with a clear transition of intensity through the MHU and THAB zones to the highest density in the Business – Mixed Use zone. This also achieves the B2.4.1 (1) growth objective seeking residential intensification to support a quality compact urban form[13].

In terms of land use efficiency, 130 developments in the residential zone sample produced 2,339 new dwellings. Seventy per cent of developments were for between 4-15 dwellings per site, 20 per cent were for 16-40 dwellings per site and 10 per cent were for developments with over 40 dwellings. Some of these had over 150 dwellings in a single development. The new developments replaced approximately 275 existing dwellings across the sample.

The majority of these dwellings in the residential zone sample have been built or in the construction phase during the monitoring period. This demonstrates the effectiveness and efficiency of the AUP standards – and specifically the unlimited density provisions enabled for 4 or more dwellings.

In the Business - Mixed Use zone the calculations are theoretical as many are yet to be constructed. There were consents for 33 developments – primarily apartments, which could produce 1,655 dwellings when built.

As a combined theoretical calculation, this shows that the 163 developments in the monitoring samples from both the residential and Business-Mixed Use zone replaced approximately 300-350 dwellings with almost 4,000 dwellings.

- Reinforcing centres and transport corridors

The monitoring has shown that the density of residential developments progressively increases towards centres and transport corridors. The findings from the monitoring sample showed lower density residential occurred furthest from centres and the highest densities were closest to centres and transport corridors. The lowest density zone in the assessment was the MHS zone, with findings showing a predominance of standalone houses, townhouses/duplexes and terraces. Terrace housing and small-scale apartments were more prevalent in the MHU zone. In the THAB zone, there were more large-scale terrace and apartment developments. And in the Business – Mixed Use zone (closest to centres and on transport corridors), most residential development was for apartments. In this zone, they were at greater scales than the other zones. This shows the zone descriptions for the future planned built form, policies, objectives and standards are effectively and efficiently influencing the location of residential density.

[13] Note that this conclusion is in the context of the AUP rules in enabling development on sites. This topic does not comment on the spatial allocation of zones and the appropriateness of intensity.

- Unlimited density provisions enable sites to maximise yield.

The AUP's unlimited density provisions combined with the land use led subdivision consenting process have been very effective in enabling sites to maximise housing yield. The findings showed that 55 per cent of developments in the residential zone sample constructed between 4-9 dwellings per site, 15 per cent of developments constructed 10-15 dwellings per site and 25 per cent developed 16 or more dwellings per site.

In the Business – Mixed Use zone, the majority of developments were for apartments on larger sites where higher dwelling numbers per site were achieved than the residential zones. The findings showed that 40 per cent of developments had 4-20 dwellings, 20 per cent of developments: 21-40 dwellings and 30 per cent of developments: 80 dwellings or more.

This shows that intensive housing is occurring at every scale of residential development throughout Auckland.

- Provide housing choice with a wide range of options to meet the diversity of Aucklanders changing needs

Analysis of the sample from the MHS, MHU and THAB zones showed there was an even split across the five residential housing typologies investigated. These were standalone houses, terraces, apartments and developments which had a mix of housing typologies.

The size of dwellings (square meterage and number of bedrooms) influences the ability of Auckland's new housing to provide for single people as well as large or multi-generational families or groups. In the residential zones, the findings showed that over 90 per cent of dwellings were 50m^2 or more. Only 5 per cent of developments had dwellings that were smaller than 50m^2. In contrast, 20 per cent of developments were for larger dwellings between 151-200m^2 to cater for families

In the residential zones, only 5 per cent of developments consisted primarily of one bedroom or studio dwellings. although around 10 per cent of developments had a mix of one and two-bedroom dwellings. There were 25 per cent of developments with a predominance of two-bedroom dwellings. This reflects the prevalence of two-bedroom dwellings in apartments and terrace housing. Three-bedroom dwellings accounted for 10 per cent of housing and 4-5 bedroom dwellings accounted for 30 per cent.

These findings show there is a good range of housing typologies and sizes to meet the diverse needs of Aucklanders.

- AUP provisions can achieve good quality of development – form, design and function

The monitoring has shown that successful developments are achieved when a range of factors such as site conditions (site size and dimensions, topography), design, scale and type of residential development are appropriate for the site and surroundings. In addition to this, the residential zones include standards for outlook spaces, outdoor living areas, landscape areas and protect daylight into dwellings to support well-functioning living environments. The site visits showed that many developments have successfully applied these standards to produce well designed quality housing. These developments have demonstrated what is possible and show how effective the AUP can be.

- Good quality street frontage appearance for most developments in the residential zones

The AUP relies on assessment criteria to influence building appearance. In addition to this, council provides design guidance in several forms. Developments with more than 10 dwellings are assessed by specialists including urban designers. Large scale developments may be reviewed by the Auckland

Urban Design Panel who are a group of industry experts who provide independent advice to developers. Council's Auckland Design Manual also provides comprehensive design guidance.

The monitoring used a number of architectural design elements to objectively evaluate the appearance of developments from the street. These included modulation of building facades, variation in rooflines and the dominance of carparking. The majority of developments included variation in the façade design to create more visual interest. Most also had some form of variation in rooflines.

Site visits evaluated developments from the street against a set of site assessment criteria. The visits confirmed that the majority of residential developments are achieving average to good outcomes in their appearance when viewed from the street. The majority of developments visited in the MHS and MHU zones were producing average to good or very good outcomes.

This positive outcome indicates that the plan's residential standards can be effective and efficient if applied appropriately. The challenge will be to achieve quality outcomes for all residential developments within constraints such as site size, dimensions and topography.

- Good quality developments are evident in all Auckland areas

The monitoring showed good quality developments in all areas of Auckland – regardless of land values, location or socio-economic factors. This shows the AUP residential provisions can be applied effectively and efficiently to produce good quality outcomes on any site, in any area and in any property market.

Auckland Unitary Plan issues

The monitoring has identified a number of issues with the Plan or emerging trends that are not managed by the plan. Many of these were assessed further with site visits to some developments. Each indicator in the report included a series of recommendations to improve the quality of residential development – many directed at specific standards or detailed aspects of development design and functionality. The issues in this overall conclusion draw from these to provide some key directions for improving the AUP.

- Need for a balanced planning framework that manages the effects of new development on existing and future residential development potential

The AUP standards that manage effects on adjoining sites are height, height in relation to boundary and yards in the MHS, MHU and THAB zones. These standards differ from other AUP residential standards in that they are subject to notification tests where the standards are infringed. This provides the opportunity for an adjoining property or in some cases, the public to submit a response on a proposed development. These standards manage effects including sunlight and daylight access, privacy and dominance of new development on adjoining sites. This can affect the function of existing development or limit the future potential of the site for redevelopment at a more intensive scale.

Other standards which are not subject to notification tests for four or more dwellings, can affect privacy, sunlight, daylight, dominance or amenity on adjacent sites such as the location and form of the principal living area outlook space and outdoor living areas. These standards collectively influence the quality and functionality of existing development and the potential for future development on those sites.

The monitoring showed that with the level of intensification occurring, these standards are not always managing the effects on adjoining sites as effectively as some legacy district plans. For

instance, the AUP requires the amount of sunlight to adjoining sites to be assessed at the equinox (spring/autumn) rather than the winter solstice – when sun is most needed. This reduces the quality of life for residents and site functionality on adjoining sites – especially during winter when sun access is valued most for passive heating, health and wellbeing.

Another issue was the loss of privacy to adjoining sites. The findings for the residential zones showed that half of developments in the sample had between 50 to 100 per cent of their dwellings facing adjoining sites. These developments complied with the AUP standards but it can be challenging to mitigate the visual and acoustic effects of this level of intensification – especially where principal living area outlook spaces and outdoor living balconies are located at the first level or higher. This can affect the functionality, amenity and future development opportunity of adjoining sites.

- Yield-led plan – large number of dwellings per site and very small sites post subdivision

A major success of the AUP has been supporting the growth in housing supply. However, this has changed the focus from being a 'outcomes-led' plan to one that is yield focussed. This is evident by the number of dwellings on parent sites and consequentially, small site subdivisions that follow. Sites are becoming so small that functionality and amenity can be compromised (particularly around private outdoor living spaces and outlook spaces). This is more evident where there is non-compliance with outlook space or outdoor living space standards. There is also little margin to cater for any changes that a property owner may undertake in future that may increase the site's impervious surfaces with a shed or shelter structure for instance.

Amenity, sunlight access, privacy (visual and acoustic) and other factors that contribute to quality housing and the health and safety of residents within sites as well as adjoining sites are being compromised in favour of housing yield in some developments. This is evidenced by the large number of dwellings per site and the level of non-compliance for building coverage, HIRB and other standards.

- Tailored standards needed for terrace housing and apartment buildings

The AUP has a generic set of residential standards in the MHS, MHU and THAB zones that are applied to standalone housing, townhouses/duplexes, terraces and apartments. These are quite disparate housing typologies - especially at larger scales. The AUP standards could be improved to support quality design outcomes with the complexity of medium to large scale terraces and apartment typologies. The scale and complexity of developments require greater management than the current standards provide. This includes the location, size, functionality and quality of outlook spaces and outdoor living areas. Waste management and safe functional pedestrian and vehicle access are important factors that need to be addressed more effectively by the AUP – particularly for medium and large-scale terrace and apartment developments. New or updated standards are also needed to effectively manage the bulk and scale of terrace and apartment development within the constraints of Auckland's typically small, narrow and deep sites. A more tailored set of standards could achieve better outcomes for terrace and apartment developments in the MHS, MHU, THAB and Business – Mixed Use zones.

- Issues with building scale and bulk relative to a site and limited sense of space

It can be a challenge to achieve a quality outcome if the site conditions, scale of development and housing typology are not compatible. There are issues regarding the bulk of buildings relative to a site which in turn, constrains the sense of spaciousness. This is at both a site and neighbourhood scale. The zone descriptions anticipate greater spaciousness in the MHS zone, which is progressively reduced towards the MHU, THAB and Business Mixed Use zones. The monitoring identified a high

degree of non-compliance with building coverage and the HIRB standards. There is evidence that the AUP and planning practice are challenged by development pressures for more development. This contributes to the lack of differentiation between zones.

The height, HIRB and building coverage standards manage the bulk and scale of buildings. Height was generally complied with. However, the findings showed 60 per cent of developments (across all three residential zones) in the sample, infringed the HIRB. Although not as significant, the extent of non-compliance with building coverage was 35 per cent in MHS, 20 per cent in MHU and 35 per cent in the THAB zone. Over one third of developments in the THAB zone infringed the standard and some by up to 20 per cent. Non-compliance with the standards enable larger, bulkier buildings that may cause negative effects within the site and on adjoining sites. Non-compliance with the building coverage can have consequential effects on the ability of a development to comply with AUP requirements for landscaping or impervious surfaces. Observations from site visits showed the inadequacy of space for quality landscaping.

The size and dimensions of sites (such as width) can have an effect on the form and type of housing developed on sites. This may have an effect on the orientation and length of buildings. The findings showed that rows of terraces and apartment buildings can create large-scale wall-like buildings that penetrate deep into sites. Building length is not regulated by the AUP. Excessive building length can affect the quality of development within a site, adjoining sites and influence neighbourhood character. The analysis showed that 25 per cent of developments in the residential sample have continuous building lengths greater than 40m. Limiting building length in multi-dwelling developments can improve built form quality within the site allowing more daylight and sunlight to dwellings. It can also alleviate negative effects on privacy, dominance and shading within the site and on adjoining sites. The form and scale of new development can have a negative effect on how the adjoining site can be intensified in future.

The Government's recent legislation – National Policy Statement – Urban Development and the Resource Management (Enabling Housing and Other Matters) Act. This legislation mandates Council to increase residential intensification. The Government requires council to update the AUP with more intensive residential standards. This limits the opportunity to modify the AUP residential standards in response to some findings from the monitoring.

- Scale of earthworks producing poor outcomes – outlook, outdoor living, landscaping

The consequences of earthworks can achieve positive and negative outcomes in the residential zones sample. The AUP land disturbance standard is enabling site development efficiencies. However, in some cases, the extent of earthworks results in hight retaining walls which can affect the quality of outlook spaces and outdoor living areas.

Observations from site visits to developments in the residential zones showed some sites also had high fences atop retaining walls – particularly on side or rear boundaries. Excavation on some sites, had resulted in developments sunk well below the natural ground level to enable an additional storey on the house, but remain within the zone height limit (measured using the rolling height, not the finished ground level). This can produce 'below ground' living environments with limited daylight, sunlight, sense of space and privacy.

- Insufficient standards to address climate change – need for quality landscaping

The purpose of landscape area AUP standard in the residential zones is to provide for quality living environments consistent with the planned urban built character of buildings surrounded by open space. Landscaping is a valuable residential zone standard that can help address the Climate

Emergency declared by Auckland Council in 2019. However, the findings showed nearly 35 per cent of all developments across all residential zones in the analysis infringed the landscaping standard.

The extent of non-compliance with the landscape area standard reflects a similar level of infringement for the maximum impervious surface standard. Non-compliance of between 1-5 per cent reduction in the landscaped area for developments in each of the zones is likely to undermine purpose of the standard and limit effectiveness in the climate change response. The amount of landscape area and the quality of landscaping is fundamental for achieving climate change objectives in suburban and urban areas.

The cumulative effects of this extent of non-compliance is not likely to achieve the purpose of the standard at a site or neighbourhood scale. Together with the bulk and location findings (refer to Indicator 1), this suggests a trend where maximisation of a site's development potential is reducing the AUP's intention of having distinct planned built character for the each of the residential zones.

The landscape purpose and standard needs updating to incorporate climate change and biodiversity objectives. This includes appropriate soil conditions to enable planting of trees and long-term maintenance plans – particularly in medium to large-scale developments.

- Inadequate residential waste management within the site and street environment

Waste management is a significant issue both in terms of on-site storage, residents' access and the method of waste collection. It is also significant in terms of service, value for money, and meeting waste reduction objectives in response to environmental sustainability and climate change commitments. Without standards, the AUP is not effective at managing residential waste.

There are space, hygiene, safety, amenity and operational aspects of waste management that affect the quality and functionality of residential developments. Consent plans and observations from site visits showed that there is insufficient consideration for waste management in many developments. There is also a disparity between commitments to waste management in resource consents and lack of implementation of access and facilities on site. This can be compounded with the increase in scale of developments. The management of waste affects both private and public health environments.

- Safety of pedestrians within sites

The interface between the street and dwellings provides both safety and amenity benefits. More intensive housing increases the number of residents, pedestrians and vehicles. Providing for the safety of pedestrians with issues such as increased vehicle activity and the desire for privacy in residential developments is a challenge.

The plan is not adequately managing on-site pedestrian safety effectively or efficiently. This is with respect to pedestrian access and circulation within the site. The findings showed the width and design of pedestrian accessways was variable. Nearly half of developments provided the minimum footpath width of 1m required by the plan. However, 45 per cent provided footpaths greater than 1m width which suggests that greater widths are not necessarily onerous for the developer. Footpath widths of at least 1.5m are necessary to enable two people to safely pass each other.

The quality and design of footpaths was also variable with most complying with the plan standard and incorporating a footpath zone within the same surface as the driveway. The form of footpath influenced pedestrian safety – particularly where they were located adjoining vehicle manoeuvring spaces. Observations from consent plans and site visits showed these footpaths did not provide the same level of pedestrian safety as a raised footpath with a kerb (like a typical public street footpath) or a landscaped buffer from the driveway.

In addition to this, a number of developments had front doors opening directly onto driveways or parking areas that could risk pedestrian safety. The findings showed 20 per cent of developments have one or more dwelling with front doors opening directly onto a driveway or parking area. This is a safety concern for residents and their visitors. Given the majority of developments avoided this, it suggests that it is not onerous for developers to achieve better safety and amenity benefits for residents.

Future S.35 monitoring

The monitoring did not interview or survey residents to understand their preferences and the lived experiences of their homes, developments and neighbourhoods. This would provide a more robust assessment of the social, economic, health, safety and well-being aspects of housing provision. It is recommended that this be included in future S.35 monitoring for this topic.

Next steps

This S.35 monitoring report has been prepared to satisfy the requirements of the Resource Management Act. The report will be submitted to the Ministry for the Environment in 2022.

The findings from the monitoring will inform future plan changes. Some recommendations are affected by recent Government legislative changes and may be either investigated and progressed as part of Auckland Council's response to the National Policy Statement on Urban Development or precluded by the legislation. Many recommendations will contribute to the full AUP review in future. There are also opportunities to influence planning practice as well as non-statutory methods such as planning and design guidance.

The monitoring report aims to provide some explanations and context for issues raised by the local boards and the public. It includes information from some legacy district plans and the Auckland Unitary Plan Independent Hearing Panel Reports. This provides the background context from which the AUP faces the challenge of accommodating residential growth with quality development to transition Auckland towards a more compact urban form with a quality built environment.

Appendix A: Indicators and measures

Relevant RPS Objective	Theme	Indicator	Measures
B2.3.1(1)(a) **B2.4.1(2)**	**Theme 1: The quality of site development, built form, appearance and setting**	1 – Extent that developments respond to the physical characteristics of sites	• Number of sites requiring Chapter E Natural resources consents for land disturbance • Amount of land disturbance – by volume removed • Extent of site modification – cut, fill, retaining walls
		2 – Extent that developments respond to the intrinsic qualities of the area and setting through the form and appearance of buildings	Built form • Site size and shape (influence of frontage width) • Height and extent of Non-compliance (by zone) • Number of storeys (by zone) • Building coverage and extent of Non-compliance (by zone) • Number of Height In Relation to Boundary (HIRB) Non-compliances Appearance and response to surroundings • Variation in roof form or ridgeline • Variation in façade/s – modulation with recessions and protrusions • Continuous building length • The percentage of dwellings within a development that had the primary living outlook facing towards adjoining sites • Whether windows and balconies were located and offset to avoid direct views into adjacent dwellings and private outdoor spaces • Whether dwellings respond positively to the street – including orientation, façade treatment and minimal garage or carpark dominance
B2.3.1(1)(b) & (d) **B2.4.1(1)(2)**	**Theme 2: Building Auckland's planned built form with**	3 – Building the planned built form with intensification reinforcing the hierarchy of centres and corridors	• Building typologies – by zone • Number of dwellings per consent (pre-subdivision)

	more intensive housing		• Whether development is consistent with the planned built character anticipated for its zone
		4 – Maximising land and building resources and infrastructure efficiency	• Number of dwellings per development • Gross site size post- subdivision • Number of dwellings removed prior to development
B2.3.1(3)	**Theme 3: Supporting the health, safety and wellbeing of residents**	5 – The extent that the health and wellbeing of residents is supported by living spaces with quality outlooks, privacy and sunlight.	Measures for residential zones: • Extent of compliance with the 6 x 4m principal living outlook space AUP standard. • Extent of primary living space outlook Non-compliance • Number of habitable rooms per dwelling complying with 1m outlook standard • Number of habitable rooms without direct access to daylight or natural ventilation • Location of the primary living outlook space – street, carpark/driveway/adjoining site • The proportion of dwellings in a development with principal living overlook spaces towards the street • Where the principal living space overlooks the street, what is the distance between primary glazing and the street boundary • The percentage of dwellings with privacy measures between the living outlook space and street • Percentage of dwellings with principal living outlook space overlooking a driveway or carpark area • Percentage of dwellings with principal living outlook space overlapping with any outlook from other dwellings within the site • Proportion of dwellings in a development with a north, east or west oriented principal living outlook space • Proportion of dwellings in a development with a south oriented principal living outlook space Measures for the Business – Mixed Use zone: • Extent of compliance with the principal living outlook space AUP standard.

			• Extent of primary living space outlook Non-compliance
		6 – The extent that the health, safety and wellbeing of residents is supported by quality outdoor living spaces	• Form of primary outdoor living space – ground level space, balcony etc • The adequacy of balcony size where they are the primary outdoor spaces – relative to the number of bedrooms. • Amount of infringement (m^2) to the size of the primary outdoor living space • Access to outdoor living space • Outdoor living space orientated for sunlight • Whether outdoor living spaces were overshadowed by buildings or structures such as fences at noon in mid-winter. • Structures in the primary outdoor living space
B2.3.1(1)(c) & (e) **B2.4.1(4)**	**Theme 4: Providing choice through a diversity of housing**	7 – Diverse mix of housing choice for people and a range of built form to suit changing needs	• Building typologies – predominant typologies for development site • Dwelling sizes – (predominant size for development) • Dwelling bedroom numbers (predominant size for development) • Percentage of dwellings in a development that have no steps or one step between dwelling front door/garage thresholds and street Whether there is a habitable room (that fits a bed) and toilet with hand basin at ground level or accessible level for the majority of dwellings in a development
B2.3.1(1)(f) & B2.3.1(2)	**Theme 5: Responding to climate change and environmental sustainability**	8 – Managing stormwater to mitigate adverse environmental effects	Measures for the residential zones • Total impervious area for developments • Extent of maximum impervious area standard Non-compliance Measures for the residential zones and Business – Mixed Use zone • Whether there are rainwater tanks shown on site plans
		9 – Quality of landscaping to address the effects increased density and climate change	• Infringements to landscaped area standard • Provision of landscape plans • Presence of at least one tree (2m+ height) proposed in the landscape plan
		10 – Location and appearance of on-	• Is there a designated location for rubbish bins?

		site rubbish management	• Is the rubbish bin screened
B2.3.1(3)	**Theme 6: Supporting safe access and travel choice**	11 – Pedestrian safety within residential developments	Measures for residential zones • Separate footpath between the street and the dwellings (including alongside driveway) • Footpath width • Whether footpaths are located in the reversing space of cars • Dwelling front door opens directly onto private way or parking Measures for residential zones and Business – Mixed Use zone • Type of vehicle parking
		12 – Pedestrian safety in the movement network	Measures for the residential zones: • Number of vehicle driveways into site • Number of dwellings served by vehicle private ways or driveways • Front doors or entry porches visible or access (e.g. paths) visible from the street • Dwellings with passive surveillance from a habitable room window at any level overlooking the street Measures for the Business – Mixed Use zone: • Ground floor activities • Amount of ground floor glazing estimated to evaluate the quality of the street frontage

Appendix B: Issues raised by councillors, local boards and the public

The following issues are drawn from a range of sources and summarised.

Need for an equitable planning system

- Planning is a legally ordered spatial arrangement that aims to treat every property owner fairly.
- Loopholes and opportunities for short cuts need to be eliminated where this creates disadvantage for neighbours and other developers.

Level of intensification

- Auckland has moved from 9-10 dwellings per hectare to 70-100 per hectare to meet demands of smaller households, less maintenance and capital costs. Three storey walk-up apartments are meeting this need. Concerns about quality e.g. ventilation and outlook.
- Developments with standalone houses are taking advantage of the land use led subdivision consenting process. This produces disproportionately large dwellings on very small sites. Small yards are contributing to the loss of garden space due to intensity of development and undermining the inherent qualities of the single house typology. This typology achieves only 25 houses per hectare so does not make intensive used of land or provide the level of intensity anticipated.
- Spatial planning is creating overly close housing with reduced privacy and meaningless separation and space.
- Standalone housing will not achieve the density needed to meet Auckland's growth objectives.
- Call a halt to over-compressed developments and achieve future housing informed by examples of high-quality high-density housing.
- Apply a density ceiling that relates to house-types for site areas to reset the parameters for intensification on small sites and enable sustainable development.
- Proximity and scale of intensive development (e.g. 5 storey apartment building) adjoining to a property with an existing single house causing significant effects
- Medium to large scale development in residential zones is occurring on sites adjoining to existing properties that were designed using lower density legacy planning provisions. These provisions did not anticipate the level of density or consider the effects of this scale of development.

Cumulative effects of higher density developments

- Concern regarding the cumulative impacts of higher density developments on adjoining sites, neighbourhoods and communities.
- A major issue is the effect of the precedents this level of intensification sets for future development when neighbouring properties claim the same rights.

Subdivision and effects of smaller site size

- The AUP allows a landuse consent and subdivision consent to be processed concurrently which enables smaller site sizes than the AUP vacant lot subdivision. The order in which these are processed produces different outcomes.
- The concurrent processing of landuse with subdivision consents enables and accepts that post-subdivision, the newly created site and dwelling will not comply with the key development standards. These are listed as building coverage, HIRB, maximum impervious area, minimum landscape area, provision of outdoor living space. In some cases non-compliance is significant.
- The site sizes are too small to achieve the outcomes sought in the zone descriptions.

Large number of dwellings per site

- The quality outcomes sought for permitted development (3 or more dwellings) specified in the zone description cannot necessarily be achieved with greater numbers of dwellings on a site. "*Up to three dwellings are permitted as of right subject to compliance with the standards. This is to ensure a quality outcome for adjoining sites and the neighbourhood, as well as residents within the development site.* There is concern that Resource consents for four or more dwellings are not achieving the quality outcomes sought in the zone description.
- The intensity of development (number of dwellings per site) can be inconsistent with what is anticipated for the zone.
- Review standards that enable multiple large standalone houses to be constructed on small sites or parent sites that when subdivided, have insufficient space for a proportional amount of outdoor living area and adequate building separation for the building size.

Building height – inconsistent with zone description

- Inconsistency between the number of storeys able to be built within the height limit and zone descriptions

Increase in building bulk

- Lack of compliance with the building coverage standard – for the parent site and post subdivision.
- Non-compliance with maximum building coverage results in developments that are too intense of the receiving environment. Further non-compliance with the HIRB results in developments of considerable scale, bulk and dominance.
- Lack of compliance results in gross overdevelopment and imposes significant effects on neighbouring properties and the broader receiving environment.

Need for quality building form and design – recognising different housing typologies

- Loss of privacy – within site and adjoining sites
- The form and design of housing fronting streets – especially for three storey dwellings is producing poor quality outcomes e.g. two 3-storey townhouses in Ruawai Rd in Mt Wellington which was the subject of a Herald article

- Need for adequate number and proportioned windows to create genuine connection to courtyards and the outside.
- Need to design fencing to achieve acoustic, visual and olfactory privacy in outdoor living areas to avoid occupational and community stress.
- Make outdoor living areas at least a size that is equivalent to an outside living room with an aspect ratio to suit social gatherings.
- Balconies should be larger sized and not cluttered with air conditioning units with exposed conduits.
- Interior planning controls that create visual distance in the long axis between front and back courtyards to compensate for the potential narrowness of some of housing so that there is a sense of size at least in one direction.
- Encourage housing typologies such as three-storey walk up apartments that are well designed and contribute to intensification objectives.
- Discourage standalone dwellings on sites too small to provide sufficient space for quality outlooks, privacy and outdoor living space.
- Multi-storey apartment buildings presenting large blank concrete walls to adjoining sites – amenity effects.

Loss of privacy on adjoining sites

- The effect of the multi-dwelling residential development on the privacy, sunlight access, dominance effects and loss of amenity on adjoining sites can be significant.
- Loss of privacy due to increasing density and dwelling sizes – outlooks from windows as well as proximity to neighbours.
- Privacy has been a defining characteristics of New Zealand housing.
- Privacy was traditionally achieved by sufficient space around standalone houses but this is now being compromised with small site sizes.

Loss of solar access on adjoining sites due to overshadowing

- Large scale developments can cause significant shading effects on adjoining sites – this can affect the health, safety, well-being and functionality of these sites for occupants of existing development. This includes the inability to dry washing outside, loss of solar heating of internal rooms

Excessive earthworks

- Excavation below ground is a method being used by developers to achieve height limits on sites that would not otherwise be achieved using the original ground level or within the HIRB standards.

Inadequate landscape area, tree cover and vegetation

- Auckland needs a natural environment with a quantum of trees, gardens and grass to sustain ecosystems and provide shade. It needs a landscape to cool the heat island and soft ground to absorb rainfall. Most of the provision comes from private property.
- Gardens are becoming too small to be useable.
- Sites are too small to enable quality outdoor living spaces – reducing quality of life for residents.
- More landscape space is required around dwellings – side, front and back yards.

Council consenting processes

- More notification required where the effects of both the construction and finished development will affect neighbours.
- Compliance with standards essential to ensure a quality outcome for adjoining sites and the neighbourhood as well as residents within the development site.
- Clear guidance to developers and applicants on the quality outcomes sought for each residential zone.
- Provide residents with comfort and protection that development will proceed in a controlled and managed way, within a framework of well-known and well-understood planning rules.

Appendix C: Quality Built Environment monitoring – site visit appraisal form

Street Frontage Assessments

Address:

Date of visit:

Building typology (describe):

Zone:

Date of Code of Compliance Certificate:

This assessment sheet includes both subjective and objective comments made during the site visit. Each development is discussed using the following parameters by a group of planners and urban designers at each site. The purpose of the site visits is to ascertain whether the anticipated outcomes from the Auckland Unitary Plan are being achieved in the actual built form.

Consider the following:

Zone character (as perceived from the street)

Does the height and bulk of buildings seem appropriate for the site and anticipated outcome for the zone when viewed from the street (consider site width, building dominance, spaces between buildings, front yard setback, proximity to adjoining buildings/sites)?

- Is the development at an appropriate intensity for the site size and conditions, location and zone OR Is it overdeveloped/underdeveloped (consider typology and number of dwellings if perceptible)?
- In light of the above, is the development consistent with the AUP zone description (spaciousness/height/density)? Consider from the following perspectives:
  - Integration with existing neighbourhood?
  - Demonstrates anticipated future form?

Site and building design

Site layout/design		Other comments
Is site contour a factor in the development?	YES / NO	
If the site has a street frontage, are there dwellings orientated towards the street?	YES / NO	
Does the design of the driveway contribute positively to the development (consider the number of driveways, location, width and material. Whether it dominates street frontage in relation to the scale of the development)	YES / NO	
Consider private ways (if applicable):	Is there…	

	1. Separate pedestrian path Y/N 2. Landscaping Y/N 3. Lighting Y/N 4. Safety features Y/N 5. Passive surveillance Y/N Is it lane-style/driveway style (choose one) Any other comments:	
Does the provision for parking/access for cars dictate the layout of the site?	YES / NO	
Is parking visible from the street?	YES / NO	
Are rubbish bins or other domestic infrastructure located in the front yards?	YES / NO	
Is outdoor living is located on the street frontage?	YES / NO	
If outdoor living is located on the street frontage, does it provide enough privacy?	YES / NO Specify how if necessary:	
In light of the above, does the development respond well to the site shape or other site constraints (including effects from internal layout)? YES / NO Provide other comments if applicable)		
Building design		
Does the size and arrangement of doors, windows and other architectural features facing the street present a positive frontage?	YES / NO	
Is the façade modulated?	YES / NO	
Are there any other architectural features?	Specify:	
What are the building materials?	Specify:	
Is there diversity in design or/and layout within the development?	YES / NO	
Are there adverse effects of Primary Outlook from living areas overlooking driveways?	YES / NO Specify if necessary:	
Is there a front door/gate and path visible from the street?	YES / NO	

If there are garage doors – do they dominate the façade?	YES / NO	
Is it evident whether the development has dominance/shading or privacy effects on adjoining sites (consider now and when those sites are developed in future)?	YES / NO	
In light of the above, is the building design appropriate for the site (including effects from internal layout)? YES / NO Provide other comments if applicable)		
Landscaping		
Are there any large trees on the site?	YES / NO	
Is the landscaping well maintained?	YES / NO	
Is the amount of landscaping mainly just grass?	YES / NO	

4. Additional comments on the development if visible beyond the street frontage? *(this includes location and visibility of waste bins)*

Community safety

5. Does the development provide passive surveillance (presence of occupants, ears or eyes on the street day and night)?
6. Are curtains/blinds, fences, hedges or other structures obscuring the connection with the street? Yes/No

Overall assessment – based on the assessment of the development as viewed from the street, do we (collectively) consider the overall quality of the development as:

very good/ good / average/ producing unanticipated outcomes

Any other comments:

Appendix D: AUP references

Relevant AUP references

RPS B2. Tāhuhu whakaruruhau ā-taone - Urban growth and form

B2.2. Urban growth and form B2.2.1.

Objectives

(1) A quality compact urban form that enables all of the following:

(a) a higher-quality urban environment;

(b) greater productivity and economic growth;

(c) better use of existing infrastructure and efficient provision of new infrastructure;

(d) improved and more effective public transport;

(e) greater social and cultural vitality;

(f) better maintenance of rural character and rural productivity; and (g) reduced adverse environmental effects

2) Urban growth is primarily accommodated within the urban area 2016 (as identified in Appendix 1A).

(3) Sufficient development capacity and land supply is provided to accommodate residential, commercial, industrial growth and social facilities to support growth.

4) Urbanisation is contained within the Rural Urban Boundary, towns, and rural and coastal towns and villages.

(5) The development of land within the Rural Urban Boundary, towns, and rural and coastal towns and villages is integrated with the provision of appropriate infrastructure.

B2.3 A quality built environment

Objectives:

(1) A quality built environment where subdivision, use and development do all of the following:

(a) respond to the intrinsic qualities and physical characteristics of the site and area, including its setting;

(b) reinforce the hierarchy of centres and corridors;

(c) contribute to a diverse mix of choice and opportunity for people and communities;

(d) maximise resource and infrastructure efficiency;

(e) are capable of adapting to changing needs; and

(f) respond and adapt to the effects of climate change.

(2) Innovative design to address environmental effects is encouraged.

(3) The health and safety of people and communities are promoted.

Policies

(1) Manage the form and design of subdivision, use and development so that it does all of the following:

(a) supports the planned future environment, including its shape, landform, outlook, location and relationship to its surroundings, including landscape and heritage;

(b) contributes to the safety of the site, street and neighbourhood;

(c) develops street networks and block patterns that provide good access and enable a range of travel options;

(d) achieves a high level of amenity and safety for pedestrians and cyclists;

(e) meets the functional, and operational needs of the intended use; and

(f) allows for change and enables innovative design and adaptive re-use.

(2) Encourage subdivision, use and development to be designed to promote the health, safety and well-being of people and communities by all of the following:

(a) providing access for people of all ages and abilities

(b) enabling walking, cycling and public transport and minimising vehicle movements; and

(c) minimising the adverse effects of discharges of contaminants from land use activities (including transport effects) and subdivision.

(3) Enable a range of built forms to support choice and meet the needs of Auckland's diverse population.

(4) Balance the main functions of streets as places for people and as routes for the movement of vehicles.

(5) Mitigate the adverse environmental effects of subdivision, use and development through appropriate design including energy and water efficiency and waste minimisation

B2.4. Residential growth

B2.4.1. Objectives

(1) Residential intensification supports a quality compact urban form.

(2) Residential areas are attractive, healthy and safe with quality development that is in keeping with the planned built character of the area.

(3) Land within and adjacent to centres and corridors or in close proximity to public transport and social facilities (including open space) or employment opportunities is the primary focus for residential intensification.

(4) An increase in housing capacity and the range of housing choice which meets the varied needs and lifestyles of Auckland's diverse and growing population.

(5) Non-residential activities are provided in residential areas to support the needs of people and communities.

(6) Sufficient, feasible development capacity for housing is provided, in accordance with Objectives 1 to 4 above, to meet the targets in Table B2.4.1 below:

Table B2.4.1: Minimum Dwelling Targets

Table B2.4.1: Minimum Dwelling Targets

Term	Short to Medium 1 - 10 years (2016 – 2026)	Long 11 - 30 years (2027 – 2046)	Total 1 – 30 years (2016 – 2046)
Minimum Target (number of dwellings)	189,800	218,500	408,300

Source: Development Strategy, Assessing Demand, Auckland Plan 2050.

B3.3 Transport

B3.3.1. Objectives

(1) Effective, efficient and safe transport that:

(a) supports the movement of people, goods and services;
(b) integrates with and supports a quality compact urban form;
(c) enables growth;
(d) avoids, remedies or mitigates adverse effects on the quality of the environment and amenity values and the health and safety of people and communities; and
(e) facilitates transport choices, recognises different trip characteristics and enables accessibility and mobility for all sectors of the community.

Relevant AUP Zone descriptions and core standards

Zone descriptions

Residential – Mixed Housing Suburban Zone

The Residential – Mixed Housing Suburban Zone is the most widespread residential zone covering many established suburbs and some greenfield areas. Much of the existing development in the zone is characterised by one or two storey, mainly standalone buildings, set back from site boundaries with landscaped gardens.

The zone enables intensification, while retaining a suburban built character.

Development within the zone will generally be two storey detached and attached housing in a variety of types and sizes to provide housing choice. The height of permitted buildings is the main difference between this zone and the Residential – Mixed Housing Urban Zone which generally provides for three storey predominately attached dwellings.

Up to three dwellings are permitted as of right subject to compliance with the standards. This is to ensure a quality outcome for adjoining sites and the neighbourhood, as well as residents within the development site.

Resource consent is required for four or more dwellings and for other specified buildings in order to:

- achieve the planned suburban built character of the zone;
- achieve attractive and safe streets and public open spaces;
- manage the effects of development on neighbouring sites, including visual amenity, privacy and access to daylight and sunlight; and
- achieve high quality on-site living environments.

The resource consent requirements enable the design and layout of the development to be assessed; recognising that the need to achieve a quality design is increasingly important as the scale of development increases.

Residential – Mixed Housing Urban Zone

The Residential – Mixed Housing Urban Zone is a reasonably high-intensity zone enabling a greater intensity of development than previously provided for.

Over time, the appearance of neighbourhoods within this zone will change, with development typically up to three storeys in a variety of sizes and forms, including detached dwellings, terrace housing and low-rise apartments. This supports increasing the capacity and choice of housing within neighbourhoods as well as promoting walkable neighbourhoods, fostering a sense of community and increasing the vitality of centres.

Up to three dwellings are permitted as of right subject to compliance with the standards. This is to ensure a quality outcome for adjoining site and the neighbourhood, as well as residents within the development site.

Resource consent is required for four or more dwellings and for other specified buildings in order to:

- achieve the planned urban built character of the zone;
- achieve attractive and safe streets and public open spaces;
- manage the effects of development on adjoining neighbouring sites, including visual amenity, privacy and access to daylight and sunlight; and
- achieve high quality on-site living environments.

The resource consent requirements enable the design and layout of the development to be assessed; recognising that the need to achieve quality design is important as the scale of development increases.

Residential – Terrace Housing and Apartments Zone

The Residential – Terrace Housing and Apartment Buildings Zone is a high-intensity zone enabling a greater intensity of development than previously provided for. This zone provides for urban residential living in the form of terrace housing and apartments. The zone is predominantly located around metropolitan, town and local centres and the public transport network to support the highest levels of intensification.

The purpose of the zone is to make efficient use of land and infrastructure, increase the capacity of housing and ensure that residents have convenient access to services, employment, education facilities, retail and entertainment opportunities, public open space and public transport. This will promote walkable neighbourhoods and increase the vitality of centres.

The zone provides for the greatest density, height and scale of development of all the residential zones. Buildings are enabled up to five, six or seven storeys in identified Height Variation Control areas, depending on the scale of the adjoining centre, to achieve a transition in height from the centre to lower scale residential zones. This form of development will, over time, result in a change from a suburban to urban built character with a high degree of visual change.

Standards are applied to all buildings and resource consent is required for all dwellings and for other specified buildings and activities in order to:

- achieve the planned urban built character of the zone;
- achieve attractive and safe streets and public open spaces;
- manage the effects of development on adjoining sites, including visual amenity, privacy and access to daylight and sunlight; and
- achieve high quality on-site living environments.

The resource consent requirements enable the design and layout of the development to be assessed; recognising that the need to achieve a quality design is increasingly important as the scale of development increases.

This zone also provides for a range of non-residential activities so that residents have convenient access to these activities and services while maintaining the urban residential character of these areas

Business – Mixed Use Zone

The Business – Mixed Use Zone is typically located around centres and along corridors served by public transport. It acts as a transition area, in terms of scale and activity, between residential areas and the Business – City Centre Zone, Business – Metropolitan Centre Zone and Business – Town Centre Zone. It also applies to areas where there is a need for a compatible mix of residential and employment activities.

The zone provides for residential activity as well as predominantly smaller scale commercial activity that does not cumulatively affect the function, role and amenity of centres. The zone does not specifically require a mix of uses on individual sites or within areas.

There is a range of possible building heights depending on the context. Provisions typically enable heights up to four storeys. Greater height may be enabled in areas close to the city centre, metropolitan centres and larger town centres.

Some street frontages within the zone are subject to a General Commercial Frontage Control.

New development within the zone requires resource consent in order to ensure that it is designed to a high standard which enhances the quality of streets within the area and public open spaces.

Business - Mixed Use zone

H13.1. Zone description The Business – Mixed Use Zone is typically located around centres and along corridors served by public transport. It acts as a transition area, in terms of scale and activity, between residential areas and the Business – City Centre Zone, Business – Metropolitan Centre Zone and Business – Town Centre Zone. It also applies to areas where there is a need for a compatible mix of residential and employment activities. The zone provides for residential activity as well as predominantly smaller scale commercial activity that does not cumulatively affect the function, role and amenity of centres. The zone does not specifically require a mix of uses on individual sites or within areas. There is a range of possible building heights depending on the context. Provisions typically enable heights up to four storeys. Greater height may be enabled in areas close to the city centre, metropolitan centres and larger town centres. Some street frontages within the zone are subject to a General Commercial Frontage Control. New development within the zone requires resource consent in order to ensure that it is designed to a high standard which enhances the quality of streets within the area and public open spaces.

Core standards for residential zones

These are resource consent standards that developments are expected to comply with.

MHS

Residential development – 4 dwellings or more

Standard H4.6.4 Building height; Standard H4.6.5 Height in relation to boundary; Standard H4.6.6 Alternative height in relation to boundary; Standard H4.6.7 Yards

MHU

Residential development – 4 dwellings or more

Standard H5.6.4 Building height; Standard H5.6.5 Height in relation to boundary; Standard H5.6.6 Alternative height in relation to boundary; Standard H5.6.7 Height in relation to boundary adjoining lower intensity zones; Standard H5.6.8 Yards

THAB

Dwellings

Standard H6.6.5 Building height; Standard H6.6.6 Height in relation to boundary; Standard H6.6.7 Alternative height in relation to boundary; Standard H6.6.8 Height in relation to boundary adjoining lower density zones; Standard H6.6.9 Yards

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ATTACHMENT 2 - AUCKLAND COUNCIL. WIDTH OF AN AVERAGE OF 'TYPICAL' RESIDENTIAL SITE WITHIN WALKABLE CATCHMENT IN AUCKLAND. UDU RESEARCH, OCTOBER 2021.

Width, length, and area of an average or 'typical' residential site within walkable catchments in Auckland

UDU research
June 2022

Researcher: [redacted]
Reviewed by: [redacted]
Peer reviewed by: [redacted]

1. Research objective

The objective of this research was to identify the width, length and area of a typical residential site within the walkable catchments of Rapid Transit Network (RTN) stations in Auckland, to inform Council's relevant work streams to amend the Auckland Unitary Plan Operative in Part (AUP OP) and fulfil the requirements of Policy 3 of the National Policy Statement on Urban Development (NPSUD).

Policy 3 of the NPSUD requires that:

"*In relation to tier 1 urban environments, regional policy statements and district plans enable:*

(a) in city centre zones, building heights and density of urban form to realise as much development capacity as possible, to maximise benefits of intensification; and

(b) in metropolitan centre zones, building heights and density of urban form to reflect demand for housing and business use in those locations, and in all cases building heights of at least 6 storeys; and

(c) building heights of least 6 storeys within at least a walkable catchment of the following:

- *(i) existing and planned rapid transit stops*
- *(ii) the edge of city centre zones*
- *(iii) the edge of metropolitan centre zones; and*

(d) in all other locations in the tier 1 urban environment, building heights and density of urban form commensurate with the greater of:

- *(i) the level of accessibility by existing or planned active or public transport to a range of commercial activities and community services; or*
- *(ii) relative demand for housing and business use in that location."*

Council sought legal advice to clarify what 'enable' means in the context of the NPSUD. Council was advised by DLA Piper, dated 11 August 2021, that "…*our view is that the Council can give effect to Policy 3 if, in a location, building heights of at least 6 storeys are enabled as a permitted activity or controlled activity on a typical site in the location."*

2. Research methodology

This research used the RTN walkable catchment boundaries that were set by the Geospatial Team of Plans and Places. We looked at all 45 walkable catchments, including the eight Metropolitan Centres.

GIS data of all sites within the walkable catchments was obtained from the Geospatial Team of Plans and Places. To determine what a 'typical' site was, the research applied the mode average methodology separately for the three attributes - site width, area and length - that is the value that appears most frequently in a dataset. Site width was recorded as the dimension of the site's frontage to the street. Site length was calculated by dividing the site area by the site width. This calculation provided an approximate site length (please note limitations discussed under Section 3 below).

This data was first filtered by zone, site width and property ownership type. With the application of these filters the sites that were analysed were all sites that were zoned residential in the AUP OP (SH, MHS, MHU and THAB), sites that had a minimum of 7m width or more, sites that had a frontage to the street and sites that were freehold. Some sites with an area less than 100m^2 were excluded from the analysis as these are not suitable for residential development (e.g., forms part of berm, road verge).

This methodology therefore excluded all sites that were not residential, parts of sites that formed a driveway to a rear property and sites that have multiple buildings on them owned by multiple owners. In the original dataset, some sites appeared more than once due to having two frontages to the street (i.e. corner sites). Duplicates were removed from the list.

3. Methodology Limitations

3.1 Site Length

The dimensions used for site length were calculated by dividing the site area by the site width. This method had its limitations as it assumes that each site is rectangular or regular in shape. This is not the case for all sites, where many are irregular in shape.

A high-level analysis found that approximately 60% of sites within the walkable catchments are or are close to being (within 10% margin of error) perfectly rectangular in shape. Therefore, the calculated dimensions are relatively accurate for at least 60% of the total sites included in the dataset.

It is acknowledged that there is a level of inaccuracy associated with the dataset and that the dimensions used for site length are only an estimate. The estimate of site length was considered to be appropriate for this high-level analysis.

3.2 Dataset

The initial dataset was extracted in September 2021. Therefore, the dataset was based on the walkable catchment boundaries at that time. A more recent analysis to take account of any updated walkable catchment boundaries has not been completed as part of this assessment.

3.2 Human Error

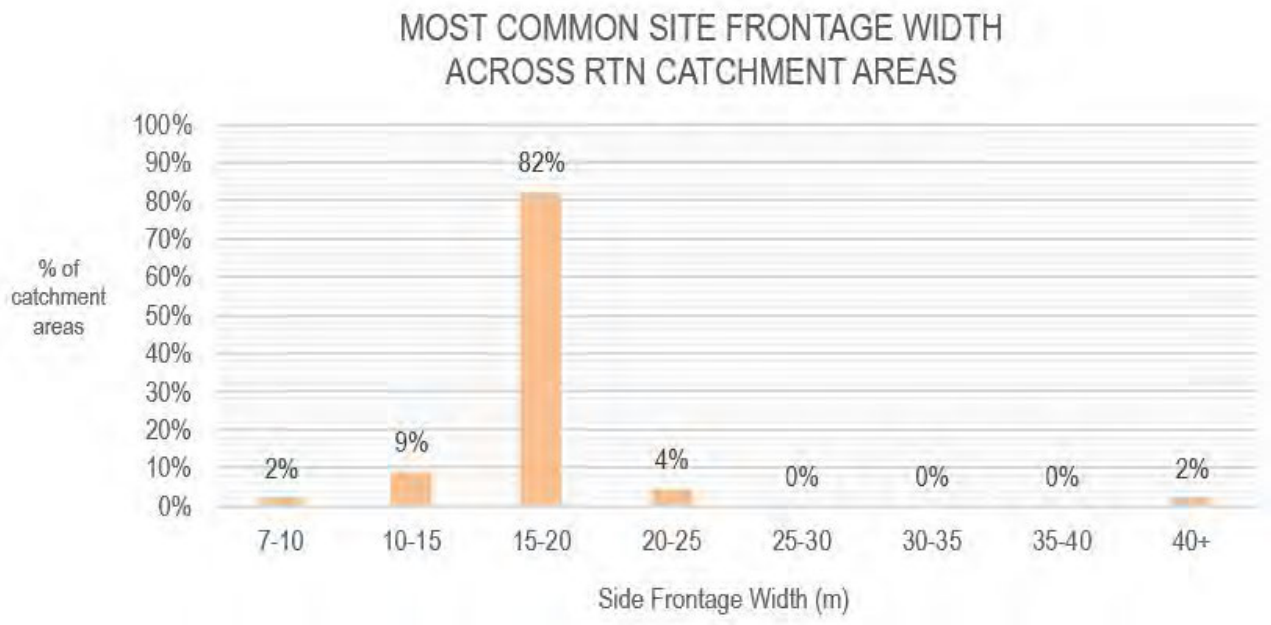
The analysis of all sites within the walkable catchment was subject to a degree of human error as the dataset was assessed using Microsoft Excel and was manually filtered, counted and assessed.

4. Findings

The research findings are organised into three categories: an overall mode average of site width, site area and site length throughout all walkable catchments. The findings broken down by individual RTN walkable catchments are attached in **Appendix 1**.

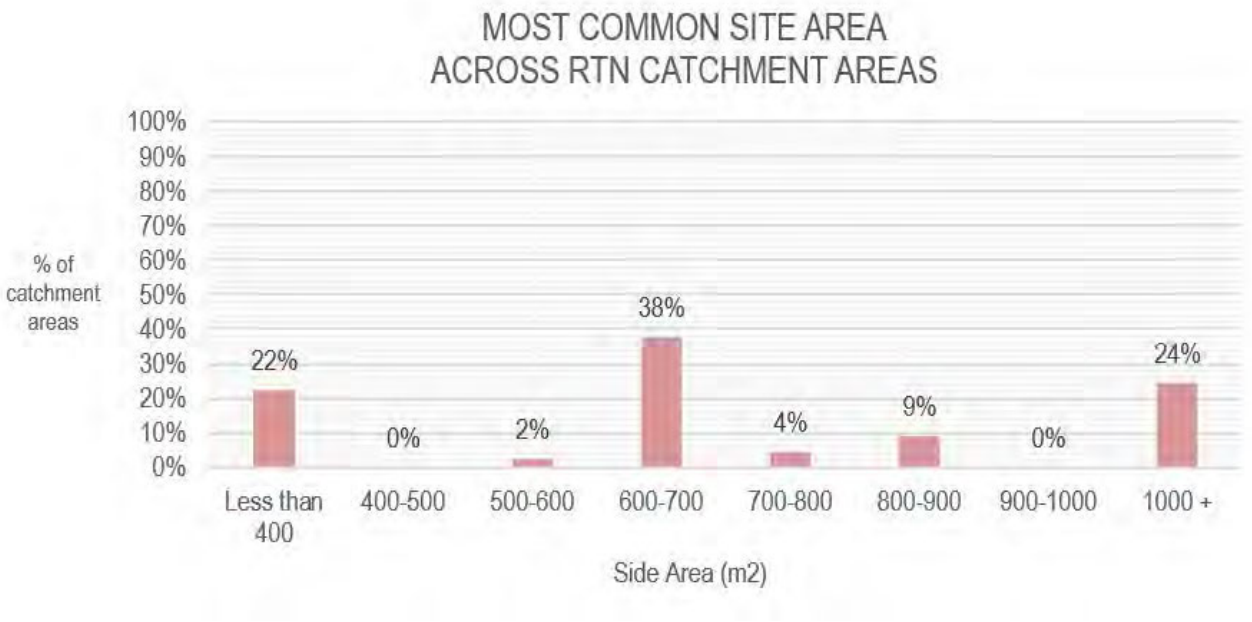
a. Typical site width - walkable catchment-wide result

.
The most common site width (82%) of the residential freehold sites throughout the walkable catchments is between 15m and 20m.



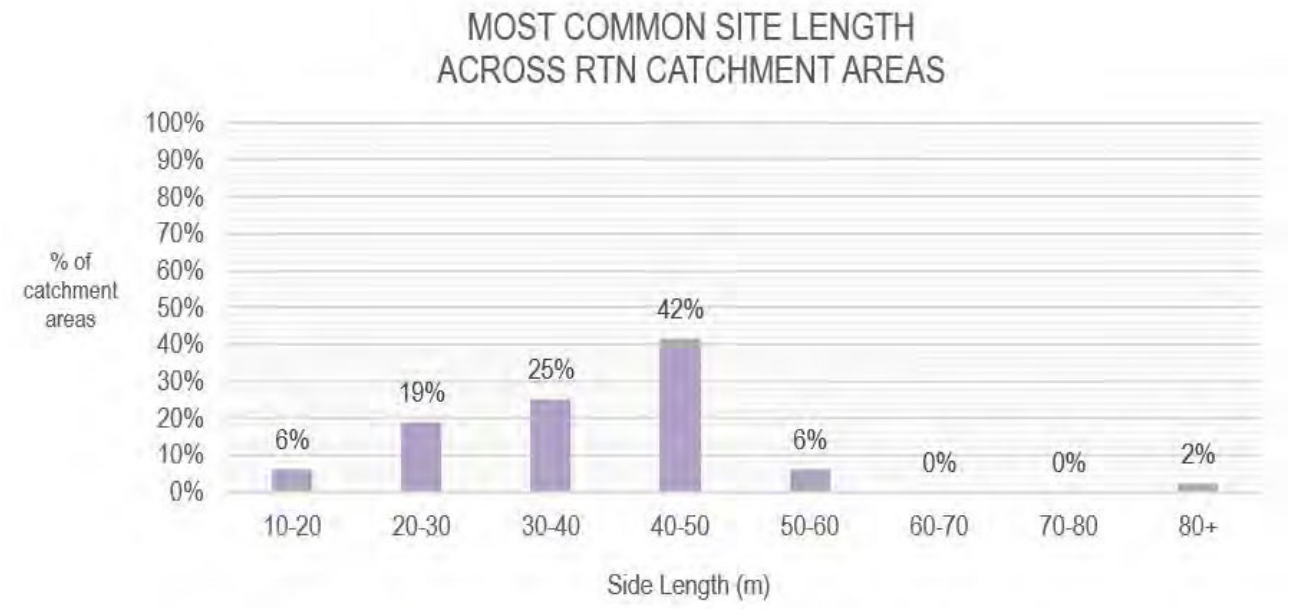
b. Typical site area - walkable catchment-wide result

The most common site area (38%) of the residential freehold sites throughout the walkable catchments is between 600m^2 and 700m^2.



c. Typical site length - walkable catchment-wide result

The most common site length (42%) of the residential freehold sites throughout the walkable catchments is between 40m and 50m.



5. Summary

The majority of the sites within walkable catchments that are subject to Policy 3 of the NPSUD and therefore are required to accommodate at least 6-storey high buildings:

- have between 15m and 20m site width at their road frontage
- are sites between 600m^2 and 700m^2 in area, and
- have between 40m and 50m site length.

It should be noted that these findings are not intended to determine the width, height and area of a single 'typical' site. These findings do not mean that a 'typical' or average residential site is in fact 15m-20m wide, 45m-50m long and 600-700m^2 in area. These average values for width, height and area need to be considered as separate findings, which can only be used to inform modelling to determine the suitable zone standards that enable the construction of 6+ storey high buildings on a 'typical' site in the walkable catchments in Auckland. Further, it should be noted that these results are based on calculations from given GIS data and not data that we have researched independently.

Disclaimer

The correctness of the research methodology and the validity of the findings of this research have been confirmed by the peer reviewer. It is important to note however, that the methodology and accuracy of this research were adequate for internal useto enable Council to develop, test and model proposed Plan standards. It is believed further research, rigor and detail is necessary, should this work be required to be used as hearing evidence.

Any additional work needs

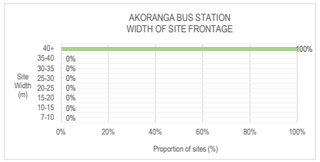
to be undertaken to a level of detail appropriate to the evidentiary requirements of a hearing.

Calcultation of typical site frontage width and site area:

A table and graph has been generated for each RTN catchment area to demonstrate the distribution of sites in terms of site frontage width and site area. Some parameters have been applied to the data set so only the following sites have been included within this analysis:
- Only those sites with a residential zoning
- Only sites with a frontage to the street and with a frontage width of greater than 7m
- Only sites with a freehold title. Other types of sites (e.g. cross-lease, unit title) were excluded
- Some sites with an area less than 100m^2 were excluded from the analysis as they were unable to be developed (e.g. forms part of berm, road verge).

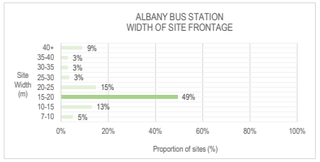
AKORANGA BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	0	0%
10-15	0	0%
15-20	0	0%
20-25	0	0%
25-30	0	0%
30-35	0	0%
35-40	0	0%
40+	1	100%
TOTAL	1	100%



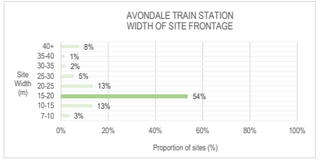
ALBANY BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	9	5%
10-15	23	13%
15-20	87	49%
20-25	26	15%
25-30	6	3%
30-35	5	3%
35-40	5	3%
40+	16	9%
TOTAL	177	100%



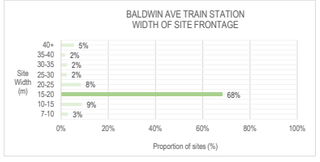
AVONDALE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	18	3%
10-15	71	13%
15-20	288	54%
20-25	72	13%
25-30	29	5%
30-35	10	2%
35-40	8	1%
40+	41	8%
TOTAL	537	100%



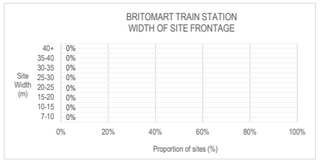
BALDWIN AVE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	29	3%
10-15	89	9%
15-20	690	68%
20-25	84	8%
25-30	24	2%
30-35	24	2%
35-40	17	2%
40+	54	5%
TOTAL	1011	100%



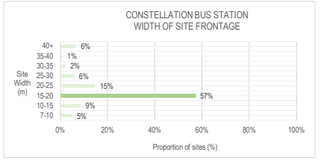
BRITOMART TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	0	0%
10-15	0	0%
15-20	0	0%
20-25	0	0%
25-30	0	0%
30-35	0	0%
35-40	0	0%
40+	0	0%
TOTAL	0	0%



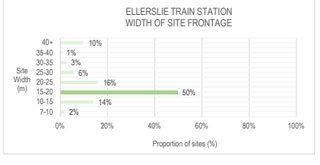
CONSTELLATION BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	14	5%
10-15	25	9%
15-20	167	57%
20-25	43	15%
25-30	17	6%
30-35	6	2%
35-40	2	1%
40+	19	6%
TOTAL	293	100%



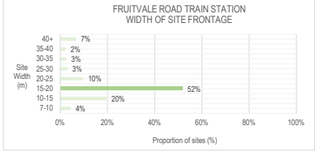
ELLERSLIE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	6	2%
10-15	50	14%
15-20	176	50%
20-25	57	16%
25-30	20	6%
30-35	9	3%
35-40	2	1%
40+	35	10%
TOTAL	355	100%



FRUITVALE ROAD TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	26	4%
10-15	116	20%
15-20	306	52%
20-25	57	10%
25-30	18	3%
30-35	15	3%
35-40	14	2%
40+	39	7%
TOTAL	591	100%



GLEN EDEN TRAIN STATION

Calcultation of typical site frontage width and site area:

A table and graph has been generated for each RTN catchment area to demonstrate the distribution of sites in terms of site frontage width and site area.
Some parameters have been applied to the data set so only the following sites have been included within this analysis
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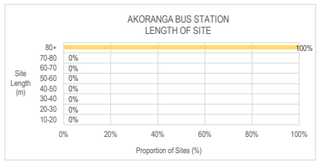
- Only sites with a freehold title. Other types of sites (e.g. cross-lease, unit title) were excluded.
- Some sites with an area less than 100m^2 were excluded from the analysis as they were unable to be developed (e.g. forms part of berm, road verge).

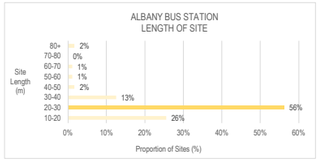
AKORANGA BUS STATION

LENGTH OF SITE (m)	NO. OF SITES	% OF TOTAL
10-20	0	0%
20-30	0	0%
30-40	0	0%
40-50	0	0%
50-60	0	0%
60-70	0	0%
70-80	0	0%
80+	1	100%
TOTAL	1	100%



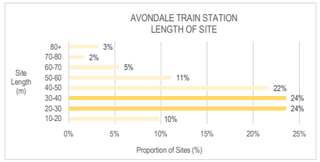
ALBANY BUS STATION

LENGTH OF SITE (m)	NO. OF SITES	% OF TOTAL
10-20	45	26%
20-30	99	56%
30-40	22	13%
40-50	3	2%
50-60	2	1%
60-70	2	1%
70-80	0	0%
80+	3	2%
TOTAL	176	100%



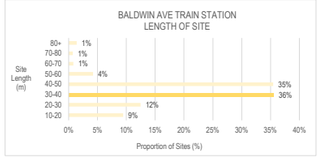
AVONDALE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	52	10%
20-30	125	24%
30-40	125	24%
40-50	115	22%
50-60	59	11%
60-70	29	5%
70-80	9	2%
80+	17	3%
TOTAL	531	100%



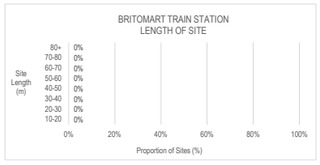
BALDWIN AVE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	94	9%
20-30	124	12%
30-40	354	36%
40-50	353	35%
50-60	42	4%
60-70	8	1%
70-80	7	1%
80+	14	1%
TOTAL	996	100%



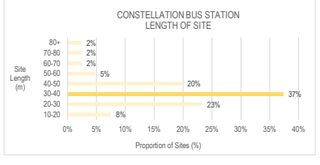
BRITOMART TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	0	0%
20-30	0	0%
30-40	0	0%
40-50	0	0%
50-60	0	0%
60-70	0	0%
70-80	0	0%
80+	0	0%
TOTAL	0	0%



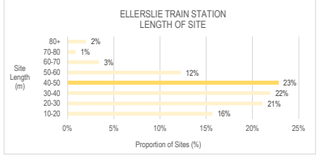
CONSTELLATION BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	22	8%
20-30	68	23%
30-40	109	37%
40-50	58	20%
50-60	14	5%
60-70	7	2%
70-80	7	2%
80+	7	2%
TOTAL	292	100%



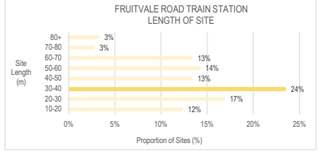
ELLERSLIE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	55	16%
20-30	74	21%
30-40	77	22%
40-50	80	23%
50-60	43	12%
60-70	12	3%
70-80	3	1%
80+	7	2%
TOTAL	351	100%



FRUITVALE ROAD TRAIN STATION

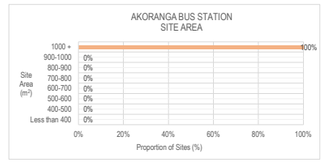
WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	71	12%
20-30	97	17%
30-40	135	24%
40-50	77	13%
50-60	82	14%
60-70	77	13%
70-80	16	3%
80+	19	3%
TOTAL	574	100%



GLEN EDEN TRAIN STATION

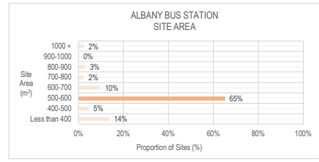
AKORANGA BUS STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	0	0%
400-500	0	0%
500-600	0	0%
600-700	0	0%
700-800	0	0%
800-900	0	0%
900-1000	0	0%
1000 +	1	100%
TOTAL	1	100%



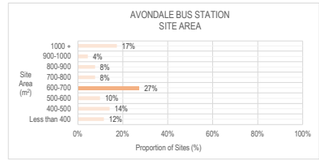
ALBANY BUS STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	24	14%
400-500	8	5%
500-600	115	65%
600-700	17	10%
700-800	4	2%
800-900	5	3%
900-1000	0	0%
1000 +	4	2%
TOTAL	177	100%



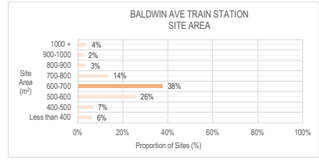
AVONDALE TRAIN STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	62	12%
400-500	76	14%
500-600	53	10%
600-700	146	27%
700-800	41	8%
800-900	41	8%
900-1000	24	4%
1000 +	93	17%
TOTAL	536	100%



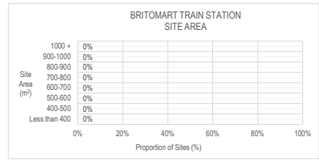
BALDWIN AVE TRAIN STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	63	6%
400-500	68	7%
500-600	257	26%
600-700	379	38%
700-800	136	14%
800-900	35	3%
900-1000	25	2%
1000 +	40	4%
TOTAL	1003	100%



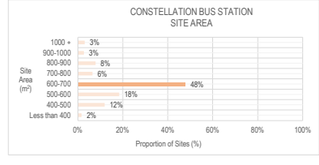
BRITOMART TRAIN STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	0	0%
400-500	0	0%
500-600	0	0%
600-700	0	0%
700-800	0	0%
800-900	0	0%
900-1000	0	0%
1000 +	0	0%
TOTAL	0	0%



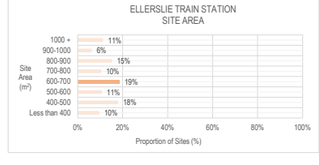
CONSTELLATION BUS STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	5	2%
400-500	35	12%
500-600	54	18%
600-700	140	48%
700-800	19	6%
800-900	23	8%
900-1000	8	3%
1000 +	9	3%
TOTAL	293	100%



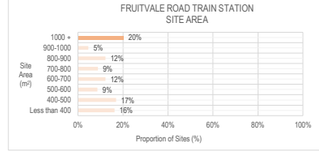
ELLERSLIE TRAIN STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	34	10%
400-500	64	18%
500-600	38	11%
600-700	66	19%
700-800	37	10%
800-900	54	15%
900-1000	22	6%
1000 +	40	11%
TOTAL	355	100%



FRUITVALE ROAD TRAIN STATION

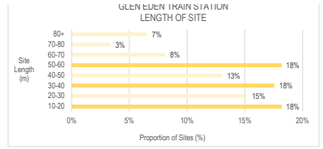
SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	96	16%
400-500	100	17%
500-600	51	9%
600-700	72	12%
700-800	52	9%
800-900	72	12%
900-1000	27	5%
1000 +	119	20%
TOTAL	589	100%



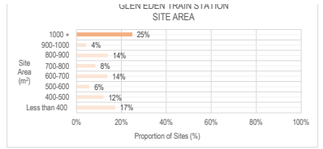
GLEN EDEN TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	71	13%
10-15	50	10%
15-20	252	48%
20-25	65	12%
25-30	28	5%
30-35	15	3%
35-40	10	2%
40+	35	7%
	526	**100%**

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	92	18%
20-30	77	15%
30-40	89	18%
40-50	66	13%
50-60	92	18%
60-70	41	8%
70-80	17	3%
80+	33	7%
TOTAL	**507**	**100%**

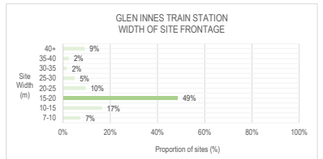


SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	90	17%
400-500	63	12%
500-600	30	6%
600-700	72	14%
700-800	44	8%
800-900	73	14%
900-1000	23	4%
1000 +	129	25%
TOTAL	**524**	**100%**



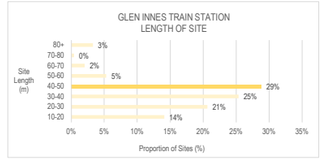
GLEN INNES TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	37	7%
10-15	83	17%
15-20	244	49%
20-25	48	10%
25-30	25	5%
30-35	8	2%
35-40	12	2%
40+	46	9%
TOTAL	**503**	**100%**



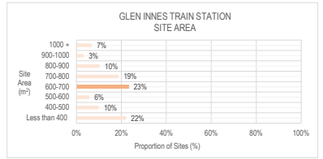
GLEN INNES TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	69	14%
20-30	101	21%
30-40	124	25%
40-50	141	29%
50-60	26	5%
60-70	10	2%
70-80	2	0%
80+	16	3%
TOTAL	**489**	**100%**



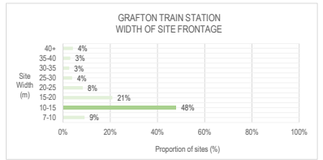
GLEN INNES TRAIN STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	111	22%
400-500	50	10%
500-600	29	6%
600-700	117	23%
700-800	94	19%
800-900	52	10%
900-1000	16	3%
1000 +	34	7%
TOTAL	**503**	**100%**



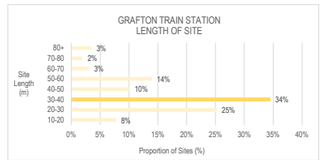
GRAFTON TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	24	9%
10-15	126	48%
15-20	55	21%
20-25	22	8%
25-30	10	4%
30-35	7	3%
35-40	8	3%
40+	11	4%
TOTAL	**263**	**100%**



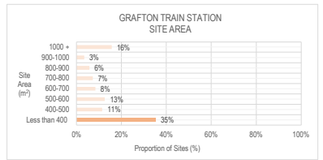
GRAFTON TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	20	8%
20-30	65	25%
30-40	89	34%
40-50	26	10%
50-60	36	14%
60-70	8	3%
70-80	5	2%
80+	9	3%
TOTAL	**258**	**100%**



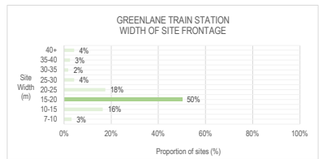
GRAFTON TRAIN STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	92	35%
400-500	30	11%
500-600	33	13%
600-700	22	8%
700-800	19	7%
800-900	15	6%
900-1000	9	3%
1000 +	41	16%
TOTAL	**261**	**100%**



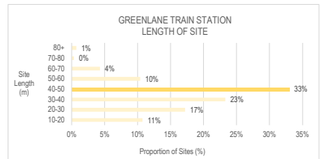
GREENLANE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	9	3%
10-15	46	16%
15-20	140	50%
20-25	49	18%
25-30	12	4%
30-35	5	2%
35-40	7	3%
40+	12	4%
	280	**100%**



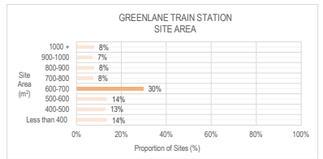
GREENLANE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	30	11%
20-30	48	17%
30-40	65	23%
40-50	92	33%
50-60	29	10%
60-70	12	4%
70-80	1	0%
80+	2	1%
TOTAL	**279**	**100%**



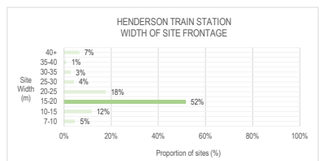
GREENLANE TRAIN STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	38	14%
400-500	36	13%
500-600	38	14%
600-700	83	30%
700-800	21	8%
800-900	22	8%
900-1000	20	7%
1000 +	22	8%
TOTAL	**280**	**100%**



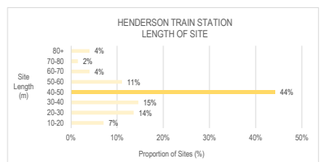
HENDERSON TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	10	5%
10-15	25	12%
15-20	111	52%
20-25	38	18%
25-30	9	4%
30-35	6	3%
35-40	2	1%
40+	14	7%
TOTAL	**215**	**100%**



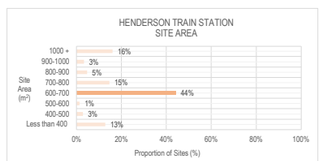
HENDERSON TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	14	7%
20-30	27	14%
30-40	29	15%
40-50	88	44%
50-60	22	11%
60-70	8	4%
70-80	3	2%
80+	8	4%
TOTAL	**199**	**100%**



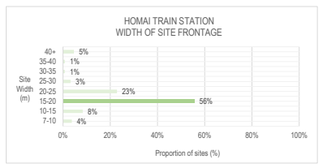
HENDERSON TRAIN STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	27	13%
400-500	6	3%
500-600	3	1%
600-700	93	44%
700-800	31	15%
800-900	10	5%
900-1000	7	3%
1000 +	34	16%
TOTAL	**211**	**100%**



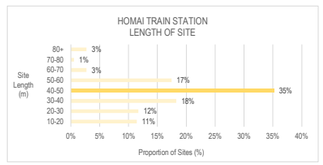
HOMAI TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	14	4%
10-15	31	8%
15-20	207	56%
20-25	85	23%
25-30	12	3%
30-35	3	1%
35-40	3	1%
40+	17	5%
	372	**100%**



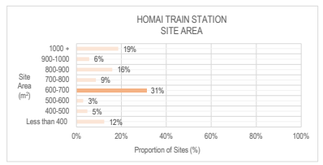
HOMAI TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	42	11%
20-30	43	12%
30-40	67	18%
40-50	129	35%
50-60	64	17%
60-70	10	3%
70-80	2	1%
80+	10	3%
TOTAL	**367**	**100%**



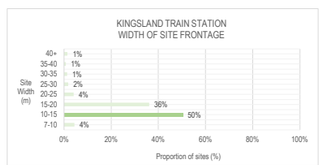
HOMAI TRAIN STATION

SITE AREA	NO. OF SITES	% OF TOTAL
Less than 400	46	12%
400-500	18	5%
500-600	11	3%
600-700	115	31%
700-800	32	9%
800-900	59	16%
900-1000	21	6%
1000 +	69	19%
TOTAL	**371**	**100%**



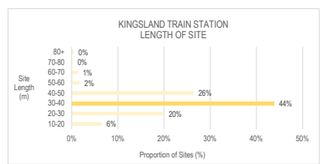
KINGSLAND TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	48	4%
10-15	551	50%
15-20	395	36%
20-25	44	4%
25-30	19	2%
30-35	14	1%
35-40	8	1%
40+	16	1%
	1095	**100%**



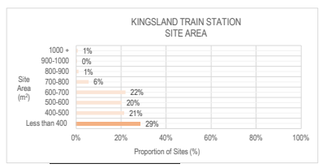
KINGSLAND TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	70	6%
20-30	216	20%
30-40	475	44%
40-50	286	26%
50-60	18	2%
60-70	14	1%
70-80	2	0%
80+	4	0%
TOTAL	**1085**	**100%**



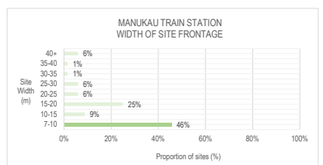
KINGSLAND TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	313	29%
400-500	234	21%
500-600	222	20%
600-700	240	22%
700-800	61	6%
800-900	12	1%
900-1000	4	0%
1000 +	8	1%
TOTAL	**1094**	**100%**



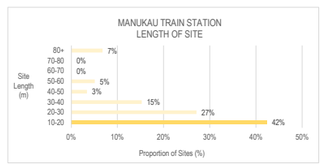
MANUKAU TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	31	46%
10-15	6	9%
15-20	17	25%
20-25	4	6%
25-30	4	6%
30-35	1	1%
35-40	1	1%
40+	4	6%
	68	**100%**



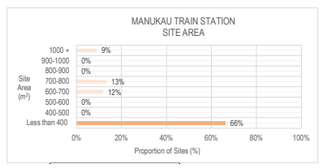
MANUKAU TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	25	42%
20-30	16	27%
30-40	9	15%
40-50	2	3%
50-60	3	5%
60-70	0	0%
70-80	0	0%
80+	4	7%
TOTAL	**59**	**100%**



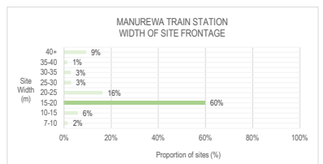
MANUKAU TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	45	66%
400-500	0	0%
500-600	0	0%
600-700	8	12%
700-800	9	13%
800-900	0	0%
900-1000	0	0%
1000 +	6	9%
TOTAL	**68**	**100%**



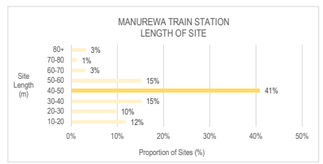
MANUREWA TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	9	2%
10-15	33	6%
15-20	341	60%
20-25	93	16%
25-30	17	3%
30-35	16	3%
35-40	8	1%
40+	53	9%
	570	**100%**



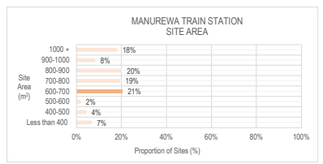
MANUREWA TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	67	12%
20-30	55	10%
30-40	86	15%
40-50	232	41%
50-60	86	15%
60-70	17	3%
70-80	7	1%
80+	18	3%
TOTAL	**568**	**100%**



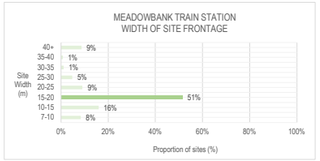
MANUREWA TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	39	7%
400-500	25	4%
500-600	11	2%
600-700	117	21%
700-800	111	19%
800-900	115	20%
900-1000	48	8%
1000 +	104	18%
TOTAL	**570**	**100%**



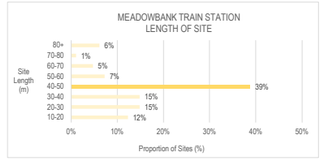
MEADOWBANK TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	23	8%
10-15	44	16%
15-20	142	51%
20-25	25	9%
25-30	13	5%
30-35	3	1%
35-40	2	1%
40+	24	9%
	276	**100%**



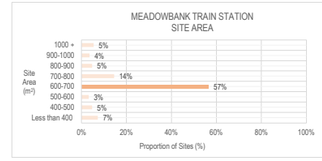
MEADOWBANK TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	34	12%
20-30	41	15%
30-40	41	15%
40-50	107	39%
50-60	20	7%
60-70	13	5%
70-80	3	1%
80+	17	6%
TOTAL	**276**	**100%**



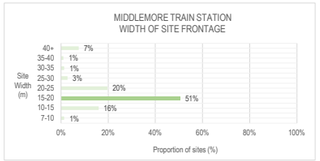
MEADOWBANK TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	20	7%
400-500	13	5%
500-600	9	3%
600-700	156	57%
700-800	40	14%
800-900	13	5%
900-1000	10	4%
1000 +	15	5%
TOTAL	**276**	**100%**



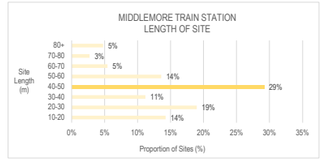
MIDDLEMORE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	4	1%
10-15	47	16%
15-20	149	51%
20-25	58	20%
25-30	8	3%
30-35	4	1%
35-40	3	1%
40+	22	7%
	295	**100%**



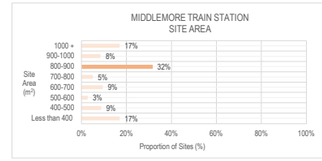
MIDDLEMORE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	42	14%
20-30	56	19%
30-40	33	11%
40-50	86	29%
50-60	40	14%
60-70	16	5%
70-80	8	3%
80+	14	5%
TOTAL	**295**	**100%**



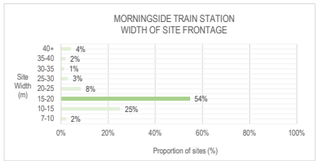
MIDDLEMORE TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	50	17%
400-500	26	9%
500-600	8	3%
600-700	28	9%
700-800	15	5%
800-900	93	32%
900-1000	25	8%
1000 +	50	17%
TOTAL	**295**	**100%**



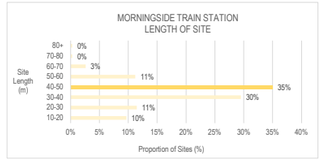
MORNINGSIDE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	8	2%
10-15	96	25%
15-20	209	54%
20-25	32	8%
25-30	11	3%
30-35	5	1%
35-40	7	2%
40+	16	4%
	384	**100%**



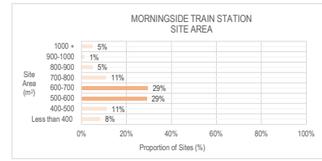
MORNINGSIDE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	37	10%
20-30	44	11%
30-40	113	30%
40-50	134	35%
50-60	43	11%
60-70	10	3%
70-80	1	0%
80+	1	0%
TOTAL	**383**	**100%**



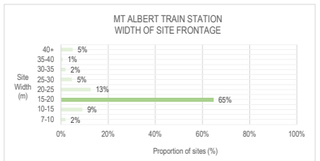
MORNINGSIDE TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	32	8%
400-500	43	11%
500-600	111	29%
600-700	113	29%
700-800	42	11%
800-900	19	5%
900-1000	5	1%
1000 +	19	5%
TOTAL	**384**	**100%**



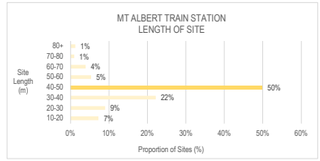
MT ALBERT TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	12	2%
10-15	57	9%
15-20	408	65%
20-25	79	13%
25-30	29	5%
30-35	12	2%
35-40	4	1%
40+	31	5%
	632	**100%**



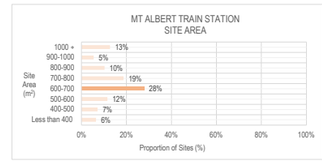
MT ALBERT TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	46	7%
20-30	57	9%
30-40	140	22%
40-50	315	50%
50-60	34	5%
60-70	25	4%
70-80	6	1%
80+	8	1%
TOTAL	**631**	**100%**



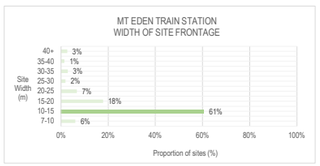
MT ALBERT TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	41	6%
400-500	45	7%
500-600	73	12%
600-700	176	28%
700-800	118	19%
800-900	65	10%
900-1000	34	5%
1000 +	80	13%
TOTAL	**632**	**100%**



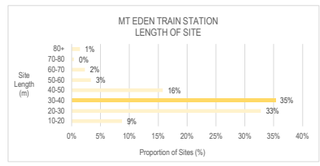
MT EDEN TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	30	6%
10-15	299	61%
15-20	88	18%
20-25	33	7%
25-30	9	2%
30-35	14	3%
35-40	7	1%
40+	13	3%
	493	**100%**



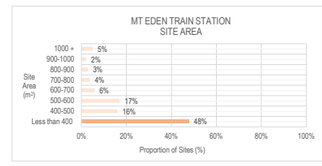
MT EDEN TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	42	9%
20-30	158	33%
30-40	170	35%
40-50	76	16%
50-60	16	3%
60-70	11	2%
70-80	2	0%
80+	7	1%
TOTAL	**482**	**100%**



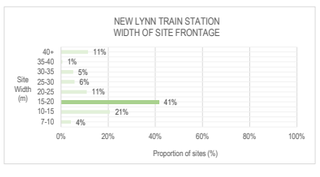
MT EDEN TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	233	48%
400-500	78	16%
500-600	83	17%
600-700	28	6%
700-800	18	4%
800-900	14	3%
900-1000	10	2%
1000 +	24	5%
TOTAL	**488**	**100%**



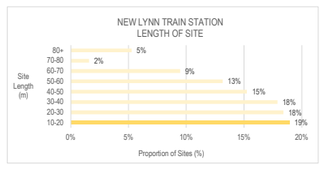
NEW LYNN TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	8	4%
10-15	40	21%
15-20	80	41%
20-25	21	11%
25-30	11	6%
30-35	10	5%
35-40	1	1%
40+	22	11%
	193	**100%**



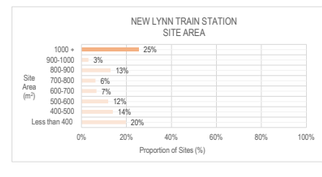
NEW LYNN TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	36	19%
20-30	35	18%
30-40	34	18%
40-50	29	15%
50-60	25	13%
60-70	18	9%
70-80	3	2%
80+	10	5%
TOTAL	**190**	**100%**



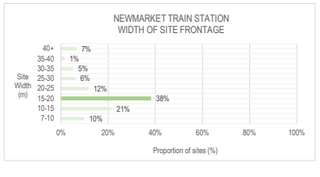
NEW LYNN TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	38	20%
400-500	27	14%
500-600	23	12%
600-700	13	7%
700-800	12	6%
800-900	25	13%
900-1000	6	3%
1000 +	49	25%
TOTAL	**193**	**100%**



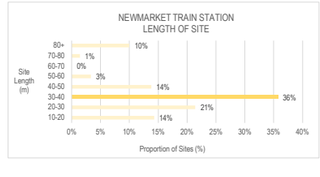
NEWMARKET TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	21	10%
10-15	46	21%
15-20	82	38%
20-25	25	12%
25-30	13	6%
30-35	11	5%
35-40	3	1%
40+	14	7%
	215	**100%**



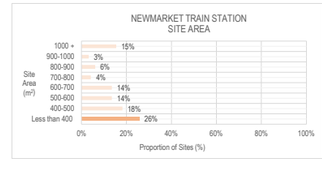
NEWMARKET TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	30	14%
20-30	45	21%
30-40	75	36%
40-50	29	14%
50-60	7	3%
60-70	0	0%
70-80	3	1%
80+	21	10%
TOTAL	**210**	**100%**



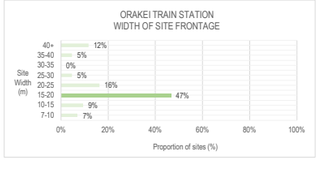
NEWMARKET TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	55	26%
400-500	39	18%
500-600	29	14%
600-700	29	14%
700-800	9	4%
800-900	13	6%
900-1000	7	3%
1000 +	33	15%
TOTAL	**214**	**100%**



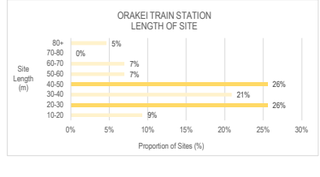
ORAKEI TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	3	7%
10-15	4	9%
15-20	20	47%
20-25	7	16%
25-30	2	5%
30-35	0	0%
35-40	2	5%
40+	5	12%
	43	**100%**



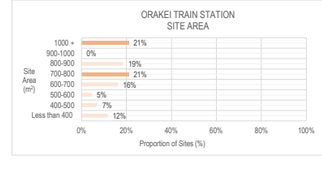
ORAKEI TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	4	9%
20-30	11	26%
30-40	9	21%
40-50	11	26%
50-60	3	7%
60-70	3	7%
70-80	0	0%
80+	2	5%
TOTAL	**43**	**100%**



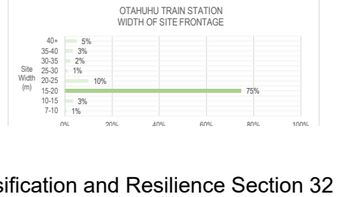
ORAKEI TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	5	12%
400-500	3	7%
500-600	2	5%
600-700	7	16%
700-800	9	21%
800-900	8	19%
900-1000	0	0%
1000 +	9	21%
TOTAL	**43**	**100%**



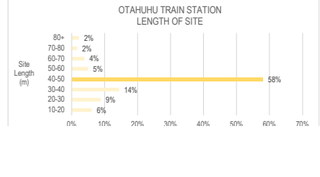
OTAHUHU TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	1	1%
10-15	6	3%
15-20	136	75%
20-25	18	10%
25-30	2	1%
30-35	4	2%
35-40	6	3%



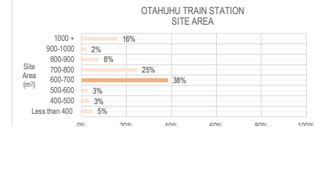
OTAHUHU TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	11	6%
20-30	16	9%
30-40	26	14%
40-50	105	58%
50-60	9	5%
60-70	7	4%
70-80	3	2%



OTAHUHU TRAIN STATION

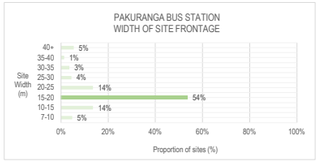
SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	9	5%
400-500	6	3%
500-600	5	3%
600-700	70	38%
700-800	45	25%
800-900	14	8%
900-1000	4	2%



40+	9	5%
	182	**100%**

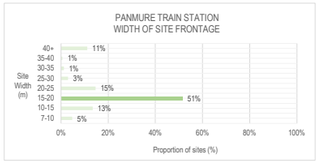
PAKURANGA BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	15	5%
10-15	43	14%
15-20	170	54%
20-25	43	14%
25-30	14	4%
30-35	11	3%
35-40	4	1%
40+	17	5%
	317	**100%**



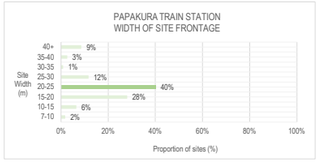
PANMURE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	8	5%
10-15	23	13%
15-20	88	51%
20-25	25	15%
25-30	5	3%
30-35	2	1%
35-40	1	1%
40+	19	11%
	171	**100%**



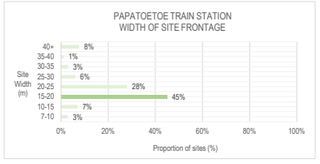
PAPAKURA TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	4	2%
10-15	15	6%
15-20	65	28%
20-25	93	40%
25-30	27	12%
30-35	2	1%
35-40	6	3%
40+	20	9%
	232	**100%**



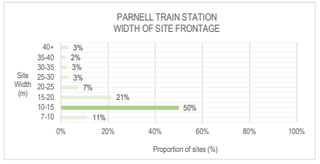
PAPATOETOE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	15	3%
10-15	37	7%
15-20	241	45%
20-25	150	28%
25-30	32	6%
30-35	16	3%
35-40	5	1%
40+	41	8%
	537	**100%**



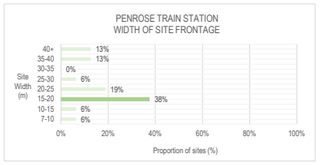
PARNELL TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	22	11%
10-15	98	50%
15-20	42	21%
20-25	14	7%
25-30	6	3%
30-35	5	3%
35-40	4	2%
40+	6	3%
	197	**100%**



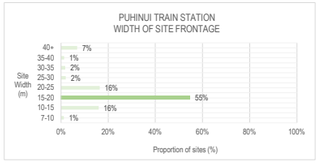
PENROSE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	1	6%
10-15	1	6%
15-20	6	38%
20-25	3	19%
25-30	1	6%
30-35	0	0%
35-40	2	13%
40+	2	13%
	16	**100%**



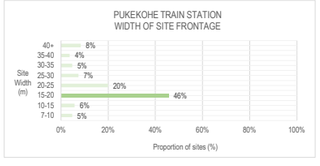
PUHINUI TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	8	1%
10-15	110	16%
15-20	377	55%
20-25	113	16%
25-30	14	2%
30-35	12	2%
35-40	9	1%
40+	47	7%
	690	**100%**



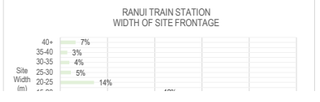
PUKEKOHE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	9	5%
10-15	11	6%
15-20	87	46%
20-25	38	20%
25-30	14	7%
30-35	9	5%
35-40	7	4%
40+	16	8%
	191	**100%**



RANUI TRAIN STATION

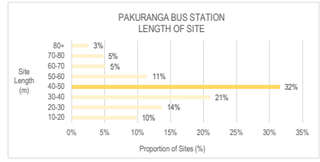
WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	75	8%
10-15	186	19%
15-20	413	42%
20-25	142	14%



80+	4	2%
TOTAL	**181**	**100%**

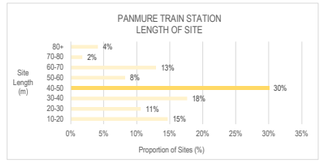
PAKURANGA BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	31	10%
20-30	43	14%
30-40	66	21%
40-50	99	32%
50-60	36	11%
60-70	16	5%
70-80	15	5%
80+	8	3%
TOTAL	**314**	**100%**



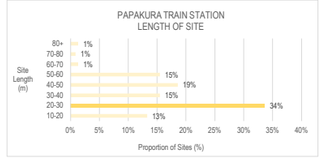
PANMURE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	25	15%
20-30	18	11%
30-40	30	18%
40-50	51	30%
50-60	14	8%
60-70	22	13%
70-80	3	2%
80+	7	4%
TOTAL	**170**	**100%**



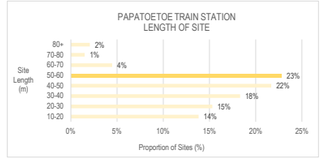
PAPAKURA TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	30	13%
20-30	76	34%
30-40	35	15%
40-50	42	19%
50-60	35	15%
60-70	3	1%
70-80	2	1%
80+	3	1%
TOTAL	**226**	**100%**



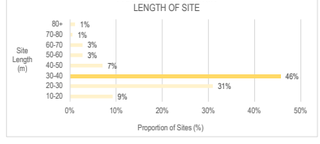
PAPATOETOE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	74	14%
20-30	82	15%
30-40	98	18%
40-50	116	22%
50-60	122	23%
60-70	24	4%
70-80	8	1%
80+	11	2%
TOTAL	**535**	**100%**



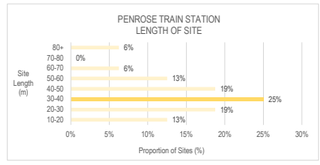
PARNELL TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	17	9%
20-30	57	31%
30-40	84	46%
40-50	13	7%
50-60	5	3%
60-70	5	3%
70-80	1	1%
80+	2	1%
TOTAL	**184**	**100%**



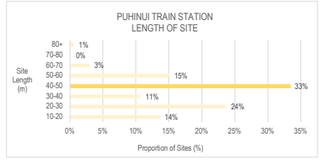
PENROSE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	2	13%
20-30	3	19%
30-40	4	25%
40-50	3	19%
50-60	2	13%
60-70	1	6%
70-80	0	0%
80+	1	6%
TOTAL	**16**	**100%**



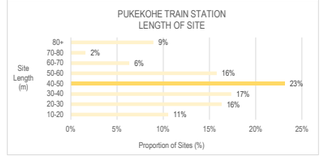
PUHINUI TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	93	14%
20-30	162	24%
30-40	73	11%
40-50	228	33%
50-60	103	15%
60-70	20	3%
70-80	1	0%
80+	4	1%
TOTAL	**684**	**100%**



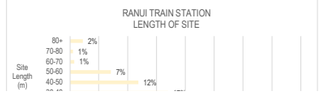
PUKEKOHE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	20	11%
20-30	31	16%
30-40	33	17%
40-50	44	23%
50-60	30	16%
60-70	12	6%
70-80	3	2%
80+	17	9%
TOTAL	**190**	**100%**



RANUI TRAIN STATION

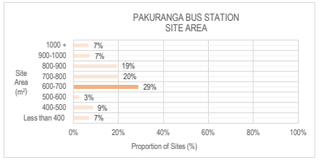
WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	254	27%
20-30	317	34%
30-40	160	17%
40-50	112	12%



1000 +	29	16%
TOTAL	**182**	**100%**

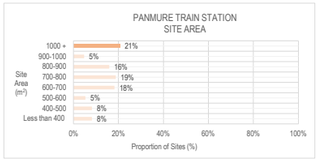
PAKURANGA BUS STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	22	7%
400-500	27	9%
500-600	8	3%
600-700	91	29%
700-800	63	20%
800-900	61	19%
900-1000	23	7%
1000 +	21	7%
TOTAL	**316**	**100%**



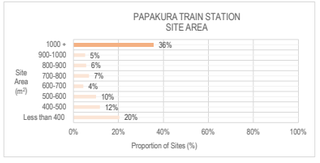
PANMURE TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	14	8%
400-500	14	8%
500-600	9	5%
600-700	31	18%
700-800	32	19%
800-900	27	16%
900-1000	8	5%
1000 +	35	21%
TOTAL	**170**	**100%**



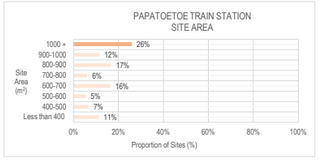
PAPAKURA TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	47	20%
400-500	27	12%
500-600	23	10%
600-700	10	4%
700-800	16	7%
800-900	13	6%
900-1000	12	5%
1000 +	82	36%
TOTAL	**230**	**100%**



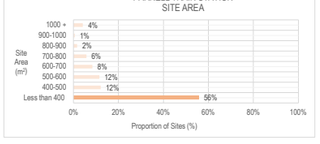
PAPATOETOE TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	60	11%
400-500	36	7%
500-600	29	5%
600-700	88	16%
700-800	33	6%
800-900	90	17%
900-1000	62	12%
1000 +	139	26%
TOTAL	**537**	**100%**



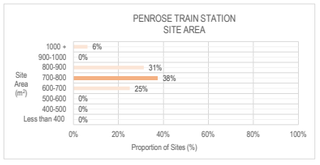
PARNELL TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	106	56%
400-500	23	12%
500-600	22	12%
600-700	16	8%
700-800	11	6%
800-900	3	2%
900-1000	1	1%
1000 +	8	4%
TOTAL	**190**	**100%**



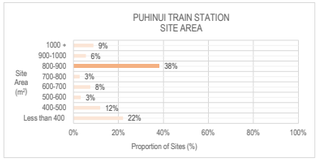
PENROSE TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	0	0%
400-500	0	0%
500-600	0	0%
600-700	4	25%
700-800	6	38%
800-900	5	31%
900-1000	0	0%
1000 +	1	6%
TOTAL	**16**	**100%**



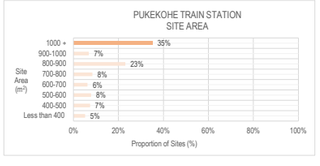
PUHINUI TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	152	22%
400-500	82	12%
500-600	22	3%
600-700	52	8%
700-800	19	3%
800-900	263	38%
900-1000	38	6%
1000 +	61	9%
TOTAL	**689**	**100%**



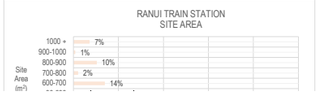
PUKEKOHE TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	10	5%
400-500	14	7%
500-600	15	8%
600-700	12	6%
700-800	16	8%
800-900	44	23%
900-1000	13	7%
1000 +	67	35%
TOTAL	**191**	**100%**

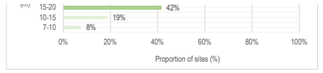


RANUI TRAIN STATION

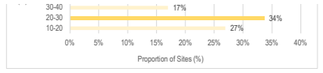
SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	353	36%
400-500	123	12%
500-600	176	18%
600-700	139	14%



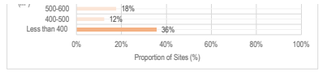
25-30	45	5%
30-35	38	4%
35-40	30	3%
40+	65	7%
	994	**100%**



50-60	67	7%
60-70	7	1%
70-80	5	1%
80+	21	2%
TOTAL	**943**	**100%**

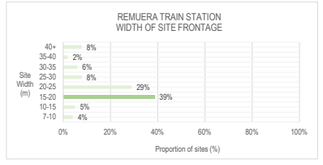


700-800	21	2%
800-900	103	10%
900-1000	8	1%
1000 +	71	7%
TOTAL	**994**	**100%**



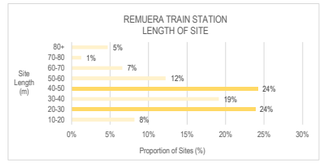
REMUERA TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	13	4%
10-15	16	5%
15-20	124	39%
20-25	93	29%
25-30	25	8%
30-35	19	6%
35-40	6	2%
40+	25	8%
	321	**100%**



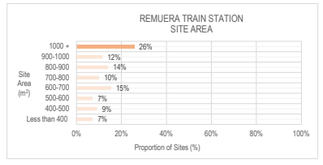
REMUERA TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	26	8%
20-30	76	24%
30-40	61	19%
40-50	77	24%
50-60	39	12%
60-70	21	7%
70-80	4	1%
80+	15	5%
TOTAL	**319**	**100%**



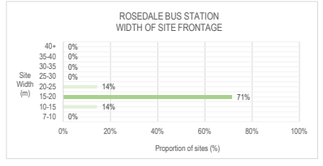
REMUERA TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	23	7%
400-500	29	9%
500-600	23	7%
600-700	49	15%
700-800	32	10%
800-900	45	14%
900-1000	37	12%
1000 +	82	26%
TOTAL	**320**	**100%**



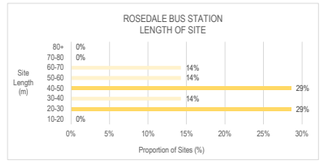
ROSEDALE BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	0	0%
10-15	1	14%
15-20	5	71%
20-25	1	14%
25-30	0	0%
30-35	0	0%
35-40	0	0%
40+	0	0%
	7	**100%**



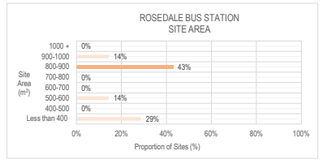
ROSEDALE BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	0	0%
20-30	2	29%
30-40	1	14%
40-50	2	29%
50-60	1	14%
60-70	1	14%
70-80	0	0%
80+	0	0%
TOTAL	**7**	**100%**



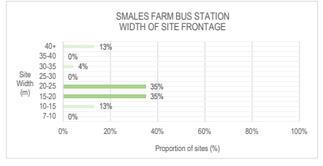
ROSEDALE BUS STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	2	29%
400-500	0	0%
500-600	1	14%
600-700	0	0%
700-800	0	0%
800-900	3	43%
900-1000	1	14%
1000 +	0	0%
TOTAL	**7**	**100%**



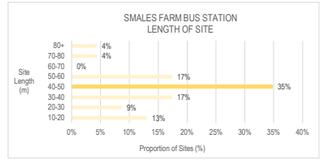
SMALES FARM BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	0	0%
10-15	3	13%
15-20	8	35%
20-25	8	35%
25-30	0	0%
30-35	1	4%
35-40	0	0%
40+	3	13%
	23	**100%**



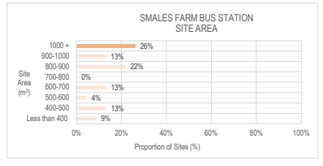
SMALES FARM BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	3	13%
20-30	2	9%
30-40	4	17%
40-50	8	35%
50-60	4	17%
60-70	0	0%
70-80	1	4%
80+	1	4%
TOTAL	**23**	**100%**



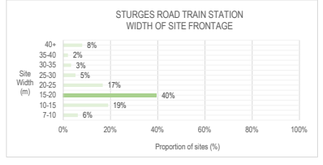
SMALES FARM BUS STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	2	9%
400-500	3	13%
500-600	1	4%
600-700	3	13%
700-800	0	0%
800-900	5	22%
900-1000	3	13%
1000 +	6	26%
TOTAL	**23**	**100%**



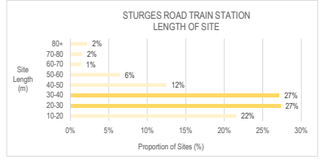
STURGES ROAD TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	47	6%
10-15	144	19%
15-20	300	40%
20-25	127	17%
25-30	39	5%
30-35	25	3%
35-40	15	2%
40+	61	8%
	758	**100%**



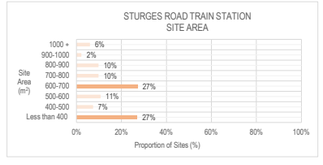
STURGES ROAD TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	157	22%
20-30	199	27%
30-40	198	27%
40-50	91	12%
50-60	47	6%
60-70	10	1%
70-80	11	2%
80+	16	2%
TOTAL	**729**	**100%**



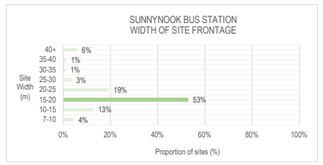
STURGES ROAD TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	204	27%
400-500	56	7%
500-600	81	11%
600-700	205	27%
700-800	74	10%
800-900	74	10%
900-1000	17	2%
1000 +	45	6%
TOTAL	**756**	**100%**



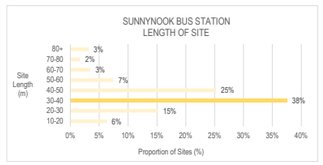
SUNNYNOOK BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	15	4%
10-15	44	13%
15-20	184	53%
20-25	67	19%
25-30	12	3%
30-35	3	1%
35-40	4	1%
40+	20	6%
	349	**100%**



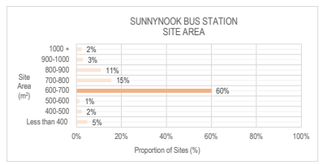
SUNNYNOOK BUS STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	22	6%
20-30	53	15%
30-40	131	38%
40-50	88	25%
50-60	26	7%
60-70	12	3%
70-80	6	2%
80+	11	3%
TOTAL	**349**	**100%**



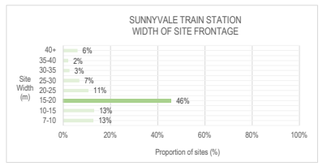
SUNNYNOOK BUS STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	17	5%
400-500	8	2%
500-600	5	1%
600-700	209	60%
700-800	54	15%
800-900	38	11%
900-1000	10	3%
1000 +	8	2%
TOTAL	**349**	**100%**



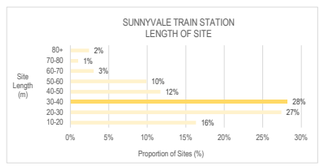
SUNNYVALE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	67	13%
10-15	69	13%
15-20	240	46%
20-25	56	11%
25-30	36	7%
30-35	14	3%
35-40	11	2%
40+	32	6%
	525	**100%**



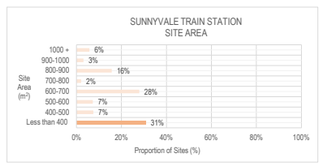
SUNNYVALE TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	81	16%
20-30	136	27%
30-40	140	28%
40-50	58	12%
50-60	49	10%
60-70	15	3%
70-80	5	1%
80+	12	2%
TOTAL	**496**	**100%**



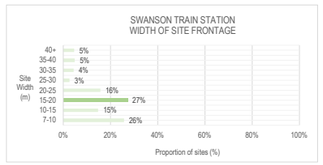
SUNNYVALE TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	161	31%
400-500	39	7%
500-600	38	7%
600-700	146	28%
700-800	11	2%
800-900	82	16%
900-1000	16	3%
1000 +	30	6%
TOTAL	**523**	**100%**



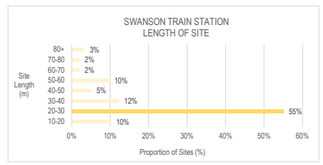
SWANSON TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	106	26%
10-15	61	15%
15-20	112	27%
20-25	65	16%
25-30	11	3%
30-35	18	4%
35-40	20	5%
40+	19	5%
	412	**100%**



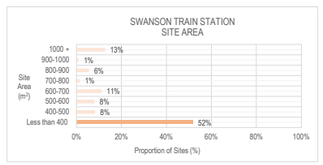
SWANSON TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	40	10%
20-30	215	55%
30-40	48	12%
40-50	20	5%
50-60	38	10%
60-70	8	2%
70-80	8	2%
80+	13	3%
TOTAL	**390**	**100%**



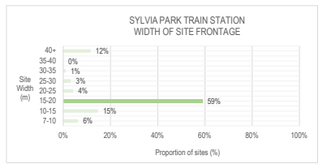
SWANSON TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	213	52%
400-500	34	8%
500-600	33	8%
600-700	46	11%
700-800	6	1%
800-900	23	6%
900-1000	4	1%
1000 +	52	13%
TOTAL	**411**	**100%**



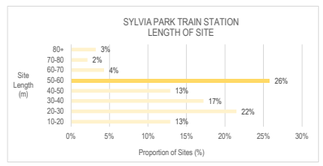
SYLVIA PARK TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	6	6%
10-15	14	15%
15-20	56	59%
20-25	4	4%
25-30	3	3%
30-35	1	1%
35-40	0	0%
40+	11	12%
	95	**100%**



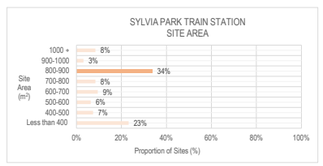
SYLVIA PARK TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	12	13%
20-30	20	22%
30-40	16	17%
40-50	12	13%
50-60	24	26%
60-70	4	4%
70-80	2	2%
80+	3	3%
TOTAL	**93**	**100%**



SYLVIA PARK TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	22	23%
400-500	7	7%
500-600	6	6%
600-700	9	9%
700-800	8	8%
800-900	32	34%
900-1000	3	3%
1000 +	8	8%
TOTAL	**95**	**100%**



TAKAANINI TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	105	11%

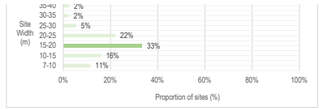
TAKAANINI TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	150	17%

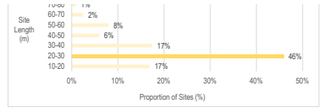
TAKAANINI TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	341	37%

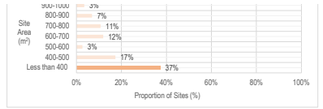
10-15	146	16%
15-20	305	33%
20-25	201	22%
25-30	49	5%
30-35	21	2%
35-40	22	2%
40+	66	7%
	915	**100%**



20-30	408	46%
30-40	155	17%
40-50	53	6%
50-60	71	8%
60-70	22	2%
70-80	8	1%
80+	23	3%
TOTAL	**890**	**100%**

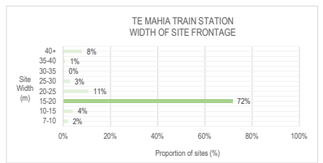


400-500	158	17%
500-600	24	3%
600-700	109	12%
700-800	98	11%
800-900	63	7%
900-1000	32	3%
1000 +	90	10%
TOTAL	**915**	**100%**



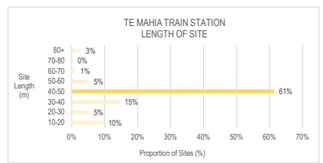
TE MAHIA TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
7-10	7	2%
10-15	15	4%
15-20	262	72%
20-25	39	11%
25-30	10	3%
30-35	1	0%
35-40	3	1%
40+	29	8%
	366	**100%**



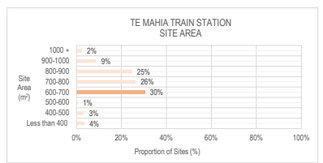
TE MAHIA TRAIN STATION

WIDTH OF SITE FRONTAGE (m)	NO. OF SITES	% OF TOTAL
10-20	35	10%
20-30	19	5%
30-40	53	15%
40-50	224	61%
50-60	19	5%
60-70	4	1%
70-80	1	0%
80+	10	3%
TOTAL	**365**	**100%**



TE MAHIA TRAIN STATION

SITE AREA (m^2)	NO. OF SITES	% OF TOTAL
Less than 400	13	4%
400-500	12	3%
500-600	2	1%
600-700	111	30%
700-800	96	26%
800-900	90	25%
900-1000	32	9%
1000 +	9	2%
TOTAL	**365**	**100%**



ATTACHMENT 3 - BOFFA MISKELL. 6 STOREY APARTMENT BUILDINGS - AUCKLAND CASE STUDIES. 2022

Boffa Miskell

6 STOREY APARTMENT BUILDINGS

AUCKLAND CASE STUDIES

21 JULY 2022

EXECUTIVE SUMMARY

STUDY PURPOSE

This document contains case studies of six storey apartment buildings in Auckland. Nine buildings are surveyed. The purpose of the document is to gain an understanding of typical heights for six storey apartment buildings. This is to inform drafting of height related provisions for Auckland Council's proposed Plan Change required to incorporate the National Policy Statement on Urban Development ('NPS-UD') into the Auckland Unitary Plan – Operative in Part ('AUP(OP)'), with a focus on NPS-UD Policy 3c.

Relevant information in each case study that relates to building elements that comprise total building height are also recorded. These include:

- Floor to floor height at ground level
- Floor to floor height at upper levels
- Height of interfloor structure
- Height of roof form
- Height of above ground basement structure.

While the case studies may be helpful to gain an overall understanding of the broader bulk and massing of six storey apartment buildings, and therefore inform potential bulk and massing related controls, that is not their primary purpose.

CASE STUDY SELECTION

Case studies were selected by a combination of desk top analysis of aerial photos and the study team's knowledge of the Auckland area. Approved resource consent plans and decisions for each building were then obtained. The assessment did not include checking of approved building consent drawings.

Total building heights were obtained from resource consent decisions (as a primary source) or from annotations on approved drawing elevations. Where not stated in either source, building elevations were measured from drawings, relying on the stated scale of the drawings for accuracy. Some buildings required consent for height infringements while others did not. This was not the basis for case study selection.

All case study buildings have been consented since 2014. AUP(OP) zonings that relate to the case study buildings are Terrace Housing and Apartment Buildings ('THAB') zone and Business Mixed Use ('MU') zone. Within these zones, potential case study buildings were canvassed in areas with height controls considered more likely to result in a six storey apartment building. These were:

- THAB zone sites subject to a 19.5m Height Variation Control; and
- MU zone sites with a 21m height control (19m occupiable and 2m for roof form).

These were supplemented by canvassing appropriate case studies from:

- THAB zone sites with a standard 16m height control; and
- MU zone sites with a 18m height control (16m occupiable + 2m for roof form).

Two selected buildings have a total of seven storeys. These buildings were considered appropriate for assessment as they have a building form with a partly or fully strongly expressed six storeys (due to factors including, for example, a recessed seventh storey).

DEFINITION OF TERMS

The following defines two terms used in the case study records:

- 'Roof form height' refers to non-occupiable space above the top habitable floor of the building. Where cross sections were available in approved resource consent plans, roof form height was measured vertically from the ceiling of the top habitable floor to the highest point of the roof structure.
- 'Interfloor structure' refers to all non-occupiable space between floors. It includes the floor slab, ceiling cavity and ceiling lining. Where recorded, the information was taken from cross sections in approved resource consent plans. The interfloor structures shown in these cross sections are likely to be indicative only. Reference would need to be made to approved building consent drawings for more specific information.

OVERVIEW COMMENTS

From the desk top analysis of aerials and the study team's knowledge of consented developments, sites for six storey apartment buildings in Auckland appear to share the following general characteristics:

- Corner sites are common;
- Sites in the THAB zone which have constructed/ consented six storey apartment buldings are generally larger. Consent drawings show that sites are often amalgamated from smaller lots and that buildings may form part of larger masterplanned blocks.

- Sites in the MU zone are a range of sizes, including small lots – likely reflecting the more permissive bulk and location standards in that zone.

Of the nine selected buildings:

- **Total height** for six storeys ranged from **19.55m** (19 Dunn Road) to **23m** (10-12 Exmouth Street). The lower height Dunn Road example resulted from lower floor to floor heights (3m) than the study average, the generally low height of basement and roof form structures, and the flat nature of the site.
- **Ground floor to floor heights** (excluding foundation and basement structures) varied widely, from **3m** to **5.1m**, depending on responses to site slope and (for buildings on MU zoned sites) whether ground floor commercial space was proposed.
- **Upper floor to floor heights** ranged from **3m** to approximately **3.6m**, with most falling in the **3.2m – 3.3m** range.
- The heights of **interfloor structures** ranged from **0.5m to 0.7m**.
- The heights of **basement structures** varied widely, from **0.9m to 4m**, again appearing to respond to site slope.
- The height of **roof forms** was generally in the range of **0.5m to 1.5m**.
- Some sites were essentially flat or had minimal slope, while **sites with slope** across their depth from **1.5m to 2.5m** were not uncommon.

19 DUNN ROAD, MT WELLINGTON

BUN603227 - SEPTEMBER 2018
TERRACE HOUSING & APARTMENT BUILDING ZONE
19.5M HEIGHT VARIATION CONTROL AREA

BUILDING

6 storeys. No basement car parking. Parking for 4 cars at ground floor to rear.

HEIGHT DETAILS

Total height:	19.55m
Ground floor to floor height:	3m
Upper floors - floor to floor height:	3m
Roof form height:	1.1m max
Interfloor structure:	0.6m approx
Basement structure (above ground):	0.9m approx
Roof slope:	3 degrees. Single pitch. No parapet structure

SITE INFORMATION

Area:	1038m²
Depth:	26.47m
Width:	39.21m

COMMENT

Corner site with two road frontages: Dunn Road and Jellicoe Road.

Flat/minimal slope.

1 (11)01 Longitudinal Section
Scale: 1 : 100

28 KILLARNEY ST, TAKAPUNA

LUC60026716 - NOVEMBER 2014
TERRACE HOUSING & APARTMENT BUILDING ZONE
19.5M HEIGHT VARIATION CONTROL AREA

BUILDING

6 storeys + 2 floor full basement for parking.

HEIGHT DETAILS

Total height:	20.92m
Ground floor to floor height:	3.3m
Upper floors - floor to floor height:	3.3m
Roof form height:	0.5m max
Interfloor structure:	0.5m approx
Basement structure (above ground):	1.2m approx
Roof slope:	No information on RC plans

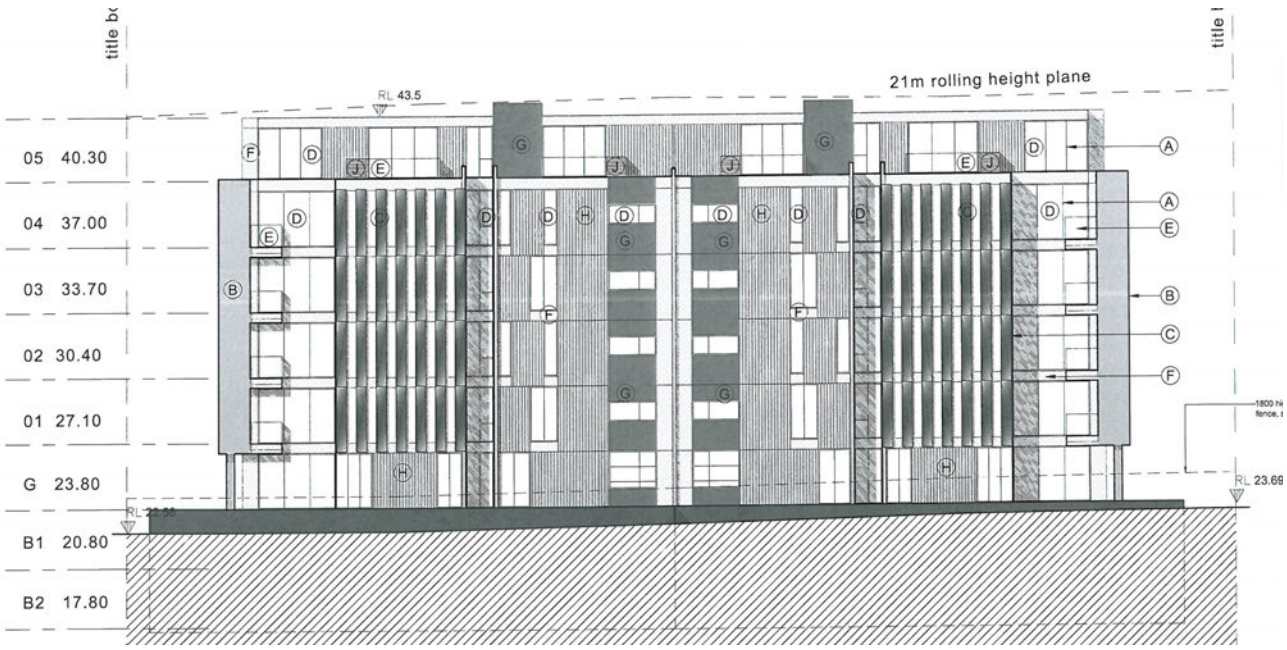
SITE INFORMATION

Area:	1947m²
Depth:	35.8m
Width:	56m

COMMENT

Consented against the Residential 8 zone of the Auckland Council District Plan (North Shore Section) that permitted a maximum 6 storeys in 21m height.

Minimal slope site.



74-80 ANZAC ST, TAKAPUNA

LUC60027906 - MARCH 2016
TERRACE HOUSING & APARTMENT BUILDING ZONE
19.5M HEIGHT VARIATION CONTROL AREA

BUILDING

2 buildings of 6 storeys + 1 floor full basement for parking.

HEIGHT DETAILS

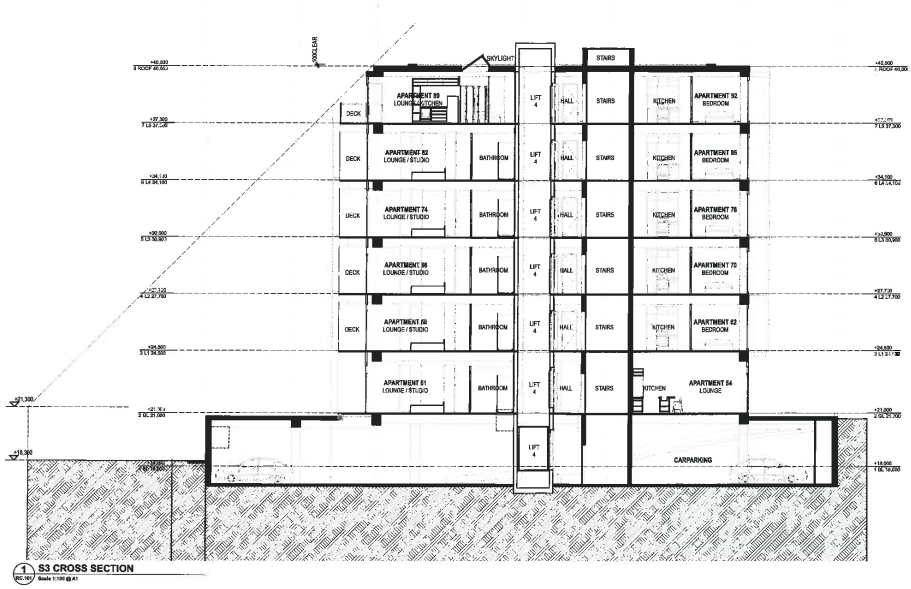
Total height:	20m (measured from RC long section)
Ground floor to floor height:	3.5m
Upper floors - floor to floor height:	3.2m
Roof form height:	0.5m max
Interfloor structure:	0.5m approx
Basement structure (above ground):	2.5m approx
Roof slope:	No information on RC plans

SITE INFORMATION

Area:	1947m²
Depth:	35.8m
Width:	56m

COMMENT

Approximate 1.8m fall from front to rear of site (1:20 gradient / 5 percent slope) results in basement structure above ground to rear.



RECEIVED
RESOURCE CONSENTS
09 MAR 2016
AUCKLAND COUNCIL

24-40 CADNESS ST, NORTHCOTE

BUN60392209 - JUNE 2022
TERRACE HOUSING & APARTMENT BUILDING ZONE
19.5M HEIGHT VARIATION CONTROL AREA

BUILDING

6 storeys. Part of complex of 3 apartment buildings and a terrace house block. Half floor of parking at grund level.

HEIGHT DETAILS

Total height:	21.1m up to a max of 24.6m for architectural feature (parapet)
Ground floor to floor height:	3.15m
Upper floors - floor to floor height:	3.15m
Roof form height:	1.2m max
Interfloor structure:	0.6m approx
Basement structure (above ground):	1.5m approx
Roof slope:	5 degree slope down to central gully, screened by parapet around edge.

SITE INFORMATION

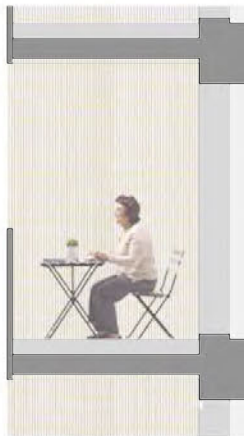
Area:	4842m²
Characteristics:	Part of wider comprehensive development block.

COMMENT

Kainga Ora development site. Consented but not yet built.

Corner site with building adjoining planned new street.

Approximate 1:13 gradient / 7.5 percent slope over depth of site.



11 AKEPIRO, KINGSLAND

LUC60117572-A - OCTOBER 2015
BUSINESS - MIXED USE ZONE
21M HEIGHT CONTROL (19M OCCUPIABLE + 2M ROOF)

BUILDING

6 storeys + 1 floor full basement for bike parking / general storage. 2 car park spaces at ground level.

HEIGHT DETAILS

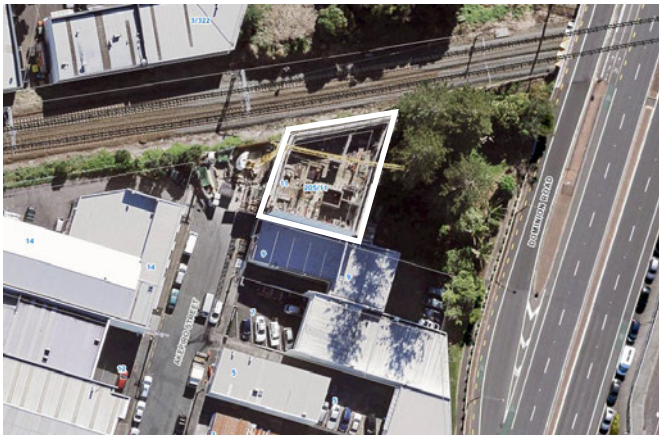
Total height:	22.83m
Ground floor to floor height:	3.2m
Upper floors - floor to floor height:	3.2m
Roof form height:	1.5m max
Interfloor structure:	0.5m approx
Basement structure (above ground):	2.0m approx
Roof slope:	5 degree slope down to central gully, screened by parapet around edge.

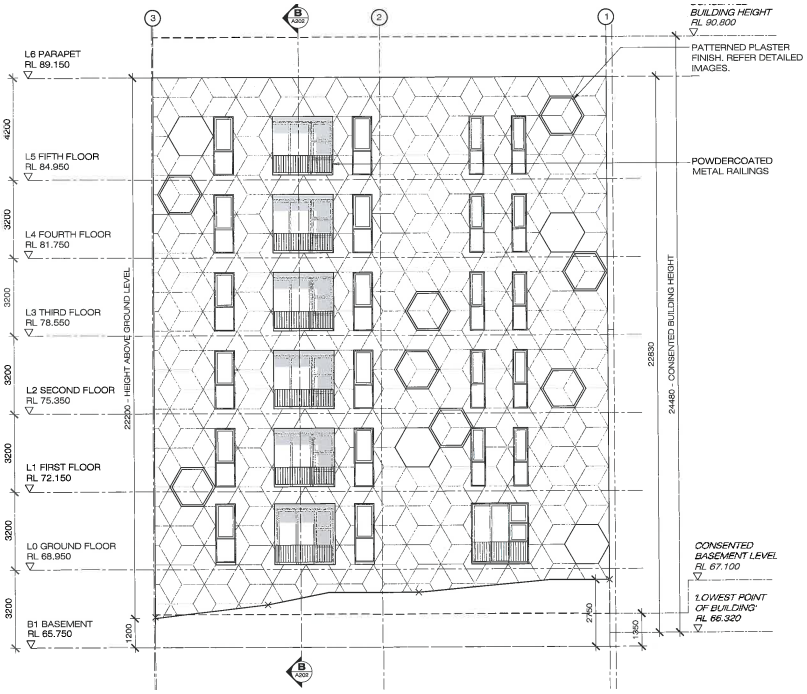
SITE INFORMATION

Area:	321m²
Depth:	16.8m
Width:	14.6m

COMMENT

Approximate 1:10 gradient / 11 percent slope over depth of site.





10-12 EXMOUTH ST, EDEN TERRACE

LUC60119795-B - MARCH 2018
BUSINESS - MIXED USE ZONE
21M HEIGHT CONTROL (19M OCCUPIABLE + 2M ROOF)

BUILDING

6 storeys to Dundonald St and 7 storeys to Exmouth St + 1.5 floors basement car parking.

HEIGHT DETAILS

Total height:	27.54m total height. 23m height to top of 6th storey, measured along Dundonald St frontage.
Ground floor to floor height:	4.28m (Dundonald); 4.08m (Exmouth)
Upper floors - floor to floor height:	Varies - 4.53m (lower floors); 3.575m upper floors
Roof form height:	1.0m max
Interfloor structure:	0.7m approx
Basement structure (above ground):	4.0m approx
Roof slope:	3 degrees. Hip roof rising to central ridge. No parapet.

SITE INFORMATION

Area:	2,200m²
Depth:	60.8m
Width:	30.1m (Exmouth); 42.1m (Dundonald)

COMMENT

Two street frontages to either end of the site: Dundonald St and Exmouth St.

5.3m fall from Dundonald to Exmouth Streets is an approximate 1:11.5 gradient / 9 percent slope over depth of site.

6 NIXON ST, GREY LYNN

LUC60351146 - FEBRUARY 2020
BUSINESS - MIXED USE ZONE
18M HEIGHT CONTROL (16M OCCUPIABLE + 2M ROOF)

BUILDING

7 storey builidng - 6 main storeys, with setback top floor for communal area. Ground floor commercial and bike storage. No on-site parking.

SITE INFORMATION

Area:	345m²
Depth:	21.1m
Width:	15.4m

HEIGHT DETAILS

Total height:	19.75m to top of 6th storey. 22.9m total building height.
Ground floor to floor height:	3.5m
Upper floors - floor to floor height:	3.2m
Roof form height:	1.0m max
Interfloor structure:	0.5m approx
Basement structure (above ground):	0.9m approx
Roof slope:	No information on RC plans.

COMMENT

Corner site with two street frontages: Chapman St and Nixon St.

Flat / minimal slope site.

193-197 GREAT NORTH RD, GREY LYNN

BUN60075571 - MAY 2015
BUSINESS - MIXED USE ZONE
18M HEIGHT CONTROL (16M OCCUPIABLE + 2M ROOF)

BUILDING

6 storey building with commercial ground floor + 1 floor of basement car parking.

HEIGHT DETAILS

Total height:	23.21m
Ground floor to floor height:	5.1m
Upper floors - floor to floor height:	3.2m
Roof form height:	1.0m max
Interfloor structure:	0.5m approx
Basement structure (above ground):	2.7m approx
Roof slope:	3% slope up to central ridge.

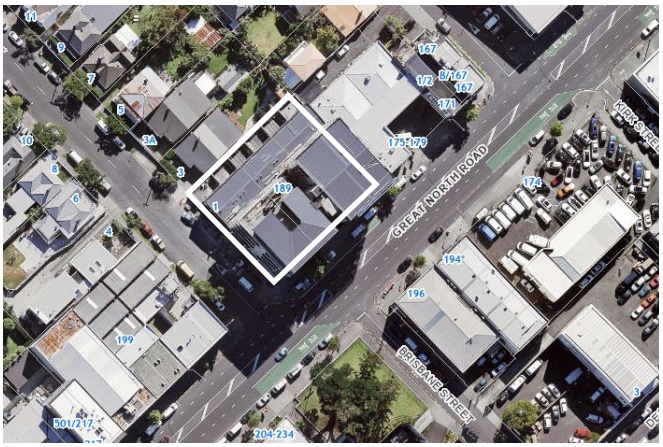
SITE INFORMATION

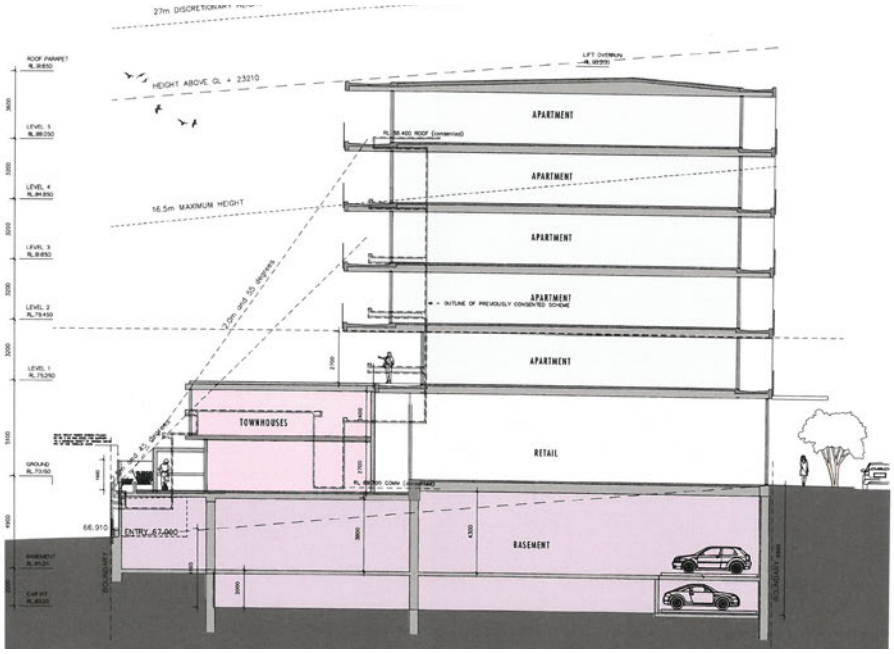
Area:	1,382m²
Depth:	39.5m
Width:	35m

COMMENT

Corner site with two street frontages: Great North Road and Turakina Street.

2.5m fall across depth of site is an approximate 1:16 gradient / 6.33 percent slope over depth of site.





APPROVED
RESOURCE CONSENTS
20 MAY 2015
AUCKLAND COUNCIL

57 MAPOU RD, HOBSONVILLE

BUN30574251 - AUGUST 2016
TERRACE HOUSING AND APARTMENT BUILDING ZONE
16M HEIGHT CONTROL

BUILDING

6 storey building + 1 floor of basement car parking.

HEIGHT DETAILS

Total height:	22.8m
Ground floor to floor height:	3.3m
Upper floors - floor to floor height:	3.3m
Roof form height:	1.4m max
Interfloor structure:	No information
Basement structure (above ground):	1.5m approx
Roof slope:	Low pitched roof partly screened by parapet. Slope information not available on RC plans.

SITE INFORMATION

Area:	1,819m²
Depth:	28m
Width:	65m
Characteristics:	

COMMENT

Referred to as 'Stage 4' on approved plans. Part of larger consented masterplanned block, including terraces.

Corner site with three street frontages: Hobsonville Point Rd, Squadron Drive and Mapou Rd. All measuresments above refer to Stage 4 land parcel.

Consent decision refers to site having Mixed Housing Urban zoning, while zoning maps show THAB zoning.