Proposed Plan Change 79 – Transport (PPC79) to the Auckland Unitary Plan Operative in part Section 32 – Evaluation Report

August 2022

Plans and Places, Department, Auckland Council

Executive summary

Section 32 Evaluation

This report is prepared as part of the evaluation required by Section 32 of the Resource Management Act 1991 ('the RMA') for Proposed Plan Change 79 (PPC79) to the Auckland Unitary Plan (Operative in Part) (AUP).

Section 32 of the RMA requires that before adopting any objective, policy, rule or other method, the Council shall carry out an evaluation to examine:

- The extent to which each objective is the most appropriate way to achieve the purpose of the Act, and
- Whether, having regard to their efficiency and effectiveness, the policies, rules or other methods are the most appropriate for achieving the objective.

The evaluation must also take into account:

- The benefits and costs of policies, rules, or other methods; and
- The risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules or other methods.

The issues

This evaluation has 2 components:

I. Issues relating to the removal of parking minimums in conjunction with significant increases in development potential across the region (through the IPI plan change) and the need to transition to cleaner, more sustainable transport modes:
    - Accessible parking
    - Pedestrian only access
    - Loading spaces
    - Heavy vehicle access
    - Cycle parking and access
    - Electric vehicle charging
    - Effects on the transport network

ii. Issues Relating to vehicle access provisions in the Residential zones:
    - Lack of prioritisation of pedestrian safety and convenience in the design of accessways resulting in poor outcomes as a result of:
        - Inadequate minimum footpath width;
        - Inadequate separation of footpaths from trafficable areas;
        - Steep footpath gradients and steps within footpaths;

    - Obstruction of footpaths by lighting poles, letterboxes, utility boxes, rubbish bins etc;
    - Poor provision of footpaths in longer accessways, and accessways serving larger numbers of residential units;
    - Absence of provisions to require artificial lighting during the hours of darkness.
- Design of accessways for vehicles:
    - Inadequate speed management measures increase safety risks for all users;
    - Whether vehicle accessways are designed for Fire and Emergency New Zealand (FENZ) vehicles, as required by the Building Code and recommended in FENZ guidance.
- Lack of integration of the transport provisions in Chapters E27 Transport and E38 Subdivision – Urban of the AUP.
- Removal of car parking minimums creates a risk that developments may underestimate the accessway requirements for larger developments with low parking provisions per dwelling.

The Intensification Planning Instrument

The Auckland Unitary Plan (Operative in Part) (AUP) promotes a quality compact urban form, which is integrated with and supports effective, efficient, and safe transport. While the AUP ensured that zoning would enable sufficient land-use for the next 30 years of estimated housing growth, recent Government legislation (National Policy Statement on Urban Design 2020 (updated May 2022) (NPS:UD), Resource Management (Housing Supply and Other Matters) Amendment Act 2021) is anticipated to have a significant impact on the urban form of Auckland and other major cities.

Council has prepared a package of plan changes to progress an Intensification Planning Instrument (IPI) as required by the recent legislation. PPC79 is a companion plan change to the IPI which will be processed under the standard Schedule 1 (Preparation, change and review of policy statements and plans).

Given the increase in housing capacity and intensification anticipated by the IPI plan changes to the AUP, it is important that proposed improvements to the parking, loading and access provisions in the AUP are progressed at the same time as the IPI, to ensure an integrated set of residential provisions.

The objectives of the evaluation

The objectives of this evaluation are to determine the most appropriate methods for achieving the following outcomes:

- a well-functioning urban environment and a reduction in climate change impacts is achieved.

- accessible parking is provided in locations and at a level that enables people with disabilities to fully take part in everyday life.
- the safety of pedestrians on sites with pedestrian-only access is prioritised.
- the loading/unloading of goods can occur in a manner that does not compromise the safe and efficient functioning of the transport network including accessways, avoids or mitigates adverse effects on users and the adjacent neighbourhood and ensures land is used efficiently.
- heavy vehicle access to developments (particularly waste collection vehicles) are managed to ensure safety of pedestrians.
- Auckland's transport infrastructure is future-proofed to cater for emerging changes in transport, including greater use of bicycles, including e-bikes, micro-mobility devices and electric vehicles.
- an appropriate assessment of effects of larger scale residential subdivision and developments on the transport network is provided for.
- pedestrian access and safety along vehicle accessways are prioritised by providing safe and convenient pedestrian access, including footpaths of adequate widths and gradients for all users and appropriate lighting for way-finding and safety.
- reducing the likelihood of death or serious injury on accessways by implementing speed management methods.
- encourages people to walk and cycle and reduces the risk of accidents or death on accessways for all users.
- the provision of vehicle accessways is commensurate with the scale of development.
- the transport provisions in Chapters E27 Transport (E27) and E38 Subdivision – Urban (E38) are integrated.

The evaluation process and rationale

The evaluation process is:

Step 1 – Issue, problem or opportunity identification, including the scale and significance

Step 2 – Determine the objectives of the evaluation

Step 3 – Assess the statutory background and the national and regional planning context for relevance to the evaluation

Step 4 – Development of high-level options to address the issue, problem or opportunity

Step 5 – Development of detailed options to address the issue, problem or opportunity

Step 6 – Undertake consultation based on the high-level & detailed options

Step 7 – Refine options based on feedback from consultation

Step 8 – Evaluation of detailed options

Step 9 – Recommendations and reasons

The rationale for the evaluation is to determine the most appropriate methods to address the issues identified and to achieve the objectives/outcomes.

The following high-level outcomes are of particular importance:

- address adverse environment effects, including effects on the health and safety of people
- achieve well-functioning urban environments
- future proof the city for changes in transport modes and higher level of intensification
- contribute towards addressing climate change issues

The statutory evaluation in section 5 and the national and regional planning context in section 6 of this evaluation provide the context for the evaluation that follows in sections 7 and 9.

Statutory Evaluation

Relevant sections of the RMA were assessed to determine their relevance to the evaluation of the issues. These included:

- Section 5: Purpose
- Section 6: Matters of National Importance
- Section 7: Other Matters
- Section 8: Treaty of Waitangi
- Sections 30-31:
- Sections 60 – 63, & 65 – 68
- Sections 72 – 76
- Section 79 – 80.

National and Regional Planning Context

The national and regional planning context was considered to determine its relevance to the evaluation of the options. This included:

- National Policy Statement: Urban Development 2020 – updated 2022
- The Resource Management (Enabling Housing Supply and Other Matters) 2021
- Local Government Act 1974
- Auckland Plan 2050
- Auckland Unitary Plan Regional Policy Statement 2016
- Auckland Climate Plan 2020
- The Māori Plan 2017
- Auckland Design Manual
- Transport Design Manual

- Auckland Cycling and Micro Mobility Programme Business Case 2022
- Emissions Reduction Plan 2022
- Auckland Transport Draft Parking Management Strategy 2022
- Waste Management and Minimisation Bylaw 2019.

Other considerations that have influenced the response to the issues identified are:

- Legal advice on district plan rules for emergency services access
- Residential capacity analysis
- Modelling the impact of various standards on yield
- Resource consent monitoring data and reports
- Design considerations
- Driveway accident and death statistics.

High level Options

An initial "high level" analysis of possible options was undertaken. The options considered were:

- Option 1 – Do Nothing;
- Option 2 – Statutory (i.e. plan change);
- Option 3 – Non – Statutory.

These options were assessed against the following criteria:

- Achievable/able to be implemented;
- Acceptable RMA practice;
- Timeliness – able to be implemented in a timely manner;
- Addresses the RMA issue.

Given the nature of the RMA issues that this evaluation seeks to address, Option 2 – Statutory, is the recommended option. This can be supplemented by Option 3 – Non Statutory Guidelines where appropriate (e.g. design guidance).

Development of Detailed Options

More detailed options were developed to address the RMA issues.

The detailed options provided the basis upon which stakeholder consultation was undertaken.

Consultation

Consultation on both the issues and possible options to address these has been undertaken with the following:

- Auckland Council's Planning Committee;
- Mana Whenua/iwi authorities;
- Local Boards;
- Council's advisory Panels including Disability Advisory Panel, Seniors Advisory Panel and Universal Design Forum;
- Key Stakeholders including Safe Kids, Fire & Emergency New Zealand, Property Council New Zealand, Urban Design Institute, and Kainga Ora.

Consultation has taken the form of workshops, hui, and online and in person meetings. Meeting notes have been taken and these have assisted in informing this evaluation.

Significant Changes in Response to Feedback

A number of significant changes/amendments were made both during and following the period of engagement and consultation. In summary these were as follows:

Accessible parking

- Reduced the threshold (from 20+) to 10 or more units;
- Require accessible parking in the THAB and Mixed Housing Urban zones;
- Deleted the standard requiring no accessible parking be located in a front yard in a residential zone.

Cycle parking and access

- Retention of the status quo in terms of the number of required cycle parks;
- Enable a combination of options to provide for cycle parking: A non-habitable room;
- a storage/garden shed or equivalent; a dedicated cycle parking facility; or a combination of the above;
- Added cycle dimensions and communal parking space dimensions;
- Amend the requirement that cycle parking be directly accessible from the pedestrian only access to also include the road, vehicle access or car parking area to reflect the different cycle parking options.

EV Charging

- Replaced the draft "complex" standard with a simple standard describing the key outcomes sought, with reference to the relevant standards and guidelines;
- Clarified that provision for ev charging equipment is not required for visitor parking.

Effects on the Transport Network

- Reduced thresholds for the trip generation standard for residential activities – both subdivision and land use.

Access

- Amended the thresholds at which requirements for accessways are applied to exclude dwellings that have separate pedestrian access to a road.

Evaluation of Detailed Options

An assessment has been undertaken for key decision points associated with each issue.

The following criteria was used to assess the options:

- Appropriateness;
- Effectiveness;
- Efficiency;
- Costs;
- Benefits;
- Risks.

Each assessment contains a recommended option. This option is the one that achieves the best balance in meeting the following:

- Is appropriate in addressing the resource management issue;
- Addresses the issue effectively;
- Is efficient in addressing the issue;
- Has low cost or negative impacts;
- Has high benefits or positive impacts;
- Has low risks.

Summary of Recommendations

Accessible Parking

- Use previous parking standards to calculate theoretical parking demand.
- Apply NZS 4121:2001 (non-residential) and modified NZS 4121:2001 (residential) to theoretical parking demand to determine number of accessible carparks.
- Require accessible parking for residential development 10 units or more.
- No accessible parking requirement in those business zones that previously did not require parking under the AUP (but if parking is provided, then NZS 4121:2001 applies).

Pedestrian Only Access

- Does not apply where there is vehicle access to a residential unit.
- Where pedestrian access is the only access, increase width to 1.8m.
- Require passing bay out to width of 2.5m if pedestrian only access is greater than 50m in length.
- Pedestrian only access potentially can also double as access to covered and secure bike parking.

- Gradient & lighting requirements (landscaping addressed in the residential chapters of the AUP).

Loading Space

- No changes to retail and industrial activities and all other activities, except residential.
- For residential - where there is onsite parking provided: status quo applies.
- For residential - where there is no onsite parking: 1 loading space for developments of 10 or more units.
- Existing standards for "greater than 20,000m2" continue to apply.
- Revised assessment criteria.

Heavy Vehicle Access

- Introduce Standards to relevant Land Use Chapters of the AUP, to allow determination of when on-site waste collection is required.
- Introduce a Standard in E27 to address access and safety outcomes when heavy vehicle access within a residential site is required.

Cycle Parking and Access

- Apply new cycle parking standard to all residential developments that do not have a dedicated garage or basement carpark.
- 1 space per 20 (visitor) for developments 20 units or more; 1 spaces per unit.
- Cycle parking to be covered, secure and with e-bike charging capability.
- Enable a combination of options to provide for cycle parking – a non-habitable room, a storage/garden shed or equivalent, a dedicated cycle parking facility or a combination of these.
- Cycle parking to be directly accessible from the road, vehicle access, car parking area or pedestrian only access.
- Revised assessment criteria.
- Design guidance is provided in AT's Transport Design Manual.

Electric Vehicle Charging

- Any new carpark (covered or uncovered) associated with a residential unit required to have sufficient space on the switchboard for residual current device (RCD), appropriately sized mains and the necessary conduit, cable roue and/or cable ladders in place to enable future EV charge equipment installation.

Effects on the Transport Network

- Reduce the thresholds in the trip generation standard for residential activities; subdivision – 60 dwellings, dwellings – 60 dwellings, integrated residential development – 100 units, and visitor accommodation – 60 units.
- Amendments to assessment criteria to refer to consideration of all modes of transport.

Pedestrian Safety

1. Width of pedestrian access when adjacent to a vehicle access:

- For developments between 10 – 19 dwellings or 10-19 parking spaces, the recommendation is for a minimum wide footpath of 1.35m to be required adjacent to vehicle accessways, unless alternative pedestrian access is provided to dwellings.
- For developments of 20+ dwellings or 20+ parking spaces, the recommendation is for a minimum wide footpath of 1.8m to be required adjacent to vehicle accessways, unless alternative pedestrian access is provided to dwellings.

2. Pedestrian accesses separated from trafficable areas:
    - That pedestrian access must be vertically separated from trafficable areas, including manoeuvring areas associated with parking.
3. Pedestrian accesses clear from obstruction:
    - Amend the operative provisions to identify a horizontal clear corridor requirement for all pedestrian accesses within private accessways.
4. Additional pedestrian accesses based on accessway length and/or development intensity:
    - Amend the operative provisions to identify a requirement that pedestrian accesses connect to every dwelling, when more than 20 dwellings or parking spaces are served.
5. Footpath gradients:
    - Identify a maximum gradient for all pedestrian accesses.

Fire and Emergency Access

- A Practice Note is developed and distributed to Planners and Transport Engineers that outlines the requirements of the Building Code.
- Add a Note to E27.6.4.3 and E38.8.1.2 identifying that, where vehicle accessways are provided, consideration of fire emergency vehicle access is required by the New Zealand Building Code Clause C6.

Speed Management Measures

- Amend E27 and E38 to require speed management at a maximum of 30m spacing to achieve a maximum operating speed of less than 30 km/hr.

Carriageway Widths

- Amend operative rules to address consequential changes from the recommended amendments for footpath widths.

Integration Between Chapters E27 Transport and E38 Subdivision Urban

- Ensure that the provisions of both chapters are integrated as a consequence of amendments to chapter E27.

Lighting

- Require artificial lighting for pedestrian accesses in residential zones which serve two or more dwellings where there is no vehicle access or where there are 10 or more parking spaces or 10 or more dwellings (except for dwellings which have individual pedestrian access directly from the road).
- Require artificial lighting to be measured and assessed in accordance with the appropriate standard (Standard AS/NZS1158.3.1 Lighting for Roads and Public Spaces.

- In addition, require that the efficiency and durability of the lighting is demonstrated and that it can be supplied from a reliable electrical source.

Conclusion

Section 32 of the RMA requires that before adopting any objective, policy, rule or other method, the Council shall carry out an evaluation to examine:

- The extent to which each objective is the most appropriate way to achieve the purpose of the Act; and
- Whether, having regard to their efficiency and effectiveness, the policies, rules or other methods are the most appropriate for achieving the objective.

The evaluation must also take into account:

- The benefits and costs of policies, rules, or other methods; and
- The risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules or other methods.

A section 32 analysis of options has been undertaken in accordance with section 32(1)(b) and (2) of the RMA. A number of options have been analysed.

The recommended options best achieve Part 2 of the Resource Management Act and the purpose or objectives of relevant national and regional planning documents. These include:

- National Policy Statement: Urban Development 2021, updated 2022;
- The Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021
- Resource Management Act 1991
- The Auckland Plan 2050;
- The Unitary Plan's Regional Policy Statement 2016.

PPC79 is the most efficient, effective and appropriate means of addressing the resource management issues identified.

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1 Introduction

1. This report is prepared as part of the evaluation required by Section 32 of the Resource Management Act 1991 ('the RMA') for Proposed Plan Change 79 (PPC79) to the Auckland Unitary Plan (Operative in Part) (AUP).
2. This evaluation contains two components:
   i. Issues relating to the removal of parking minimums, in conjunction with significant increases in development potential across the region (through the IPI plan change) and the need to transition to cleaner, more sustainable transport modes;
      - Accessible parking;
      - Pedestrian only access;
      - Loading spaces;
      - Heavy vehicle access;
      - Cycle parking and access;
      - Electric vehicle charging;
      - Effects on the transport network.

   ii. Issues Relating to vehicle access provisions in the residential zones:
      - The design of accessways does not prioritise pedestrian safety and convenience, resulting in poor outcomes, arising from:
        - Inadequate minimum footpath width;
        - Inadequate separation of footpaths from trafficable areas;
        - Steep footpath gradients and steps within footpaths;
        - Obstruction of footpaths by lighting poles, letterboxes, utility boxes, rubbish bins etc;
        - Poor provision of footpaths in longer accessways, and accessways serving larger numbers of residential units;
        - Absence of provisions to require adequate artificial lighting during the hours of darkness.
      - Design of accessways for vehicles:
        - Inadequate speed management measures increase safety risks for all users;
        - Whether vehicle accessways are designed for Fire and Emergency New Zealand (FENZ) vehicles, as required by the Building Code and recommended in FENZ guidance.
      - Lack of integration of the transport provisions in Chapters E27 Transport and E38 Subdivision – Urban of the AUP.
      - Removal of car parking minimums creates a risk that developments may underestimate the accessway requirements for larger developments with low parking provisions per dwelling.
3. This Section 32 Report deals with both components of PPC79.

1.1 Section 32 Evaluation

4. Section 32 of the RMA requires that before adopting any objective, policy, rule or other method, the Council shall carry out an evaluation to examine:
   - The extent to which each objective is the most appropriate way to achieve the purpose of the RMA; and
   - Whether, having regard to their efficiency and effectiveness, the policies, rules or other methods are the most appropriate for achieving the objective.
5. The evaluation must also take into account:
   - The benefits and costs of policies, rules, or other methods; and
   - The risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules or other methods.

1.2 The Evaluation Approach

6. This section outlines how the transport issues identified in section 1 of this evaluation have been evaluated. The remainder of this report will follow the evaluation approach described in the table below. In accordance with section 32(6) of the RMA and for the purposes of this report:
   i. the 'proposal' means this component of the evaluation;
   ii. the 'objectives' means the objective of the evaluation; and
   iii. the 'provisions' means the method(s) used to give effect to the above objectives – statutory or non - statutory.

Table 1: The Evaluation Approach

Sections of this report	Evaluation Approach
Section 1: Introduction	Introduction to the section 32 evaluation and a summary of the approach.
Section 2: Overview	This part of the report will explain the background and the key legislative framework underpinning the evaluation, including key data on urban form and housing capacity in Auckland. It will also provide a summary of other data and background information which have helped to develop the issues which are subject to this evaluation, including the s35 monitoring work, issues registers and the removal of the requirement for parking minimums.
Section 3: Issues	This part of the report will identify and explain the key resource management issues at stake and why there is a need to resolve them. It also addresses the scale and significance of the issues, and the data and supporting research.
Section 4: Objectives	This section determines, at a high level, the most appropriate methods for achieving the specific desired outcomes.

Section 5: The evaluation process	This part of the report examines the extent to which the objectives of the proposal (PC79) are the most appropriate way to achieve the purpose of the RMA. This section outlines the reasons for PC79 and its scope.
Section 6: Statutory evaluation	This part of the report evaluates the relevance of PC79 to Part 2 (sections 5-8) and other relevant parts / sections of the RMA.
Section 7: National and local planning context	This part of the report evaluates the relevance of PC79 against the national and local planning context.
Section 8: Development of the options to address the issues	This part of the report outlines the high level methodology and development of the options, including the information used in preparing PC79.
Section 9: Consultation	This section includes a summary of all consultation undertaken, including that feedback received from iwi authorities on PC79 (as required by section 32(4)(a) of the RMA). It also identifies key amendments to the options following consultation.
Section 10: Evaluation of detailed options	In accordance with section 32(1)(b) and (2) of the RMA, this section examines whether the identified options appropriately achieve the objectives of the AUP and the sustainable management purpose of the RMA. The options are assessed by their efficiency and effectiveness, costs, benefits and risks to resolve the RMA issue.
Section 11: conclusion	This part of the report concludes that a plan change is the most efficient, effective and appropriate means of addressing the resource management issues identified.

2 Overview

2.1 Legislative drivers

7. The Auckland Unitary Plan (Operative in Part) (AUP) promotes a quality compact urban form, which is integrated with and supports effective, efficient, and safe transport.
8. The AUP ensured that zoning would enable sufficient land-use for the next 30 years of estimated housing growth.
9. Recent government legislation is anticipated to have a significant impact on the urban form of Auckland and other major cities.
10. This key legislation is as follows:
    - National Policy Statement on Urban Design 2020 (updated May 2022) (NPS:UD);
    - Resource Management (Housing Supply and Other Matters) Amendment Act 2021 (the RMA);
    - The Resource Management Act 1991 (the RMA).
11. National policy statements provide national direction for matters of national significance relevant to achieving the sustainable management purpose of the RMA. They allow the Government to prescribe objectives and policies for matters of national significance.
12. The NPS:UD is part of the Government's Urban Growth Agenda. This Agenda states that to support productive and well-functioning cities it is important that regional policy statements and regional and district plans provide adequate opportunity for land development for business and housing to meet community needs. The stated potential benefits of flexible urban policy include higher productivity and wages, shorter commute times, lower housing costs, social inclusion, and more competitive urban land markets.
13. The NPS:UD focus is on ensuring Aotearoa New Zealand's towns and cities are well functioning urban environments that meet the changing needs of our diverse communities. For large Tier 1 councils, such as Auckland, it will enable much higher levels of housing capacity and intensification in specific areas than anticipated by the AUP. This will result in widescale and significant changes to existing zoning patterns.
14. The NPS:UD also requires the removal of overly restrictive development constraints. It contains the Medium Density Residential Standards (MDRS) which prescribe the minimum level of development for relevant residential areas. Council must give effect to the NPS:UD polices including incorporating the MDRS into the relevant AUP residential zones. This will introduce substantial changes to the zone provisions.
15. Council has prepared a package of plan changes to progress an Intensification Planning Instrument (IPI) as required by the RMA.
16. The NPS:UD and the RMA are key legislative drivers behind this evaluation.
17. Given the increase in housing capacity and intensification anticipated by the IPI plan changes to the AUP, it is important that proposed improvements to the parking, loading and trip generation provisions in the AUP are progressed at the same time as the IPI, to ensure an integrated set of residential provisions.

2.2 Removal of Parking Minimums and Plan Change 71

18. A key policy (policy 11[1]) of the NPS:UD requires Council to remove objectives, policies, rules or assessment criteria that have the effect of requiring a minimum number of car parks from the AUP and the HGI Plan. The removals were required to be undertaken by 20 February 2022 (they were removed on 11 February 2022), without using RMA Schedule 1 plan change process (i.e., members of the public are not able to make submissions on the removals). However, accessible parking minimums and parking dimensions or manoeuvring standards can continue to be specified in these plans.
19. Plan Change 71 (PC71) was undertaken to address consequential technical matters arising from the removal of car parking minimums to give effect to Policy 11 of the NPS:UD. It sought to ensure that the AUP and the Hauraki Gulf Islands (HGI) Plan continue to function as intended and that adverse effects on the transport network can continue to be assessed under the AUP once car parking minimums are removed.
20. It was anticipated as part of PC71 that the issues would be addressed as part of a separate, future evaluation, and if appropriate, a plan change.

2.3 Regional Policy Statement

21. In addition to the requirements of the NPS:UD the AUP must under section 75(3)(c) of the RMA give effect to its Regional Policy Statement (RPS). The RPS provides direction for the management of subdivision, use and development in Auckland.
22. 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. The RPS objectives relevant to this evaluation include those that anticipate a quality compact form and effective, efficient and safe transport. The RPS is discussed further below in this report.

2.4 Section 35 monitoring

23. Section 35 of the RMA requires council to monitor how effective and efficient the objectives, policies, rules and other methods of the AUP are and to take appropriate action where necessary. Section 35(2)(b) specifies that monitoring results are published every five years. Council is currently undertaking a s35 monitoring review of the AUP district plan provisions as to how well they are meeting the outcomes intended by the RPS.
24. The monitoring review examines these outcomes by RPS topic, using a number of indicators and measures to determine the efficiency and effectiveness of the objectives.
25. A full s35 monitoring review of the AUP's transport provisions is not scheduled until 2023. However, there have been a number of other s35 reviews undertaken thus far which are relevant to and have informed this evaluation.

[1] Policy 11 of the National Policy Statement on Urban Development 2022

26. The s35 monitoring report on the RPS B2.3 Quality Built Environment[2] (QBE report) is now complete and has contributed to the identification of issues, particularly with the management of pedestrian safety within accessways and streets, which is a key issue identified in this evaluation. The QBE report focuses on the MHS, MHU and THAB residential zones and provides an evidence base for PPC79.
27. The QBE report investigated the safety and functionality of site access and circulation for pedestrians and vehicles, for developments comprising at least four dwellings on a site, between April 2018 and December 2020. Pedestrian safety within a site was identified as a particular concern given the high incidence of driveway accidents involving pedestrians (particularly children). It recommended further research and analysis be undertaken to improve the outcomes being delivered by the AUP.

2.5 Consent Monitoring

28. In addition to the s35 monitoring work, Council monitored the performance of accessways serving rear sites using information and data from 145 consented developments (from an overall database of 598 consents).[3] The monitored consents were for developments containing a minimum of ten dwellings in the MHS, MHU and THAB residential zones and spanned the timeframe between November 2016 and November 2020.
29. In summary, the report found concerns with the quality of the outcomes being achieved and recommended further research and analysis. The rear sites accessway monitoring report is attached as Appendix 3.

2.6 Parallel Investigations and Issues Registers

30. Council has also been running various parallel investigations (through registers and working groups) into several transport related matters. These arose as a consequence of the removal of parking minimums from the AUP, and by the perceived poor outcomes being identified, particularly private vehicle accessways in the residential zones for rear sites. These investigations (by various departments within Council) form a repository of issues, many of which were identified and assessed as part of this evaluation. In summary these registers and other platforms are as follows:

Table 2: Investigations and Registers Identifying Transport issues

Investigations and Registers which include transport issues	Description
AUP Issues Register 2016-ongoing	Auckland Council has compiled an Issues Register since 2016 when the AUP became operative in part. Several issues raised in relation to Transport matters include the performance and useability of the

[2] Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment; July 2022. Technical Report TR2022/11 - Plans and Places Department, Auckland Council

[3] Auckland Unitary Plan – E27 Transport and E38 Subdivision Urban: Rear Sites Accessways Monitoring Report

	residential access provisions for shared driveways, specifically within Chapters E27 and E38.
Intensification Issues Resolution Group	Issues were raised by council's engineering and consent specialists (including AT, Waste Solutions, Healthy Waters and Watercare) in 2017-2018 regarding the scale, risk and long term maintenance and operation of privately owned infrastructure and how the interface between public and private assets can be managed more effectively. This work raised issues relating to private roads as well as wastewater and stormwater.
Residential Issues Project	A review of residential issues identified in the Issues Register in 2019, led to the establishment of the Residential Issues project which investigated a wide range of issues associated with specific residential activities and poor development outcomes, including performance and usability of the residential access provisions for shared driveways in Chapters E27 and E38. (Specifically, the narrow width of accessways, and overall issues for pedestrian safety.)
Shared driveways construction and design Technical Guidance	There is currently no equivalent manual to the Transport Design Manual for accessways nor is there is an engineering code of practice. Council is currently working to rectify this omission and is developing a Technical Guidance document on driveway construction and design. It is anticipated this Technical Guidance will be available from September 2022 and will be useful tool for both council and the development industry.

2.7 Previous Plan Changes

31. Plan changes 4, 14 and 16 addressed vehicle access matters among many other proposed amendments. These are discussed in FLOW's Transportation Technical Report[4].
32. In summary, the Council-initiated Plan Changes 4, 14 and 16 sought to address technical errors and anomalies within the AUP, which had potential to create ambiguity and confusion for plan users. Plan Changes 4 and 14 included amendments to the AUP's vehicle crossing and access widths and vehicle access gradients standards, which provide further clarity on the wording of standards and/ or assessment criteria. They also introduced new requirements within standards (e.g. pedestrian access or steeper gradients) to align with the AUP's subdivision provisions. With regard to Plan Change 16, specific matters of discretion and assessment criteria were introduced into the residential zone provisions, which related to the location and design of parking and access and waste storage and collection.

[4] Proposed Plan Change Auckland Unitary Plan, Transportation Technical Report, August 2022 FLOW Transportation Specialists Ltd

2.8 Auckland's urban form and housing capacity

33. As outlined in section 2.1 above, the suite of IPI plan changes as a result of the directives of the NPS:UD will result in wide scale and significant changes to the zonings across Auckland's urban zoned land, in addition to significant changes to most of the main zone provisions (objectives, policies, rules).
34. While the AUP provides for a (plan-enabled) capacity of 2,200,000 dwellings (an additional 1,730,000 dwellings when existing dwellings are accounted for), the effect of NPS:UD and MDRS provisions will accelerate capacity to a plan-enabled capacity of approximately 3,460,000 dwellings (once qualifying matters are taken into account).
35. This capacity is weighted towards Residential - Mixed Housing Suburban and Mixed Housing Urban zones, being zones for town house, duplexes and terrace type housing. Zoning for apartments is relatively modest, accounting for about 20% of the total residential capacity (although more capacity is available in Business - Mixed Use and other relevant Business zones for apartment type developments).[5]
36. Part of the development of the IPI, investigations were undertaken into what this means for urban form and housing capacity in the medium and long-term.
37. While new housing developments will occur progressively over time, based on opportunity and demand, significant changes to Auckland's urban form (based on the building typology and the size of developments) and housing capacity (enabled by the NPS:UD and MDRS) are relevant when considering how well the AUP's transport provisions relating to parking, loading and access are delivering the objectives of the RPS.
38. More than 94 percent of consents granted are for developments with fewer than 10 dwellings and 97 percent are for developments of developments of fewer than 20 dwellings. Large developments with over 60 dwellings represent less than 1 percent of the total consents granted.

[5] Section 32 evaluation – IPI Overall Evaluation Report; David Mead August 2022

3 The Issues

3.1 The issues – summary

39. The above confirmed a need for council to undertake further research and actions to achieve better quality outcomes for parking and access matters. The purpose of this was to determine the appropriateness of a future plan change (if appropriate) or other non-statutory methods to address the issues raised.

40. An overview of the identified issues is as follows:

Table 3: Summary of Issues

Issues related to the removal of parking minimums	
Accessible Parking	Relates to increasing numbers of people in Auckland with a disability and the loss of the link between the AUP and Building Act as a result of the removal of parking minimums
Pedestrian-only access	Relates to poor outcomes for safety, quality and accessibility where no vehicle access is provided
Loading Spaces	Relates to poor outcomes for loading access where no vehicle access is provided for developments, and potential conflicts with transport network functions (parking on road/footpaths, safety and visibility issues)
Heavy Vehicle Access	Relates to the need for adequate consideration of heavy vehicle access to developments (in the context of current inadequate provisions under E27), particularly waste collection vehicles, without compromising the safety of pedestrians
Bicycle Parking and Access	Responds to the current lack of requirements for quality bicycle parking facilities in the context of increasing bicycle usage, and contributes directly towards the transition to a sustainable transport system
Electric Vehicle Charging	Responds to the direction of reduction in transport emissions, provides formal requirement to future-proof developments to enable EV charging
Effects on the Transport Network	Trip generation standard is reviewed as a result of the anticipated demands and effects on the transport network which will occur as a result of the provisions of the NPS-UD and MDRS.
Issues Related to Pedestrian Safety	
Inadequate footpath widths / separation of footpaths from trafficable areas	Responds to identified poor outcomes for both accessibility and design.
Footpath design and construction	Responds to identified issues of (steep) gradients and obstructions which inhibit useability and accessibility
Vehicle Access	

Emergency vehicle access	Relates to the ability of FENZ (Fire and Emergency NZ) vehicles to access developments. Current provisions do not reference the Building Code or FENZ guidelines and
Speed management devices for private accesses	Related to pedestrian safety, a key issue identified is the management of vehicle speed for accesses greater than 30m in length. Currently no requirement for speed management devices in private accessways
Carriageway widths	Relates to the adequacy of carriageway widths for private accessways and whether the widths should be based on number of dwellings and/or parking spaces
Issues common to pedestrian and vehicle access	
Lack of integration between Chapters E27 and E38	Responds to the consequential amendments to ensure consistency between these two chapters
Lighting	Responds to pedestrian and user safety and security; current provisions do not require formal lighting plans

3.2 The issues - problem or opportunity definition and the scale and significance

3.2.1 Accessible Parking

41. Policy 11 of the NPS:UD states that the council can continue to set minimum accessible parking requirements. The AUP and the HGI Plan both refer to the Building Code for accessible parking requirements. Under the Building Code, the number of accessible parking spaces is determined using a ratio based on the number of general car parks provided. Further to this, the Building Act 2004 deems NZS 4121:2001 Design for access and mobility buildings and associated facilities to be an acceptable solution. The standard does not, however, apply to residential buildings. Table 1 provides the accessible parking requirements under NZS 4121:2001.

Table 4: Accessible parking requirements under NZS 4121:2001

Total number of car parks	Number of accessible spaces
1 – 20	Not less than 1
21 – 50	Not less than 2
For every additional 50 car parks or part of a car park	Not less than 1

42. If, following the removal of the minimum car parking requirements there are no general car park spaces proposed as part of a development, there is no requirement in the AUP and the

HGI Plan that enables the council to require a landowner or developer to provide accessible car parking.

43. Without an appropriate number and distribution of accessible parking, people with mobility disabilities may be excluded from everyday society.
44. The NPS:UD is clear that district plans can continue to require accessible parking. The removal of minimum car parking requirements from the AUP and the HGI Plan leaves a gap in the provision of accessible parking in circumstances where no general parking is provided.
45. Approximately 10 per cent of the New Zealand population has a mobility impairment[6] and it is anticipated that the numbers will increase due to an ageing population.
46. While it is anticipated that there will continue to be increases in the accessibility and availability of public transport in Auckland, there are a range of reasons why the need for accessible parking will not subsequently decrease. Approximately 70 per cent of mobility-impaired people are vehicle-users, and for many, vehicular transport is the only feasible means for traveling outside of their homes. Many people are also affected by temporary injury or illness which requires available accessible parking. Moreover, many find that their personal mobility equipment is difficult to manage on public transport. For others, personal safety is an issue, particularly when relying on public transport in the hours of darkness. A vehicle for persons with mobility issues also functions in ways that are additional to transport, including providing a place to rest, and a place to store medical supplies or equipment.
47. It is therefore considered that requiring accessible parking is an appropriate response to ensure the needs of that proportion of the community who have a mobility impairment. The removal of accessible parking provisions with 'less than adequate plans' in place within public transport systems that may otherwise be the next best alternative means of travel, is likely to cause significant distress and discomfort especially to physically disabled people and members of public with dependants in their care while travelling in and around the city.
48. Key statistics are[7]:
    - People living with a mobility impairment affects one in ten (10 percent) of Aucklanders.
    - The percentage of Aucklanders requiring accessible car parking is expected to substantially increase as older adults will soon comprise nearly one in five of Auckland's population.
    - Recent research also suggests that lack of provision of accessible parking will likely impact some vulnerable groups, including Māori and Pasifika disabled populations to a greater degree than other ethnicities.
    - With multi-generational families living within a single household, there are higher percentages of disability within Māori and Pasifika.
    - 70 percent of disabled adults are motor vehicle drivers.
    - Currently there are 42,948 active mobility parking permit holders in Auckland.
    - 1,859 active temporary mobility parking permits were issues as at June 2021.
    - Currently 23,853 registered Total Mobility customers who in 2020/2021 took a total of 410,464 trips.

[6] Memo from Elise Copeland, Principal Specialist Universal Design – NPS:UD Removal of Parking Minimums: Consequential effects on accessible parking, 30 June 2022
[7] Memo from Elise Copeland, Principal Specialist Universal Design – NPS:UD Removal of Parking Minimums: Consequential effects on accessible parking, 30 June 2022

- Lifemark estimates that just 2per cent of houses are accessible[8].

3.2.2 Pedestrian Only Access

49. The AUP does not require car parking to be provided within the THAB zone and for studios and one-bedroom dwellings within the MHU zone. Where dwellings are not provided with vehicle access or onsite parking, they rely solely on pedestrian access. This could now also apply to other sites throughout the city where no carparking/vehicle access is provided as a result of the removal of parking minimums.
50. Where a land use consent is sought in a residential zone, the AUP requires pedestrian access if there is vehicle access serving 10 or more parking spaces. The existing AUP standards for pedestrian access relate to circumstances where the pedestrian access is provided alongside a much wider vehicle access. The pedestrian access is required to be one metre wide and can be located within the formed driveway. Where a subdivision consent is sought in a residential zone, accessways serving six or more rear sites must provide separate pedestrian access which may be located within the formed driveway. The minimum width for the pedestrian access is again one metre and it must be distinguished from the vehicle carriageway. However, where no vehicle access is provided, there are currently no standards in the AUP for pedestrian access.
51. Evidence is emerging of residential developments with pedestrian only access routes of poor quality and safety. Issues include inadequate footpath access widths, poor safety outcomes (in terms of steep gradients, lack of passive surveillance and inadequate lighting), and cluttered footpaths (waste bins and other obstructions).
52. The number of developments without vehicle access and onsite parking is likely to increase across all zones as minimum car parking requirements have been removed from the AUP. Without specific standards in the AUP, there is an increased risk of poorly designed and unsafe pedestrian only access. This presents a number of challenges in terms of practical access for occupants and visitors, universal access, emergency services access and egress (fire, police and ambulance), furniture deliveries, personal and public safety, convenience and general amenity.
53. Key statistics are[9]:
    - 62 approved resource consents providing for a total of 854 dwellings were analysed to identify key characteristics associated with pedestrian only access that are the sole means of access to dwellings.
    - This included developments with no vehicle access or carparking which rely entirely on pedestrian only access (42 percent), as well as pedestrian access provided in conjunction with vehicle access and some communal parking (58 percent).
    - The scale of the developments assessed ranged from 6-62 units and were located across the former legacy council areas of Waitakere, North Shore, Manukau and Isthmus.
    - Average pedestrian only access width was 1.37m with a minimum width of 0m and a maximum width of 2m.

[8] https://www.stuff.co.nz/pou-tiaki/300425033/not-built-for-me-lack-of-accessible-homes-leaves-disabled-people-without-dignity
[9] Pedestrian Access Routes to Dwellings: Issues, Analysis and Recommendations in Support of Proposed Plan Change 79: Transport Chapter, Tamaki Makaurau Design Ope, Auckland Council, June 2022

- Pedestrian only access lengths varied from 20m to 173m with an average length of 61m.
- Pedestrian only access served on average 11 units, with a maximum of 50 units served by a single pedestrian access.
- 57 percent of the approved developments provided for some onsite carparking and had a combination of vehicle and pedestrian only access as well as a pedestrian access as the sole means of access to some of the dwellings.
- 64 percent of pedestrian only access were of a straight alignment, with the remaining 36 percent either being dog-legged of having multiple routes.
- 93 percent of the pedestrian only access routes have some form of passive surveillance or "eyes" over the pedestrian access from an active ground floor room (kitchen, dining or living room) with only 5 percent not providing passive surveillance.
- 66 percent of pedestrian only access had gentle gradients (no steeper than 1:12.5), with the remaining 34 percent having at least one flight of stairs. Of those developments with stairs, 14 percent provided a ramp alongside. However, none of these were of an accessible gradient (maximum 1:12.5) and were all 0.6m in width, being less than the minimum width required for a single person (0.65m) and also too narrow to accommodate a 24-litre council recycling bin (width 0.73m) or a single pram (0.7m).
- Fewer than half (47 percent) of approved resource consents proposed some form of lighting. For those developments where lighting was proposed, the type included bollards, sensor lights over front doors, building or wall-mounted lights, in-ground lights and free-standing light poles.
- A planted landscape buffer between a pedestrian only access route and dwellings, was provided to the majority of developments, with widths of up to 2m.
- Landscape treatment was primarily located between a dwelling and the footpath, and sometimes provided between the footpath and the boundary.
- The majority of developments (41 percent) provided less than a 0.5m wide landscape buffer between the dwelling and pedestrian only access. Widths greater than 1m were provided to 36 pe cent of developments.
- Majority of developments (55 percent) provided for legal pedestrian only access to a site via an easement (e.g. right of way easement). Other forms of legal access included a combination of COALs/JOALs and easements (18 percent). No legal mechanism for access was proposed where a land use only consent was granted.
- Only 27 percent of developments required long-term management and maintenance of pedestrian only access. This was in the form of either an incorporated society, a resident's association or a body corporate.

3.2.3 Loading Spaces

54. There are broader issues associated with property access and the potential effects of this on the transport network. Developments or land uses that do not have vehicle access for servicing, pick up and drop off (including ride share and future potential for autonomous vehicles) and deliveries will be reliant on roadside access. This may lead to conflicts with transport network functions (parked cars blocking the carriageway or parking on the footpath) and may have safety effects (such as visibility constraints, unsafe vehicle manoeuvres and effects on pedestrian safety).

55. The AUP requirements for on-site loading have relatively high development thresholds. For example, a loading space is only required for residential developments of 5000 sqm or greater. The previous on-site car parking requirements allowed some of these loading and servicing tasks to occur without specific provision being made.
56. Loading/servicing considerations should not just be limited to private vehicles but also include trucks, rubbish collection, service vehicles etc.
57. Key statistics are:
    - Vehicle trip generation research found that light service vehicle trip rates (e.g. courier, e-commerce collection/delivery, taxis) for residential developments with low parking provision are higher than residential developments with higher parking provision (0.1 vehicle/hr/dwelling vs 0.003 vehicle/hr/dwelling respectively)[10].

E-commerce globally[11]

- Increase in e-commerce globally, particularly in 2020 and 2021 due to COVID-19, though this has since moderated. Global e-commerce rose from 15per cent of total sales in 2019 to 21 percent in 2021, with this currently sitting at an estimated 22 percent of all sales.
- Further growth of shopping online is also expected due to improvements and investments in logistics, mobile device ownership and marketplace expansion.
- E-commerce stores also partner with courier service providers to deliver their products across domestic and international locations, with global parcel delivery markets anticipated to grow at a growth rate of 8 percent between 2022-2028.

E-commerce in NZ[12]

- 53 percent growth in online spending between 2019-2021 - Kiwis spent $7.67 billion spent online in NZ in 2021 - this was $5.79 billion in 2020, and $4.62 billion in 2019.
- Record parcel numbers during COVID lockdowns - NZ Post noted that the growth of online shopping in 2020 was driven by new shoppers and existing shoppers buying more often and spending more each time.
- Online shopping being increasingly popular in NZ, as seen via number of quarterly online transactions. 16.9 million transactions online in 1st quarter of 2022 - this was up 27 percent from 1st quarter 2021, 66 percent up from 1st quarter 2020 and nearly 70 percent up from 1st quarter 2019.
- Largest online shopping sectors -1st quarter 2022 vs 1st quarter 2021: Homewares, Appliances & Electronics (up 38 percent), Health & Beauty (up 37 percent), and Clothing & Footwear (up 36 percent).

3.2.4 Heavy Vehicle Access

58. Auckland Council's Waste Strategy identifies gradient, formed access width, and manoeuvring requirements for private accessways. Chapters E27 – Transport and E38 – Subdivision (Urban) do not reference these requirements.
59. Adequate consideration of waste collection for residential development is not well addressed by the operative provisions of E27. Waste collection needs to balance the competing

[10] Transport Plan Change – Private Accessways, to the Auckland Unitary Plan, Transportation Technical Report, Flow Transportation Specialists, July 2022
[11] https://www.morganstanley.com/ideas/global-ecommerce-growth-forecast-2022#
[12] https://thefulldownload.co.nz/

demands of maximising site yield (by avoiding on-site waste collection) and minimising on-street effects (by avoiding on-street waste collection), and any new provisions to the AUP need to allow these demands to be balanced on a site by site basis.

60. When on-site waste collection is required, the safety of pedestrians and manoeuvring requirements for heavy vehicles are key transport matters that need to be considered. A lack of separation between pedestrians and vehicles within private accessways is a major factor in the likelihood of injury or death for pedestrians. Likewise, waste vehicles have limited visibility when reverse manoeuvring, and therefore reversing within the site should be minimised and reversing into/out of the site should be avoided.
61. FLOW Transportation Specialists and Auckland Councils' Waste Planning Specialists, have identified that the design of private accessways to allow for on site waste collection (whether undertaken by public or private collection service) should consider the following:
    - Pedestrian safety is a priority where trucks are loading and manoeuvring, separation between pedestrians and trucks is critical.
    - If there are individual waste bins per dwelling, this requires adequate consideration of spaces within communal areas (often this is within the private accessway) for placement of bins on collection days.
    - If there are communal bins, this requires adequate consideration of spaces within communal areas (often this is within the private accessway) for storage on waste collection days.
    - Sufficient formed accessway to allow for access, loading and manoeuvring for a heavy vehicle to enter and exit the site in a forwards direction, with minimal onsite reversing required.
    - Waste collection can require up to three different trucks per collection, for rubbish, recycling and food waste.
    - On site waste collection is often required for developments of 10 or more dwellings[13] and rear sites with multiple dwellings. The smallest waste truck that is currently operated by private contract services is around 7.2 – 7.3m long and Council contracted services are typically a 10.3m long truck.
62. Key statistics are[14]:
    - The lack of a dedicated pedestrian accesses for pedestrians, separate from vehicles, results in a twofold increase in risk of driveway runovers.
    - When on site waste collection is required, the design of private accessways needs to include consideration of heavy vehicle access and pedestrian safety.
    - Around 54 percent of consented developments of 10 or more dwellings did not provide a turning head or ability for a heavy vehicle to drive through the private accessway.
    - Most developments of less than 20 dwellings do not identify the method of waste collection, or the location of the waste collection point, as part of the resource consent application.

[13] Auckland Council's Waste management and Minimisation Bylaw 2019 Subpart 3 identifies responsibilities for owners of multi-unit development (10 units or more) to provide adequate areas for storage and collection of disposed of or discarded material. Available online at https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/bylaws/docswasteminmgmtbylaw/waste-management-minimisation-bylaw-2019.pdf

[14] Transport Plan Change – Private Accessways, to the Auckland Unitary Plan, Transportation Technical Report, Flow Transportation Specialists, July 2022

- The overwhelming majority of developments of 20 or more dwellings rely on waste collection within private accessways, or within the individual site.
- Australian cities require residential developments to:
  - design for on-site waste collection at a set threshold (varies from 7 dwellings to 55 dwellings).
  - avoid reversing onto or off the site, and to minimise reverse manoeuvring within the site when on-site collection is required.
  - design for a waste collection vehicle between 8m and 10m in length.

3.2.5 Bicycle Parking and Access

63. The AUP currently does not require on-site bicycle parking until relatively high development thresholds are reached. For example, residential development of 20 or more residential units where there is no dedicated garage.
64. Large developments (particularly residential) are an issue, particularly for visitor parking, or for sites with no garaging and communal parking areas. Developers argue, and with some legitimacy, that centralised cycle parking is inconvenient for users and rely on provision of secure parking (e.g. garages or yards) for individual units. Existing standards are more appropriate for business / commercial activities rather than residential.
65. The current assessment criteria associated with non-compliance with the bicycle parking rates are not particularly robust. This allows for situations where less bicycle parking is provided than what is anticipated under the AUP.
66. Furthermore, there are no provisions in the AUP relating to the design of on-site bicycle access and secure, sheltered parking facilities for bicycles. There are numerous benefits for cyclists in providing secure and sheltered bicycle storage facilities, especially where residents do not have access to a garage.
67. Current provisions don't ensure that quality outcomes are provided for residential bicycle parking facilities.
68. Transport is Auckland's largest source of emissions. Transitioning to a sustainable transport system is critical to give effect to Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan, which aims to halve regional emissions by 2030 and transition to net zero emissions by 2050. Increasing the uptake of cycling and micromobility is a priority in Te Tāruke-ā-Tāwhiri.
69. At a regional scale, relatively considerable funding ($306 million in the RLTP) has been allocated towards improvements of the cycle network. In order to support this investment, feasible opportunities for residents to own, store and rely on cycling as an alternative mode of transport are required, particularly in the absence of any on-site car parking.
70. Auckland has a lower cycling mode share compared to other cities in New Zealand. However, around half of the car trips in Auckland are under 6km and therefore within cycling distance for many, especially with electric bikes.
71. Accelerating the delivery of safe and connected cycling and micromobility networks in Auckland will enable more people to undertake more of their daily trips through sustainable active modes, leading to reduced transport emissions and greater wellbeing. It also enhances community and transport resilience by providing affordable, fossil-fuel free travel options for people and goods.
72. There are no provisions in the AUP that provide for bicycle access to properties.

73. Key statistics are[15]:
    - Approximately 30 per cent of people in New Zealand ride bikes.
    - The Ministry of Transport Household Travel Survey shows 31 percent of New Zealanders aged over 15 have biked in the last year. Female 26 percent, male 36 percent.
    - Around half of NZ households have a bike in working order.
    - 73 million cycling trips are made per year.
    - 67 percent of those 5-12 years old, 53 percent of those 13-17 years old and 30 percent of those 18 years and over have cycled at some stage in the last year.
    - 19 percent of people reported cycling in the last month.
    - About 48,000 people ride to work (about 2.2 percent of commuters) according to the 2018 Census. Commuting by bike is increasing in many cities including Auckland, Wellington and Christchurch.
    - 2018 Census mode share - journey to work and education – 1.2% cycled and 9.2% walked or jogged[16].
    - SPARC figures show cycling is in the top five most popular leisure activities.
    - Auckland's Climate Plan 2020 seeks to achieve:
        - Cycling mode share to increase from 0.9 percent to 7 percent (2030).
        - Cycling mode share to increase from 0.9 percent to 9 percent (2050).
    - The Auckland Cycling and Micromobility Programme Business Case indicates that an investment of $2 billion will be necessary to achieve a 7 percent cycling and micro mobility mode share by 2030.

3.2.6 Electric Vehicle Charging

74. New Zealand's transition to electric vehicles is a key component of efforts to significantly reduce transport emissions. For example, Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan anticipates 40 percent of light vehicles to be electric or zero emission by 2030, and 80 percent by 2050. As charging electric vehicles typically takes a minimum of several hours, and ideally occurs at night to take advantage of off-peak power, future residential developments will need to provide spaces and charging facilities to support uptake of electric vehicles. Even if no formal car parking is provided, it is still expected that most households will own a vehicle for the medium term at least and therefore some shared charging facilities will be required. This is particularly important as Auckland Transport staff have advised that Auckland Transport does not anticipate supporting on-street charging facilities (see draft Parking Management Strategy 2022).
75. Achieving the targets included in the Te Tāruke-ā-Tāwhiri will require rapid adoption of electric and low emissions vehicles. However, at present, research shows that price, range and availability are the key impediments to vehicle take-up. An additional cost is installing safe home charging infrastructure.
76. Globally, home charging is estimated to be 90 percent of charging because it is convenient and low cost. The cost of home charging installations will depend on a range of factors,

[15] https://can.org.nz/
[16] https://at.govt.nz/about-us/reports-publications/2018-census/

including customer preference, charger technology and the existing electrical system within the dwelling or, in the case of multi-unit developments, the car parking area.

77. It is cheaper and more efficient to provide for ev charging at the time of development, rather than retro-fitting at a later date.

78. Key statistics are:

- As of Jan 2021, EVs represent 0.6 percent of NZ's light vehicle fleet[17];
- By mid-2024 Electric vehicles expected to make up 2 percent of vehicle fleet in New Zealand[18];
- The intent is to increase zero-emissions vehicles to 30 percent of the light fleet by 2035[19];
- As a comparison, Sweden is one of the leaders in terms of EVs, achieving 55 percent of the total light vehicle fleet earlier in 2022[20].

3.2.7 Effects on the Transport Network

79. Proposed Plan Change 71 - NPS:UD Removal of Car Parking Minimums – Consequential Technical Amendments was publicly notified on 24 February 2022. The plan change was essentially a technical "fix-up" because of the removal of parking minimums. However, it did also include a proposed "travel demand standard" and associated changes. The purpose of this standard was to enable a fuller assessment of the effects of activities on the transport network (than the existing trip generation standard did).

80. The proposed travel demand standard in Plan Change 71 was opposed by a number of submitters for the following reasons:

- Plan Change 71 is contrary to Policy 11 of the NPS:UD and/ or Council's statutory obligations under the RMA. Standard also has potential to undermine the 'market-led' approach to parking sought by the NPS:UD - could have the (presumably unintended) consequence of hindering the supply of parking.
- Thresholds to trigger travel demand requirements are too low, with no justification provided in relation to this threshold.
- Standard is more restrictive than current transport provisions - creates additional requirements, costs and complexity created for applicants at resource consent stage.
- Wording of travel demand standard and the outcomes sought are confusing/ unclear. The standard as currently drafted also does not apply to the restricted discretionary activities in the main residential and rural zones due to exclusions under E27.6.1A(2)*.
- *Noted that traffic effects for these zones already require assessment under current matters of discretion.
- Standard does not consider that the AUP has existing travel demand management standards for larger developments, the impacts the standard will have on non-

[17] https://www.eeca.govt.nz/assets/EECA-Resources/Research-papers-guides/REL-EECA-EV-Supply-constraints-report.pdf
[18] https://www.transport.govt.nz/area-of-interest/environment-and-climate-change/electric-vehicles-programme/
[19] The intent is to increase zero-emissions vehicles to 30 percent of the light fleet by 2035.
[20] https://cleantechnica.com/2022/04/01/swedens-plugin-ev-share-hits-56-in-march-will-accelerate/

residential activities and their current outcomes under the AUP (e.g. Educational, healthcare facilities, industrial, office, retirement villages).

- Section 32 report does not give proper consideration to alternatives that do not require a travel plan or reasons in relation to different types of activities.
- It is the Council/ AT's role to ensure that there are accessible and frequent public services and infrastructure available for public use, not the applicant/ private sector.

81. The proposed travel demand standard was withdrawn from PC71 on 28 July 2022.

82. The mandatory residential intensification provisions under the NPS:UD and MDRS will result in additional demands and effects on the transport network. Appropriate thresholds will ensure that the effects of an increased number of residential developments are considered and where necessary mitigated. This therefore reduces pressure on the transport network. This evaluation report considers whether changes to the existing Trip General Standard (E27.6.1) are necessary.

83. Key statistics are:

Table 5: ITA Thresholds for Other New Zealand TLA's[21]

Land Use	Auckland		Whangarei		Christchurch		Porirua		Selwyn	
	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2
Dwellings	n/a	100	25	50	60	120	n/a	60	50	120
Office	n/a	5000	1250	2500	1750	4000	n/a	1000	2000	4800
Retail drive through	n/a	333	300	600	500	1000	n/a	1000	250	900
Retail other	n/a	1667	1000	2000	1000	2000	n/a	1000	550	2200
Industrial warehouse	n/a	20000	5000	10000	10000	20000	n/a	10000	6500	25000
Industrial other	n/a	10000	2500	5000	5000	10000	n/a	5000	5000	12000

Note: Tier 1 is a "light" ITA and Tier 2 is a full ITA.

3.2.8 Vehicle Access

84. A summary of the issues identified through monitoring results and by council staff, the Planning Committee, Local Boards, and key stakeholders, is provided in Table 6 below:

Table 6: Vehicle Access Issues

No.	Access issues
Design of accessways for pedestrians	
1.	Pedestrian safety challenges from inadequate minimum footpath widths and separation of footpaths from trafficable areas
2.	Lack of lighting standards applying along accessways or in parking areas
3.	Accessibility challenges due to the steep footpath gradients, steps within footpaths and obstructions on footpaths

[21] District Plans of the TLA's referred to

4.	Poor provision of footpaths in longer accessways, and accessways serving larger numbers of residential units
Design of accessways for vehicles	
5.	Inadequate consideration of heavy vehicle access
6.	Whether vehicle accessways are designed for Fire and Emergency New Zealand (FENZ) vehicles, as required by the Building Code and recommended in FENZ guidance
7.	Inadequate speed management measures
8.	Poor driver sightlines at vehicle crossings
9.	Narrow carriageway widths
10.	No requirement to provide berms to enable tree planting/landscaping
11.	Lack of integration between E27 and E38 vehicle access provisions
Other matters	
12.	Poor connectivity to the wider street network
13.	Pressure for accessways and local roads to be used for overspill parking
14.	Responsibility for ownership, maintenance and use falls on the landowners and there is a risk that the level of upkeep will diminish overtime, creating unsafe and poorly functioning accessways.
15.	Construction is not subject to a Code of Practice and vehicle accesses are often not constructed to an appropriate standard
16.	Safety challenges associated with the lack of setback of dwellings, particularly front doors, from carriageways
17.	Lower standards of amenity (no provision for trees/landscaping)
18.	AUP policy framework promotes housing to address and activate streets and does not encourage passive surveillance of dwellings over accessways
19.	Lack of Auckland Council and Auckland Transport policy on the vesting of public roads

85. Issues 1-11 are discussed below. Issues 4, 8 and 10 were assessed and no changes to the AUP were recommended. Therefore they are not evaluated further in this report. However, they are considered in FLOW's transportation technical report[22]. Issues 12-19 are out of scope and the reasoning for their exclusion is discussed later in this report.

3.2.8.1 Pedestrian safety

86. Recent data indicates that pedestrian safety on accessways is of concern. The FLOW Transportation report provides a comprehensive summary of the research undertaken by both Auckland Council and Auckland Transport outlining the various factors that influence pedestrian safety within private accessways and driveways.

87. In addition, data supplied by Otago University[23] (based on data held by Statistics NZ), reviewed transport accidents causing fatalities or injury to pedestrians in Auckland driveways.

[22] Proposed Plan Change Auckland Unitary Plan, Transportation Technical Report, August 2022 FLOW Transportation Specialists Ltd

[23] de Graaf B. Customised Enquiry: ipru.statsenquiry@otago.ac.nz. Injury Prevention Research Unit, Department of Preventive and Social Medicine, University of Otago, New Zealand; 2018

Table 7: Fatalities on Auckland Driveways 2008 – 2018

Fatalities on Auckland Driveways 2008-2018	
Age	# of deaths
0-14	15
15-64	1
65+	3
TOTAL	**19**

88. Approximately 30 percent of these deaths were Pacific Islanders, 26 percent were European, 26 percent were Maori, and 15 percent were Asian or other ethnicity. More females (57 percent) were killed than males.

Table 8: Injuries on Auckland Driveways 2011 – 2020

Injuries on Auckland Driveways 2011-2020	
Age	# injured (non-fatal)
0-4	49
5-14	18
15-59	47
60+	51
TOTAL	**165**

89. Approximately 37 percent of transport accidents causing injuries on driveways were to people of European ethnicity, 24 percent were Pacific Islanders, 20 percent were Maori, 15 pe cent were Asian and 2 percent were other ethnicities. Approximately the same number of females were injured in transport accidents on driveways as males.
90. In terms of understanding the severity of injuries caused by transport accidents in driveways, the length of hospital treatment provides valuable insights. The statistics show that 33 percent of injuries were treated in one day, 23 percent required treatment for 2-3 days, 16 percent required treatment for between 4-7 days, 10 percent for 8-14 days and 15 percent of injured pedestrians required treatment for more than 15 days. Overall, this shows that 67 percent of injuries were severe enough to require overnight or longer treatments in hospitals.
91. These findings are supported by a literature review of child safety in New Zealand undertaken by Auckland Council[24] and AT's research into the reporting of harm to road users.[25] These investigations provide comparable insight into safety issues with residential accessways.

3.2.8.2 Council residential rear site monitoring data

92. Council collated data from approved resource consents within Auckland. FLOW Transportation specialists assisted Council's Plans and Places staff with the analysis of this

[24] Auckland Council Memorandum: Driveway Safety Research and Recommendations for Private Ways Workstream, Melanie McKelvie, 17 January 2022 Available as Appendix B to the FLOW Transportation Report, attached to this report.
[25] Safety of people travelling outside: Deep dive review, Viastrada, May 2021, accessed 5/5/22, available online at https://s3.documentcloud.org/documents/21825272/at-crashes-vulnerable-users-deep-dive-march-2021.pdf

data, which is summarised in their report (Council's Rear Site Monitoring report dated 2 August 2022, prepared by Council Plans and Places and FLOW Transportation Specialist staff.)

93. Data for resource consents for assessment were drawn from two sources:
    - Consented developments data set – Land Information NZ (LINZ) for parcel titles issued between November 2016 and November 2020;
    - Consented developments data set Urban Design Unit (UDU) – consents reviewed between April 2018 to May 2021.
94. Combined, the LINZ and UDU data sets generated 173 resource consent decisions in the THAB zone and 425 in the MHU and MHS zones. A sample size was determined, with advice from Council's Research and Evaluation Unit (RIMU), using a relative standard error of 10, representing 10% uncertainty. This resulted in a requirement to analyse 81 resource consent decisions in the MHU and MHS zones and 64 in the THAB zone.
95. For each sample, the full data set was set to a random order, and the required sample size then taken from the start of the randomised list. Where a resource consent decision was not suitable for analysis, it was discarded, without affecting the total sample size.
96. Due to the small sample size, the data is not meant to be statistically significant, rather to provide a qualitative insight to the aspects of residential development which are relevant to this report. It contributes to the evidence base of this report, but does not form the sole evidence base for it.
97. The data has not been derived independently, as it presents Council's perspective on the information gathered only, and does not (for example) include the perspective of the development sector or residents living within the developments identified as part of the sample.

Pedestrian Access Width

98. The AUP provides for a 1.0m pedestrian access for accessways serving 10 or more parking spaces (Table E27.6.4.3.2) or 6 or more rear sites (E38.8.1.2.1). This provides insufficient space for safe and efficient access for all potential users (e.g. people with prams and young children, people in wheelchairs, people with bulky goods/items, and different users passing each other).
99. Accessway monitoring found that:
    - 31% of developments provided a pedestrian access at least 1.5m wide;
    - Developments with between 10 to 39 dwellings accessed by a single accessway predominantly had pedestrian access widths between 1.0 – 1.4 m;
    - Footpath widths between 1.5-1.9 m were most common for developments with more than 40 dwellings per development with more than 80 % of pedestrian accesses being wider than 1.5 m;
    - The data showed only 2 non-complying developments with pedestrian access widths under 1 m wide.
100. The s35 findings showed that 35 percent 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 percent) of developments in the sample with fewer 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.

Separating pedestrian accesses from trafficable areas

101. Where a footpath is provided in a private accessway, the operative provisions allow this to be located within the carriageway. This also permits vehicles to manoeuvre/reverse over footpaths. This does not adequately provide for the safety of pedestrians and increases the risk of driveway related injuries.
102. The accessway monitoring found that:
    - 52% of developments analysed provided separation via different surface materials;
    - 12% of developments analysed provided separation via raised kerbing;
    - 7% of developments analysed provided separation via landscaping;
    - 1% of developments analysed provided separation via railing or balustrade;
    - 1 % of developments analysed provided separation via a combination of methods;
    - 1% of developments analysed provided separation via paint markings.
103. The s35 findings in contrast showed that 35 percent 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 percent) of developments in the sample with fewer 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.
104. The findings of the s35 investigation into footpaths located in the potential reversing space of cars showed:
    - 45 percent of footpaths were in the reversing space of cars;
    - 5 percent of footpaths were partially located in the reversing space of cars;
    - 50 percent of footpaths were designed to avoid the reversing space of cars;
105. There are currently no standards or guidance in the AUP to prevent this issue.

3.2.8.3 Footpath Gradients

106. The operative provisions do not specify maximum footpath gradients for footpaths within private accessways. The maximum permitted footpath gradient for public roads is 1:12.5 (8 percent). Most (around 80-85 percent) sites in the MHS, MHU and THAB zones have an average gradient of less than 12.5 percent. However, it is an issue for around 20-25 percent of sites. Both AT and council are cognisant of the difficulties of developing steep sites. Currently, applications are assessed on a case by case basis.
107. The maximum gradient permitted in the AUP for accessway for most sites is 1:5 (20 percent) (refer E27.6.4.4.1 (T157) and E38.8.1.2.1). However, for accessways this is too steep to allow access for all potential users (e.g. people with prams and young children, people in wheelchairs, people with bulky goods/items). It also creates significant issues for heavy vehicles servicing these developments.

3.2.8.4 Response to the issues

108. In response to the suite of investigations into safety data and consents, a number of options in terms of pedestrian safety were developed, and the 'tiers' of development size based on accessway to parking spaces and/or dwellings refined.

109. E27.4.3.2 sets out the specifications for vehicle access widths. The threshold or trigger for minimum width and maximum access widths is determined by the number of parking spaces served. With the removal of car parking minimums from the AUP there is a risk that the necessary width for accessways may be underestimated for larger developments with low parking provisions per dwellings.

110. The revised 'tiered' approach is as follows:

Table 9: Revised Tiered Approach

Threshold	Accessway
Tier 1	1 – 3 parking spaces; or 1 – 3 dwellings
Tier 2	4 – 9 parking spaces; or 4 – 9 dwellings
Tier 3	10 – 19 parking spaces; or 10 – 19 dwellings
Tier 4	20 or more parking spaces; or 20 or more dwellings

111. The focus of the recommendations is on requirements for pedestrian accesses to:

- be wider;
- be separated from trafficable areas;
- not exceed maximum gradients;
- be unobstructed;
- have a connection to individual dwellings.

112. While the operative provisions provide for a 1.0m pedestrian access in some private accessways, 1.0 metre does not provide sufficient space for safe and efficient access for all potential users. A width of at least 1.8m is required for two wheelchairs to pass each other and should be considered to allow for equitable access.

113. Where a pedestrian access is provided in a private accessway, the operative provisions allow this to be located within the carriageway. This also permits vehicles to manoeuvre/reverse over pedestrian accesses. This does not adequately provide for the safety of pedestrians and increases the risk of driveway-related injuries. The recommendation is for physical separation between the pedestrian access from trafficable areas, to achieve a high level of safety for pedestrians and provide for access for people of all ages and abilities.

114. Maximum pedestrian access gradient guidance is necessary to provide access for people of all ages and abilities. Current provisions do not specify maximum pedestrian access gradients for pedestrian accesses within private accessways, and the maximum gradient permitted for such accessways is too steep to allow access for all potential users.

115. The operative provisions do not require pedestrian accesses within private accessways to be designed so they are free from obstructions (such as letterboxes, poles, utility boxes etc). This puts the safety of pedestrians at risk, as they may need to walk into the carriageway to avoid obstructions. This also limits access to some users through the reduced effective width of the pedestrian access.

116. The options are to require the design of pedestrian accessways to be free of obstructions, to achieve a high level of amenity and safety for pedestrians and provide for access for people of all ages and abilities.

117. In addition, the connection of pedestrian accessways to dwellings is considered to be important to ensure safe access for all users, especially in larger developments.

3.2.8.5 Fire and Emergency Access

118. The New Zealand Building Code (NZBC) and Fire and Emergency New Zealand (FENZ) Guidance Document F5-02 CD Designers' Guide to Firefighting Operations identify gradient and formed access width requirements in situations where firefighting vehicle access is required. Table 10 compares the relevant specifications of these documents to the AUP provisions.

Table 10: Comparison of the Relevant FENZ Requirements With the AUP

Standard	FENZ Guidance Document and NZ BC	AUP E27 Transport	AUP E38 Subdivision - Urban
Maximum gradient	1:5, where 1:8 cannot be reasonably achieved	1:8 where heavy vehicle access is required (E27.6.4.4.1 (T158)	
Minimum formed accessway	4m	Table E27.6.4.3.2 and Table E38.1.2.1 permit formed widths less than 4.0m provided no tight turns are required	
Minimum vertical clearance	4m	Table E27.6.4.3.5 and Table E38.1.2.1 permit a vertical clearance of 3.8m	
Minimum Inside turning radius	6.3		Table E38.8.1.2.1, permits a minimum radius of 6.5m

119. The NZBC provides for acceptable alternative solutions but is not prescriptive. Alternative approaches are possible on a case-by-case basis. It is noted that the provisions in the Guidance Document are not mandatory.
120. A case study outlined in FLOW's transportation report describes the case where a development did not provide for a 4m formed accessway to allow FENZ vehicle access within 20m of the fire sprinkler inlet. In this instance, alternative solutions were available. This may involve a fairly simple risk assessment to prove that the noncompliance is a low risk at the lower end or require more extensive solutions such as additional fire protection measures to achieve compliance.
121. The minimum inside turning radius standard for emergency vehicles aligns with the equivalent standard in E38. However, there is no similar standard in E38. This can lead to instances where in land use led resource consent applications that this matter goes unaddressed.
122. This issue was evaluated and the recommendation made that a note be provided as part of the current provisions to direct AUP-users to the relevant The New Zealand Building Code (NZBC) and Fire and Emergency New Zealand (FENZ) Guidance Document F5-02 CD Designers' Guide to Firefighting Operations so that a design can be specifically considered in the context of emergency vehicle access requirements. This was recommended in favour of amending and/or adding new standards, because there is no reason to amend provisions when the requirements for FENZ access are determined by the Building Code, and this response may not allow for the consideration of alternative solutions.
123. Moreover, the development of a Practice Note for resource consent staff was recommended to ensure that processing planners have a guide to best practice design for developments that allow adequate and safe access for emergency vehicle.

3.2.8.6 Speed Management

124. Speed is a major factor in the severity of injury and the likelihood of death when a driver collides with a pedestrian. Impact speeds should be limited to no more than 30km/hr on private accessways to reduce the likelihood of severe injury or death.
125. The operative provisions require consideration of speed management measures (for accessways greater than 50m in length) but do not require them.
126. In the context of the Auckland data regarding fatalities and injuries on driveways between 2008-2020, the recommendation focuses on a requirement to formally introduce speed management devices on private accessways to provide a safer environment for pedestrians. Even at slow speeds, children can be seriously injured or killed by vehicles. The Safekids New Zealand Position Paper: Child driveway run over injuries26 discusses the factors contributing to injury and death of children from vehicles in private driveways. It notes that injuries from vehicles moving at slow speed over children on private driveways is a persistent problem in Aotearoa.
127. In addition, the FLOW Transportation Report refers to:
    - Auckland Transport: Transport Design Manual – Engineering Design Code;
    - Waka Kotahi Guidance;

[26] Safekids New Zealand (2011) Safekids New Zealand position paper: Child driveway run over injuries, available online at https://media.starship.org.nz/download-safekids-position-paper-child-driveway-run-over-injuries-2011%3E%3E/Safekids_NZ_Position_Paper_Child_Driveway_Run_Over_Injuries_FINAL_Web.pdf

- Research regarding run over accidents in driveways;
- Councils' Waste Planning Specialists;
- Council research on average residential site width, depth and area within walkable catchments; and
- Research paper - Investigating speed patterns and estimating speed on traffic calmed streets.

128. In summary, a number of conclusions provide a strong rationale for the introduction of formal speed management restrictions in private accessways:
    - Driveways exceeding 12 metres in length result in a twofold increase in risk for driveway runovers.
    - Speed is a major factor in the severity of injury and likelihood of death when a driver of a vehicle collides with a pedestrian.
    - Impact speeds should be limited to no more than 30 km/hr, to reduce the likelihood of serious injury or death for pedestrians.
    - Speed management measures should be spaced at no more than 60 m spacing to encourage driver speeds of 30 km/hr. Spacing of around 30m is required to achieve speeds of around 20 km/hr.
    - Council research to identify the length of a typical residential site within the walkable catchments of Rapid Transit Network (RTN) stations in Auckland identified that 92% of sites are less than 50m in length.
    - Councils' Waste Planning Specialists identified that any speed calming measures within private accessways need to consider heavy vehicle access, where on site waste collection is required.
129. 30m spacing for speed restriction devices is determined an appropriate option to reduce the risk of injury to pedestrians, with the first speed management device located no more than 15m from the site boundary with the legal road.

3.2.8.7 Carriageway Widths

130. The AUP identifies the minimum formed access widths for residential developments.
131. A number of options were considered, such as whether the operative provisions for private accessways are appropriate, whether they should be based on the number of dwellings and/or parking spaces, and also whether or not the operative rules for vehicle crossing widths are appropriate.
132. Research into the options included an analysis of the carriageway widths specified in the operative provisions and concluding that these fall within the minimum lane widths identified in Auckland Transport's engineering standards. In addition, vehicle trip generation rates for residential developments shows a high correlation between parking spaces and peak hour vehicle trip generation. However, the correlation between dwellings and peak hour vehicle trip generation is limited.
133. While it was concluded overall that the carriageway widths specified in the operative provisions are appropriate, amendments to the provisions to ensure that they reflect any changes to the requirement for pedestrian access widths would need to be undertaken, largely as a consequential change (i.e. to identify that the specified minimum and maximum

width of vehicle crossings at site boundaries excludes the width required for pedestrian accesses.)

3.2.8.8 Integration between Chapter E27 – Transport and E38 – Subdivision Urban

134. Chapter E27 Transport (E27) of the AUP includes standards to manage the design and location of access from activities and developments to the road. Chapter E38 Subdivision – Urban (E38) addresses the design and location of access to rear sites. The FLOW Transportation report outlines the inconsistencies between the two sets of standards.
135. 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.
136. The AUP incentivises applicants to access residential developments through private accessways rather than vesting roads with Auckland Transport (AT). A higher density of development can then be achieved. Vested roads must comply with AT's minimum standards as set out in the Transport Design Manual (TDM). However, the AUP minimum standards for vehicle access are lower than the TDM road standards and no engineering standards apply. While this is financially attractive for applicants, it can result in a poorer quality amenity and construction practices.
137. Furthermore, Table E27.6.4.3.2 does not limit the number of parking spaces to be accessed while E38.8.1.2.1 limits access to 10 rear sites. There are no minimum parking standards in the AUP, so a higher density can be achieved through a land use consent than by subdivision. Legacy plans typically limited the number of rear sites accessed off an accessway to no more than ten.
138. Under the AUP residential developments are also incentivised to seek resource consents for land use in the residential zones, prior to seeking consent for subdivision, as higher density development outcomes can be achieved. Subdivision around an existing development and concurrent applications for land use and subdivision consent are the most common types of subdivision in Auckland. The rear sites monitoring report found 65 percent of the consents sampled applied concurrently for land use and subdivision consents.
139. Subdivision in accordance with an approved land use consent is a restricted discretionary activity (Table E38.4.3(A14). The activity is subject to compliance with Standard E38.8.2.1 which requires the subdivision consent must comply with the land use consent.
140. Infrastructure matters are not considered at land use consent other than as matters of capacity for the '3 waters' networks and whether adequate mitigation is proposed to address any capacity issues. Infrastructure conditions relating to access can only be placed on a consent with the agreement of the applicant (Section 108AA of the RMA).
141. The changes to E27 and E38, particularly in relation to legal widths, are consequential from the changes to pedestrian access standards, and without necessary amendment would be inconsistent.

3.2.8.9 Lighting

142. The current AUP provisions require adequate lighting to be provided for 10 or more parking spaces but is largely silent on what is deemed to be 'adequate.' There is also a focus on the effects of light spill from a site, rather than consideration of lighting within a site.

143. The accessway monitoring found that:
    - 39 percent of developments provided lighting details via consent conditions.
    - 19 percent of developments did not provide any lighting details:
        - a sixth of these were for development with less than 10 parking spaces;
        - half of these provided parking via individual covered parking spaces directly adjacent to the dwellings.
    - 21 percent of developments provided bollard lighting.
    - 11 percent of developments provided streetlamp or pole lighting.
    - 9 percent of developments provided building-mounted lighting.
144. Lighting is an issue for pedestrian safety, including way-finding, health and wellbeing. Artificial lighting forms part of the comprehensive suite of options considered to improve pedestrian safety within developments and an introduction of minimum lighting standards for pedestrian access in residential zones was considered as an option.
145. A report by lighting specialists Stephenson Turner27 undertook a review of a range of recently consented multi-unit housing developments with private pedestrian and vehicle access. This provided additional context for the need for appropriate lighting within developments.
146. The report also considered a range of lighting solutions appropriate to different situations, along with their advantages and disadvantages. The overall conclusion, when considered in the context of pedestrian safety, was that several different lighting solutions are often required to suit the particular situation. Moreover, lighting should comply with the requirements of Australia/New Zealand Standard (AS/NZS1158.3.1) to ensure that it is effective and efficient and can be adequately assessed as such by appropriate specialists. This also, in effect, removes the subjectivity of what might be considered 'adequate' lighting.
147. The option to introduce a specific standard for artificial lighting requirements in residential zones where no vehicle access is provided or where there are 10 or more parking spaces or 10 or more dwellings (excluding dwellings which have separate pedestrian access directly from the front door to the road) was considered, as well as an information requirement for (consent) applicants to supply a lighting plan which can be appropriately assessed in conjunction with the design of the development.

[27] Report on Lighting Provisions for Private Pedestrian Access and Private Vehicle Access for Proposed Auckland Unitary Plan Change – Stephenson Turner; 4 August 2022 Revision 6

4 Objectives

4.1 Objectives of this Evaluation

149. The objectives of this evaluation are to determine the most appropriate methods for achieving the following outcomes:
    - a well-functioning urban environment and a reduction in climate change impacts is achieved.
    - accessible parking is provided in locations and at a level that enables people with disabilities to fully take part in everyday life.
    - the safety of pedestrians on sites with pedestrian-only access is prioritised.
    - the loading/unloading of goods can occur in a manner that does not compromise the safe and efficient functioning of the transport network including accessways, avoids or mitigates adverse effects on users and the adjacent neighbourhood and ensures land is used efficiently.
    - Heavy vehicle access to developments (in particular waste collection vehicles) are managed to ensure safety of pedestrians.
    - Auckland's transport infrastructure is future-proofed to cater for emerging changes in transport, including greater use of bicycles, including e-bikes, micro-mobility devices and electric vehicles.
    - an appropriate assessment of effects of larger scale residential subdivision and developments on the transport network is provided for.
    - pedestrian access and safety along vehicle accessways is prioritised by providing safe and convenient pedestrian access, including footpaths of adequate gradients and widths to suit most users, and implementing appropriate artificial lighting to ensure way-finding and safety.
    - reducing the likelihood of death or serious injury on accessways by implementing speed management methods.
    - encourages people to walk and cycle and reduces the risk of accidents or death on accessways for all users.
    - the provision of vehicle accessways is commensurate with the scale of development.
    - the transport provisions in Chapters E27 Transport (E27) and E38 Subdivision – Urban (E38) are integrated.

4.2 A Well-Functioning Urban Environment

150. The over-arching outcome sought of this evaluation is achieving a well-functioning urban environment.
151. This is defined in the National Policy Statement: Urban Development as:

    Urban environments that, as a minimum:

    (a) have or enable a variety of homes that:

(i) meet the needs, in terms of type, price, and location, of different households; and

(ii) enable Māori to express their cultural traditions and norms; and

(b) have or enable a variety of sites that are suitable for different business sectors in terms of location and site size; and

(c) have good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport; and

(d) support, and limit as much as possible adverse impacts on, the competitive operation of land and development markets; and

(e) support reductions in greenhouse gas emissions; and are resilient to the likely current and future effects of climate change.

152. Achieving good accessibility for all people, including those with disabilities, between housing, jobs, community services, natural spaces and open spaces and reducing greenhouse gas emissions have particular relevance to this evaluation of transport issues.

4.3 Addressing Adverse Effects

153. Issues relating to pedestrian access, loading spaces, heavy vehicle access and loading, effects of activities on the transport network and vehicle access involve addressing actual or potential adverse effects on the environment, people and communities, including their health and safety.

4.4 Future-Proofing Auckland

154. Issues relating to cycle parking and access and ev – charging equipment relate more to future-proofing and enabling the Auckland Region's shift to more sustainable transport modes and reducing greenhouse gas emissions.

4.5 Context

155. The statutory evaluation in section 6 and the national and regional planning context in section 7 of this evaluation provide the context for the evaluation that follows in sections 8 and 10.

5 The Evaluation Process and Scope

5.1 Outline of the evaluation process

156. The evaluation process is:

Step 1 – Issue, problem or opportunity identification, including the scale and significance

Step 2 – Determine the objectives of the evaluation

Step 3 – Assess the statutory background and the national and regional planning context for relevance to the evaluation

Step 4 – Development of high-level options to address the issue, problem or opportunity

Step 5 – Development of detailed options to address the issue, problem or opportunity

Step 6 – Undertake consultation based on the high-level & detailed options

Step 7 – Refine options based on feedback from consultation

Step 8 – Evaluation of detailed options

Step 9 – Recommendations and reasons.

5.2 What is in scope/ out of scope

157. Within scope of this evaluation are:

- Accessible parking;
- Pedestrian only access;
- Loading spaces;
- Heavy vehicle access;
- Cycle parking and access;
- Electric vehicle charging;
- Effects on the transport network;
- Pedestrian safety and access on footpaths adjacent to vehicle accessways;
- Speed management on vehicle accessways;
- The integration between the transport provisions in Chapters E27 Transport and E38 Subdivision – Urban in the AUP;
- Lighting for developments.

158. Out of scope of this evaluation are:

- The removal of parking minimums;
- Loading spaces in business zones;
- Cycle parking in non-residential zones;

- Applying the same standards to private accessways as apply to local roads;
- Providing for separate vehicle and pedestrian access for dwellings of 4-9 dwellings;
- Increasing minimum carriage way widths;
- Specifying a maximum access length in E27;
- Provision of berms in carriageways;
- Improving driver sight lines at vehicle crossings;
- Managing accessway construction standards;
- Strengthening neighbourhood connectivity;
- Ongoing operation and maintenance of accessways.

5.3 Reasons for out of scope

159. The reasons for considering the above issues to be out of scope are outlined below:

Table 11: Reasons for 'Out of Scope' issues

Issue	Reasons for Out of Scope
Removal of parking minimums	This was required by the NPS:UD and occurred in February 2022
Loading spaces in business zones	There is no evidence that the current requirements are not appropriate
Cycle parking in non-residential zones	There is no evidence that the current requirements are not appropriate
Applying the same standards to private accessways as apply to local roads	There is a growing trend for developers to seek resource consents for land use consent prior to seeking consent for subdivision and for vehicle access to be provided on privately owned common infrastructure. Typically, this enables a higher yield to be achieved. AT will accept roads for vesting provided they comply with the minimum standards in the TDM. Roads to vest must now meet relevant standards from The Auckland Code of Practice for Land Development and Subdivision (found on TDM) as of July 2022. The AUP does not provide any distinctions between public and private infrastructure, or provides any strategic direction, guidance or requirements for infrastructure to be held within public or private ownership. This approach is derived from the recommendations of the AUP Independent Hearing Panel (IHP). The IHIP did not make any specific comments in relation to public vs private roads. However, in relation to other types of infrastructure the IHP commented that the proposed plan is

	concerned about the effects of the activity and not who undertakes them.[28] This issue is complex and needs to be addressed at the next review of the AUP.
Providing for separate vehicle and pedestrian access for dwellings of 4-9 dwellings	Resource consent is required for medium scale developments of four or more dwellings, representing around 10 per cent of developments granted between October 2016 and March 2022. The rear site monitoring report (commenced in 2019) indicated issues were generally centred on large scale residential developments. The decision to focus on large scale developments of 10 or more dwellings was reinforced by Chapter E27 imposing higher standards on developments serving 10 or more parking spaces, including pedestrian access standards. We currently do not have the evidence to suggest that driveway safety is occurring in smaller developments (which may have fewer vehicle movements, shorter driveways, fewer residents in these environments and more space to provide pedestrian access and play spaces compared to larger scale developments). At this point in time there is insufficient evidence on where a lower threshold could or should be set. Further research is needed. Hence this evaluation has focused on large scale developments.
Increasing minimum carriage way widths	There is no evidence that the current requirements are not appropriate
Specifying a maximum access length in E27	While there is merit in controlling the maximum length of accessways, the immediate effect can be mitigated through the provision of separated footpaths and speed management measures.
Provision of berms in carriageways	The need for a berm tends to be dictated by other requirements (such as infrastructure requirements, landscaping, bin collection etc) rather than a transport specific need)
Improving driver sight lines at vehicle crossings	Managed by AT and the standards could adversely affect existing neighbouring properties and conflicts with fencing height requirements
Managing accessway construction standards	There is currently no equivalent manual to the Transport Design Manual for accessways nor is there is an engineering code of practice. Council is currently working to rectify this omission and is

[28] IHP report Topic 046-049 Section 12.2 – Page 23, 24

	developing a Technical Guidance document on driveway construction and design. It is anticipated this Technical Guidance will be available from September 2022.
Strengthening neighbourhood connectivity	Addressed in Chapter E38 which requires subdivisions to provide street and block patterns that support concepts of a liveable, walkable and connected neighbourhood.
Ongoing operation and maintenance of accessways	The ongoing operation and maintenance of accessways including lighting, landscape treatment, footpaths and carriageways is needed in perpetuity via a residents' society or other shared entity. This is to avoid the risk that the level of upkeep will diminish over time, creating unsafe and poorly functioning driveways. Addressing civil third-party issues relating to landowner responsibilities for commonly owned infrastructure is beyond the scope of the RMA and therefore this evaluation.

6 Statutory Evaluation under the Resource Management Act 1991 (RMA)

160. The sections of the RMA that are relevant to this evaluation are set out below.

6.1 Overall broad judgement against Part 2 of RMA

161. Section 5 of the RMA describes the purpose of the Act. This is:

(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and

(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

162. Addressing the transport issues identified will promote the sustainable management of natural and physical resources, including the finite physical transport resources.
163. Providing accessible parking will enhance the well-being of people with mobility disabilities and enable them to participate in everyday life.
164. Improving pedestrian access and cycle parking facilities will encourage walking and cycling.
165. The provision of loading spaces will assist in mitigating the effects of development on the safe and efficient functioning of the transport network.
166. Providing for future EV charging when residential development occurs will enable a easier transition to electric vehicles and a lower carbon way of life.
167. Addressing issues associated with pedestrian access will enhance pedestrian safety and better facilitate safer access for heavy vehicles (particularly rubbish trucks).
168. Section 7 Other matters, states:

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

(a) kaitiakitanga:

(aa) the ethic of stewardship:

(b) the efficient use and development of natural and physical resources:

(ba) the efficiency of the end use of energy:

(c) the maintenance and enhancement of amenity values:

(d) intrinsic values of ecosystems:

(e) [Repealed]

(f) maintenance and enhancement of the quality of the environment:

(g) any finite characteristics of natural and physical resources:

(h) the protection of the habitat of trout and salmon:

(i) the effects of climate change:

(j) the benefits to be derived from the use and development of renewable energy.

169. Matters 7(b), (ba), (c), (f) (i) and (j) have particular relevance to the transport issues identified.

170. Providing for improved pedestrian access, bicycle parking and future EV charging when residential development occurs is relevant to 7(b), (ba), (i) and (j).

171. Addressing accessible parking, pedestrian access, loading and issues associated with pedestrian and vehicle access will enhance the quality of the environment in terms of its functionality and safety.

172. Section 8 Treaty of Waitangi, states:

> *In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).*

173. The Treaty principles[29] include the following:

- **Partnership -** the Treaty signified a partnership between the races' and each partner had to act towards the other 'with the utmost good faith which is the characteristic obligation of partnership'. The obligations of partnership included the duty to consult Māori and to obtain the full, free, and informed consent of the correct right holders in any transaction for their land.
- **Reciprocity -** the partnership is a reciprocal one, involving fundamental exchanges for mutual advantage and benefits. Māori ceded to the Crown the kawanatanga (governance) of the country in return for a guarantee that their tino rangatiratanga (full authority) over their land, people, and taonga would be protected. Māori also ceded the right of pre-emption over their lands on the basis that this would be exercised in a protective manner and in their own interests, so that the settlement of the country could proceed in a fair and mutually advantageous manner.
- **Active protection -** the Crown's duty to protect Māori rights and interests arises from the plain meaning of the Treaty, the promises that were made at the time (and since) to

[29] Waitangi Tribunal website, justice.govt.nz

secure the Treaty's acceptance, and the principles of partnership and reciprocity. The duty is, in the view of the Court of Appeal, 'not merely passive but extends to active protection of Māori people in the use of their lands and waters to the fullest extent practicable', and the Crown's responsibilities are 'analogous to fiduciary duties'. Active protection requires honourable conduct by, and fair processes from, the Crown, and full consultation with – and, where appropriate, decision-making by – those whose interests are to be protected.

- **Equity -** The obligations arising from kawanatanga, partnership, reciprocity, and active protection required the Crown to act fairly to both settlers and Māori – the interests of settlers could not be prioritised to the disadvantage of Māori. Where Māori have been disadvantaged, the principle of equity – in conjunction with the principles of active protection and redress – requires that active measures be taken to restore the balance.
- **Equal treatment -** The principles of partnership, reciprocity, autonomy, and active protection required the Crown to act fairly as between Māori groups – it could not unfairly advantage one group over another if their circumstances, rights, and interests were broadly the same.

174. Consultation with iwi has occurred at a number of hui to address the transport issues identified. Details of this consultation are outlined in section 8 of this evaluation.

6.2 The relevance of a plan change to other sections of the RMA

175. There are relevant sections of the RMA that must be considered in context of a proposed plan change, if that is a recommended option, to address the issues. These are:
    - Section 30 – Functions of regional councils under this Act
    - Section 31 – Functions of territorial authorities under this Act
    - Section 60 – Preparation and change of regional policy statements
    - Section 61 – Matters to be considered by regional council (policy statements)
    - Section 62 – Contents of regional policy statements
    - Section 63 – Purpose of regional plans
    - Section 65 – Preparation and change of other regional plans
    - Section 66 – Matters to be considered by regional councils (plans)
    - Section 67 – Contents of regional plans
    - Section 68 – Regional rules
    - Section 72 – Purpose of district plans
    - Section 73 – Preparation and change of district plans
    - Section 74 - Matters to be considered by territorial authority
    - Section 75 – Contents of district plans
    - Section 76 – District rules
    - Section 79 – Review of policy statements and plans
    - Section 80 – Combined regional and district documents.
176. Sections 30 and 31 of the RMA specify the functions of regional and territorial authorities, and the PAUP, as a combined plan, performs both of these functions.

177. Specifically, these functions include:
    - The establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the natural and physical resources of the region;
    - In respect of any coastal marine area in the region, the control (in conjunction with the Minister of Conservation) of land and associated natural and physical resources;
    - The establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district; and
    - The control of any actual or potential effects of the use, development, or protection of land.
178. Section 80 of the RMA sets out the approach to which local authorities may prepare, implement, and administer the combined regional and district documents. Auckland Council has a combined regional and district plan - the Auckland Unitary Plan (AUP).
179. The Auckland Unitary Plan contains existing objectives, policies, rules and other methods that are of regional and district significance.
180. Any plan change (if that is determined to be the preferred option) must have regard to the operative regional policy statement provisions and is required to give effect to the regional policy statement.
181. Overall, it is considered that a plan change, if it is the preferred option for any of the identified transport issues, would assist the council in carrying out its functions set out in section 30 and 31 of the RMA to meet the requirements of the prescribed sections of the RMA set out above.

7 National and Regional Planning Context

182. The national and regional "planning" documents that are relevant to this evaluation are set out below.

7.1 Relevance to National Policy Statements

National Policy Statement: Urban Development 2020

183. The objectives and policies with particular relevance to this evaluation are:

Objective 1: New Zealand has well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.

Objective 3: Regional policy statements and district plans enable more people to live in, and more businesses and community services to be located in, areas of an urban environment in which one or more of the following apply:

(a) the area is in or near a centre zone or other area with many employment opportunities

(b) the area is well-serviced by existing or planned public transport

(c) there is high demand for housing or for business land in the area, relative to other areas within the urban environment.

Policy 1: Planning decisions contribute to well-functioning urban environments, which are urban environments that, as a minimum:

(f) have or enable a variety of homes that:

(iii) meet the needs, in terms of type, price, and location, of different households; and

enable Māori to express their cultural traditions and norms; and

(iv) have or enable a variety of sites that are suitable for different business sectors in terms of location and site size; and

(h) have good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport; and

(i) support, and limit as much as possible adverse impacts on, the competitive operation of land and development markets; and

(j) support reductions in greenhouse gas emissions; and are resilient to the likely current and future effects of climate change.

Policy 3: 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.

Policy 11: In relation to car parking:

(a) the district plans of tier 1, 2, and 3 territorial authorities do not set minimum car parking rate requirements, other than for accessible car parks; and

(b) tier 1, 2, and 3 local authorities are strongly encouraged to manage effects associated with the supply and demand of car parking through comprehensive parking management plans.

184. Objective 3 and Policy 3 will result in a significant increase in residential capacity across the Auckland region

185. Objective 1 and Policy 1 - well functioning urban environments, therefore have particular relevance to this evaluation. The need for good accessibility for all people between housing, jobs, community services, natural spaces, and open spaces, including by way of public or active transport. This has implications for all transport issues - accessible parking, pedestrian access, cycle parking and access, EV charging and the issues associated with vehicle access.

The Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021

186. The objectives and policies with particular relevance to this evaluation are:

77G *Duty of specified territorial authorities to incorporate MDRS and give effect to policy 3 or 5 in residential zones*

(1) Every relevant residential zone of a specified territorial authority must have the MDRS incorporated into that zone.

(2) Every residential zone in an urban environment of a specified territorial must give effect to policy 3 or policy 5, as the case requires, in that zone.

(3) When changing its district plan for the first time to incorporate the MDRS and to give effect to policy 3 or policy 5, as the case requires, and to meet its obligations in section 80F, a specified territorial authority must use an IPI and the ISPP.

(4) In carrying out its functions under this section, a specified territorial authority may create new residential zones or amend existing residential zones.

187. Schedule 3A contains the Medium Density Residential Standards to be incorporated into the AUP. It includes objectives, policies, subdivision requirements and density standards (building height, height in relation to boundary, setbacks, building coverage, outdoor living space, outlook space, windows to the street and landscaped area.

188. Like the NPS:UD, the MDRS will result in a significant increase in capacity across the Auckland region (IPI Section 32 report: Economic Matters[30]). The same issues relating to achieving a well – functioning urban environment as discussed above also apply to the MDRS.

7.2 Relevance to the Auckland Plan 2050

189. The table below list the priorities and directives of the Auckland Plan 2050 (Auckland's non-statutory spatial planning document) which was approved by Auckland Council on 5 June 2018.

Table 12: Auckland Plan Directives and Focus Areas

Outcome	Directives and Focus Areas	Relevance to the evaluation - i.e., how does addressing the transport issues identified assist in achieving the relevant directives and focus areas
Outcome: Belonging and Participation All Aucklanders will be part of and contribute to society, access opportunities, and have the chance to develop to their full potential.	Direction 1: Foster an inclusive Auckland where everyone belongs Direction 2: Improve health and wellbeing for all Aucklanders by reducing harm and disparities in opportunities.	It would be appropriate for any option to support these directions to ensure that inclusion and participation by disabled persons is recognised and enhanced. For example, providing accessible parking to enable a greater degree of accessibility, and recognising the varying needs for access by disabled persons (for example, those in wheelchairs). Foci of options should be on safety and access to ensure

[30] IPI Section 32 Report 'Economic Matters' Dr Doug Fairgray; August 2022

		that the wellbeing of all users is enhanced, regardless of ability, age or gender.
Outcome: Environment and cultural heritage Aucklanders preserve, protect and care for the natural environment as our shared cultural heritage, for its intrinsic value and for the benefit of present and future generations.	Direction 1: Ensure Auckland's natural environment and cultural heritage is valued and cared for Direction 4: Ensure Auckland's infrastructure is future-proofed	Encouraging the use of low/no-emission transportation methods and providing appropriate storage/parking for bicycles and electric vehicles would contribute meaningfully to achieving these outcomes. Options to future-proof proposed developments to support electric mobility device and car charging are also desirable.
Outcome: Homes and places Aucklanders live in secure, healthy, and affordable homes, and have access to a range of inclusive public places.	Direction 1: Develop a quality compact urban form to accommodate Auckland's growth Focus area 3: Improve the built quality of existing dwellings, particularly rental housing	Part of feeling 'secure' in homes also includes security and safety of access to and from a dwelling, and the experience of moving around an immediate neighbourhood or development. Options to enhance the wellbeing and safety of people and visitors could focus on introducing a greater level of overall safety in pedestrian access areas (for example though adequate footpath widths, sightlines, way-finding and lighting).
Outcome: Transport and access Aucklanders will be able to get where they want to go more easily, safely and sustainably.	Direction 1: Better connect people, places, goods and services. Direction 2: Increase genuine travel choices for a healthy, vibrant and equitable Auckland. Direction 3: Maximise safety and environmental protection. Focus area 4: Make walking, cycling and public transport preferred choices for many more Aucklanders. Focus area 6: Move to a safe transport network free from death and serious injury Focus area 7: Develop a sustainable and resilient transport system.	Options to improve general safety within the transport realm could include pedestrian and user safety, improvements to assist access and way-finding. A focus on the changing modalities of peoples' chosen transport methods could also include the introduction of better facilities to accommodate bikes, including e-bikes. The objectives of any options could include the future-proofing the transition to greater use of ev's and the contribution these will make towards addressing climate change issues.

7.3 Relevance to the Auckland Unitary Plan Regional Policy Statement

190. Table 10 below identifies the relevant Auckland Unitary Plan Regional Policy Statement objectives and policies relating to transport and assesses the relevance of each objective or policy to the evaluation.

Table 13: Auckland Unitary Plan RPS Objectives and Policies Relevant to Transport

RPS Chapter	Relevant objective or policy	Relevance to the evaluation - i.e. how does addressing the issues identified assist in achieving the relevant objectives and policies
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;* *(e) greater social and cultural vitality; and* *(g) reduced adverse environmental effects.*	Addressing the identified issues associated with: • accessible parking • pedestrian only access • loading spaces • cycle parking and access • EV charging • effects on the transport network & • pedestrian and vehicle access will contribute towards achieving a higher quality urban environment and reduce adverse environmental effects with facilitation of walking and cycling and greater use of EV's.
B2.3. A quality built environment	*B2.3.1. Objectives* *(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;* *(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.*	Same comment as above. In addition, addressing EV charging will assist the city to adapt to changing needs (i.e the move toward greater use of EV's).
	B2.3.2. Policies	Addressing the identified issues associated with:

	(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.* *(5) Mitigate the adverse environmental effects of subdivision, use and development through appropriate design including energy and water efficiency and waste minimisation.*	• accessible parking • pedestrian only access • loading spaces • cycle parking and access • EV charging • effects on the transport network • pedestrian and vehicle access will contribute towards safer access to sites/residential units for pedestrians, cyclists and people with mobility disabilities. In addition, addressing EV charging will assist the city to adapt to changing needs (i.e the move toward greater use of EV's).
B2.4. Residential growth	*B2.4.1. Objectives* *(1) Residential intensification supports a quality compact urban form.*	See comments for B2.2 Urban growth

	(2) Residential areas are attractive, healthy and safe with quality development that is in keeping with the planned built character of the area.	
	B2.4.2 Policies *(6) Ensure development is adequately serviced by existing infrastructure or is provided with infrastructure prior to or at the same time as residential intensification.* *(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.*	Addressing the identified issues associated with: • accessible parking • pedestrian only access • loading spaces • cycle parking and access • EV charging • effects on the transport network • pedestrian and vehicle access will contribute towards ensuring development is serviced by appropriate infrastructure – pedestrian and cycling infrastructure, loading spaces, EV charging equipment. This will also promote health and safety (i.e by promoting greater choices in mobility especially walking, cycling there are health benefits for individuals and communities).
B3.2. Infrastructure	***B3.2.1. Objectives*** *(1) Infrastructure is resilient, efficient and effective.* *(2) The benefits of infrastructure are recognised, including:* *(a) providing essential services for the functioning of communities, businesses and industries within and beyond Auckland;* *(d) providing for public health, safety and the well-being of people and communities;* *(3) Development, operation, maintenance, and upgrading of infrastructure is enabled, while managing adverse effects on:* *(b) the health and safety of communities and amenity values.*	Addressing the identified issues associated with: • accessible parking • pedestrian only access • loading spaces • cycle parking and access • EV charging • effects on the transport network • pedestrian and vehicle access will contribute towards ensuring efficient development, operation and maintenance of transport infrastructure, including pedestrian and cycling infrastructure, loading spaces, EV charging equipment.

	(4) The functional and operational needs of infrastructure are recognised. *(5) Infrastructure planning and land use planning are integrated to service growth efficiently.* *(6) Infrastructure is protected from reverse sensitivity effects caused by incompatible subdivision, use and development.* *(8) The adverse effects of infrastructure are avoided, remedied or mitigated.*	This also enables the integration of transport infrastructure into the wider transport network.
	B3.2.2. Policies *(1) Enable the efficient development, operation, maintenance and upgrading of infrastructure.* *(6) Enable the development, operation, maintenance and upgrading of infrastructure in areas with 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 while ensuring that the adverse effects on the values of such areas are avoided where practicable or otherwise remedied or mitigated.* *(8) Avoid, remedy or mitigate the adverse effects from the construction, operation, maintenance or repair of infrastructure.*	Addressing the identified issues associated with: • accessible parking • pedestrian only access • loading spaces • cycle parking and access • EV charging • effects on the transport network • pedestrian and vehicle access will contribute towards ensuring efficient development, operation and maintenance of transport infrastructure and avoiding or mitigating any adverse effects. This also enables the integration of transport infrastructure into the wider transport network.
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*	Addressing the identified issues associated with: • accessible parking • pedestrian only access • loading spaces • cycle parking and access • EV charging • effects on the transport network • pedestrian and vehicle access

	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.*	will contribute towards an effective, efficient and safe transport system. This is part of a well functioning urban environment as defined under the NPS:UD.
	B3.3.2. Policies *(1) Enable the effective, efficient and safe development, operation, maintenance and upgrading of all modes of an integrated transport system.* *(2) Enable the movement of people, goods and services and ensure accessibility to sites.* *(4) Ensure that transport infrastructure is designed, located and managed to:* *(a) integrate with adjacent land uses, taking into account their current and planned use, intensity, scale, character and amenity; and* *(b) provide effective pedestrian and cycle connections.* *(5) Improve the integration of land use and transport by:* *(a) ensuring transport infrastructure is planned, funded and staged to integrate with urban growth;* *(b) encouraging land use development and patterns that reduce the rate of growth in demand for private vehicle trips, especially during peak periods;* *(c) locating high trip-generating activities so that they can be efficiently served by key public transport services and routes and complement surrounding activities by supporting accessibility to a range of transport modes;* *(d) requiring proposals for high trip-generating activities which are not located in centres or on corridors or at public transport nodes to avoid,*	Addressing the identified issues associated with: • accessible parking • pedestrian only access • loading spaces • cycle parking and access • EV charging • effects on the transport network • pedestrian and vehicle access will contribute towards an effective, efficient and safe transport system. This is part of a well functioning urban environment as defined under the NPS:UD.

	remedy or mitigate adverse effects on the transport network; *(e) enabling the supply of parking and associated activities to reflect the demand while taking into account any adverse effects on the transport system; and* *(f) requiring activities adjacent to transport infrastructure to avoid, remedy or mitigate effects which may compromise the efficient and safe operation of such infrastructure.* *(7) Avoid, remedy or mitigate the adverse effects associated with the construction or operation of transport infrastructure on the environment and on community health and safety.*

7.4 Relevance to Other Plans, Policies and Strategies

7.4.1 Auckland's Climate Plan 2020

191. The core goals in Auckland's Climate Plan are to:
    - to reduce our greenhouse gas emissions by 50 percent by 2030 and achieve net zero emissions by 2050;
    - to adapt to the impacts of climate change by ensuring we plan for the changes we face under our current emissions pathway.
192. Climate actions and targets include:

    Transport

    Vehicle kilometres travelled by private vehicles reduced by 12 percent as a result of avoided motorised vehicle travel, through actions such as remote working and reduced trip lengths

    Public transport mode share to increase from 7.8 percent to 24.5 percent (2030)

    Public transport mode share to increase from 7.8 percent to 35 percent (2050)

    Cycling mode share to increase from 0.9 percent to 7 percent (2030)

    Cycling mode share to increase from 0.9 percent to 9 percent (2050)

    Walking mode share to increase from 4.1 percent to 6 percent (2030)

    Walking mode share to increase from 4.1 percent to 6 percent (2050).

193. Some of the action areas identified in the strategy include:

    Change our travel options

Action area T1: Changing the way we all travel

- *encourage the use of public transport, walking and micro-mobility devices, rather than driving*
- *shorten private vehicle trips, and fulfil several travel needs at once including for business purposes*
- *choose lower emissions vehicles when purchasing, sharing, or leasing*
- *reduce private vehicle travel and encourage lower emissions travel options by introducing pricing and parking measures.*

Improve walking infrastructure

Action area T4: Improve safety, connectivity and amenity of walking infrastructure

- *accelerate investment in high-quality, safe and connected pathways*
- *improve road crossings, where pedestrians are disadvantaged because of high exposure to traffic, long waits at signals or significant distances between controlled crossing points*
- *prioritise improvements to walking infrastructure at major destinations including public transport hubs and educational facilities.*

194. The role of Auckland Council includes advocacy, leadership, planning, funding and delivery, support and the enabling of climate action outcomes.
195. Appropriate safe and secure cycle parking and access and the ability/convenience to charge e-bikes at home is an important component of increasing cycling mode share.
196. Likewise, improving the walking infrastructure from the front door to public infrastructure will assist in increasing mode share. If the walking environment, whether it be on private property or public land is safe and enjoyable, people are more likely to walk.
197. The switch to electric vehicles will contribute towards the goal of reducing transport emissions by 50 pe cent by 2030. This is facilitated by having readily accessible and convenient EV charging capability at home.

7.4.2 The Māori Plan 2017

198. The relevant sections of the Māori Plan to this evaluation are summarised below.

The Vision

'Te Pai me te Whai Rawa o te Māori i Tāmaki Makaurau'- Healthy and Prosperous Māori in Tāmaki Makaurau.

Key Directions

Whanaungatanga Develop Vibrant Communities "A City/region that caters for diverse Māori lifestyles and experiences";

Rangatiratanga Enhance Leadership & Participation "People engaged in their communities"; Manaakitanga Improve Quality of Life "Satisfaction with our environments and standard of living"; Wairuatanga Promote Distinctive Identity "Recognised sense of identity, uniqueness and belonging"; Kaitiakitanga Ensure Sustainable Futures "lntergenerational Reciprocity";

Whanaungatanga Develop Vibrant Communities "A City/region that caters for diverse Māori lifestyles and experiences";

- Social - Access to infrastructure services/ development - Māori receive ongoing access to safe, operational and reasonably priced infrastructure services.

Rangatiratanga Enhance Leadership & Participation "People engaged in their communities";

- Social - Engagement/Consultation/ Inclusion in Decision Making - Māori are empowered to actively and meaningfully contribute to the development of Auckland, through consultation and inclusion in decision making processes and future plans.
- Social - Regional Planning and Development - Māori are recognised as playing an important role in the development of the Auckland region.

Manaakitanga Improve Quality of Life "Satisfaction with our environments and standard of living";

- Economic - Affordable Housing - Affordable and improved quality housing is a priority for increasing the standard of living and quality of life of Māori.

Kaitiakitanga Ensure Sustainable Futures "lntergenerational Reciprocity"

- "Recognised sense of identity, uniqueness and belonging";
- Social - Papakāinga Housing - Māori have access to papakāinga housing and are supported to develop papakainga housing initiatives.

199. Of particular relevance to this evaluation are:
    - Access to infrastructure services/development – in terms of accessible car parking, pedestrian access, bicycle parking and access and EV charging facilities;
    - Engagement/consultation – this has taken place through the NPS:UD hui, as outlined in section 8 of this report;
    - Improved quality of housing – in terms of pedestrian access and places to safely and securely store bicycles;
    - Access to papakainga housing – despite the removal of parking minimums, Maori as land owners/developers are still able to provide parking and accessible parking in conjunction with papakainga.

7.4.3 Auckland Design Manual 2022

200. The Auckland Design Manual (ADM) explains the importance of good design and provide tips on how to achieve good design outcomes.
201. Chapter 3 of the Auckland Code of Practice for Land Development and Subdivision July 2022, deals with cycling and Infrastructure & Appendix A Cycle Parking.
202. The cycle parking content covers:
    - Standard Dimension;
    - Bicycle parking general principles;

- Types of bicycle parking;
- Types of bicycle stands;
- Bicycle parking placement;
- Clearances.

203. Although the focus of the Auckland Code of Practice for Land Development and Subdivision July 2022 is on public cycle parking and cycling infrastructure, the code does contain relevant material for the provision of private cycle parking. This includes cycle dimensions.

204. In terms of vehicle access the ADM promotes the:

- provision of clear and efficient pedestrian access to parked vehicles;
- consideration of all potential users;
- separation of pedestrian and vehicle routes;
- prioritises pedestrian safety.

205. The ADM references the Global Street Design Guide[31] for design guidance on footpaths. This resource identifies that footpaths should be delineated by a vertical or horizontal separation from moving traffic to provide adequate buffer space and a sense of safety for pedestrians.

7.4.4 Transport Design Manual 2022

206. The Transport Design Manual (TDM) is "a set of guides, codes and specifications that are specifically created for the Auckland region based on international best practice and robust common engineering theory"[32]

207. The TDM contains best-practice guidance on aspects of the proposed plan change including accessible parking, loading zones and cycle parking. Guidance information and specifications detailed in the TDM have been used to inform some of the proposed changes to the AUP. Specifically, the Engineering Design Code for Cycling Infrastructure has relevant guidance on dimensions, standards, and access requirements for cycle parking.

208. Additional technical standards are provided to give more in-depth dimensions and specifications. The information contained within these documents is best-practice guidance for the Auckland region and is therefore particularly relevant to the evaluation.

7.4.5 Auckland Cycling and Micromobility Programme Business Case 2022

209. The Cycling and Micromobility Programme Business Case (CAM-PBC) is a new 10-year investment programme for cycling and micromobility that identifies how best to spend the $306 million that is currently allocated in the Regional Land Transport Plan (RLTP) and prioritises future investment should any additional funding become available. It works alongside and complements other cycling and multi-modal transport projects and programmes to reduce transport emissions and increase cycle and micromobility mode share.

210. Cycling and micromobility need substantial investment to be equitable with other transport modes and to realistically contribute to the mode shift aspiration of Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan. Te-Tāruke-ā-Tāwhiri: Auckland's Climate Plan seeks to reduce

[31] Auckland Design Manual: Street Design, available online at https://www.aucklanddesignmanual.co.nz/streets-and-parks/street-design
[32] https://at.govt.nz/about-us/manuals-guidelines/transport-design-manual/

Auckland's greenhouse gas emissions by 50 percent by 2030, with a 64 percent reduction in transport emissions. The resulting cycling mode share (by distance) goal is 7 percent by 2030. It is acknowledged that this target may change following the development of the Transport Emissions Reduction Plan (TERP).

211. Ensuring safe cycling infrastructure is delivered across more of the network is critical to enabling cycling in greater volumes, as safety is the number one impediment to the uptake of cycling. Additional investment in cycling and micromobility improvements is justifiable because of the positive health, emissions, and place outcomes, as well as the positive return on investment, which is (in the case of the CAM-PBC) twice that of similar scale roading projects.
212. The CAM-PBC aims to improve safe cycle access and uptake through an agile programme that includes network development, cycle parking and customer growth initiatives (e.g., marketing, cycle skills training, bike hubs) and identifies policy changes required to support its investment strategy.
213. The business case indicates that an investment of $2 billion will be necessary to achieve a 7 percent cycling and micro mobility mode share by 2030.
214. In addition to outlining the funding requirements, Attachment A of the business case provides policy recommendations for various areas. In reference to the NPS:UD, it is suggested that actions *"... pursue good outcomes for cycling and micro-mobility from the suite of AUP changes that are being progressed to implement the NPS:UD (2020) such as:*
    - *More stringent parking restrictions in areas with high public transport availability*
    - *Increase bike parking requirements in new developments*
    - *Lower threshold for "end of trip facilities" in new developments."*
215. The evaluation in relation to the issues identified, is being progressed following the removal of car parking minimums from the AUP and HGI plan in accordance with Policy 11 of the NPS:UD.
216. It is considered that the Auckland Cycling and Micromobility Business Case is of relevance to the cycle parking and access component of the evaluation, as it emphasises the current and future significance of cycling as a transport mode in Tāmaki Makaurau.
217. The evaluation intends to directly address the issue of cycle parking and access, particularly in relation to residential sites. One issue to consider is whether will be a need for an increase in the requirements for on-site cycle parking in new developments. This is aligned with the intention of the business case which emphasises the need for significant investment and prioritisation in cycling infrastructure to support modal shift.

7.4.6 Emissions Reduction Plan 2022

218. The Emissions Reduction Plan (ERP), published in May 2022, is the first national-level reduction plan for New Zealand. In relation to the proposed plan change, the ERP addresses some of the issues in detail, including EV charging and cycling.

EV Charging

219. One of the major actions identified by the ERP is increasing access to electric vehicles (EVs) as well as encouraging active modes of transport and public transport use.
220. Action 10.2.3 of the ERP sets out the key initiatives for supporting the rollout of EV charging infrastructure at a national scale. Along with providing funding for public EV chargers, the

government is intending "to develop an EV-charging infrastructure work programme to coordinate policy, investment and engagement with stakeholders". This is further supported by an initiative targeted at improving safety around EV charging by reviewing the Electricity (Safety) Regulations 2010.

221. Overall, there is a national-level direction for widespread provision of EV charging facilities to support the anticipated increase in EVs over coming years. The evaluation is aligned with this high-level strategy and intends to address the issue within Auckland's policy framework.

Cycling

222. The ERP establishes that cycling and other active transport modes are a key priority if reductions in emissions are to be achieved. At a high level, the plan notes that improvements to the cycling network are required alongside initiatives which encourage the uptake of active transport modes, including e-bikes and other micro-mobility devices. Action 10.1.2 includes the delivery of a national plan aimed at increasing the safety and attractiveness of cycling and micro-mobility as well as additional support for local government to develop network plans.

223. This aligns with the intention of the evaluation which is to consider the appropriateness of existing requirements for on-site cycling facilities for residential developments, so that cycling is a more attractive and feasible alternative to private vehicle travel.

7.4.7 Draft Auckland Parking Strategy 2022

224. The Draft Auckland Parking Strategy (2022) is intended to manage on-street parking and Council-owned off-street parking.

225. The aim of the draft strategy is to:

- to support and enable a connected city across all types of transport – walking, cycling, micro-mobility, public transport, driving;
- to support transport network functions, access for business and residents;
- to contribute to managing congestion and carbon emissions;
- to support making the region safer;
- to support businesses;
- to support population growth;
- to build a more equitable transport system;
- to support use of land as productively as possible for all Aucklanders.

226. Principles guiding the role of the road corridor, and the role of parking within the road corridor are:

i. The road network is a valuable public asset that needs to be managed to benefit all Aucklanders. Parking will be supplied and managed in a way that helps deliver:

- the Government Policy Statement for land transport 2021;
- the Auckland Plan 2050;
- Auckland's strategic objectives for transport;
- other agreed strategic planning documents, policies, and tools (Future Connect, The Roads and Streets Framework etc).

ii. To align with government and council direction we need to ensure that the way we manage parking:
    - encourages travel by sustainable and efficient transport modes such as public transport and cycling;
    - prioritises trips by modes other than private motor vehicles;
    - enables kerbside space to be utilised for more beneficial activities.

iii. Kerbside space will typically be allocated in the following priority order:
    1. To ensure and improve the safety of people using the transport system;
    2. To preserve existing property access (e.g. retain existing property accesses and also accommodate vehicle movements to access properties);
    3. To support the movement of people (e.g. allocate space for public transport, cycling, walking, freight, and general traffic in accordance with the Strategic Transport Network);
    4. Public space improvements, such as public spaces for seating, plantings and trees, and outdoor dining areas;
    5. Mobility parking;
    6. Specialty parking such as loading zones, car share parking, cycle and micro-mobility parking, motorbike parking and electric vehicle parking;
    7. General vehicle parking;
    8. General vehicle parking to accommodate overflow parking from developments that occurred after September 2013.

iv. Vehicle parking is the lowest priority use of kerbside space on the Strategic Transport Network and will be repurposed to provide space for projects that increase the movement of people and goods, except under exceptional circumstances.

227. The (Draft) Auckland Parking Strategy refers to provision and management of parking within public space. Parking in public space will be provided and managed in a way that promotes desired regional transport and land use outcomes. Relevant parking policies in the draft strategy include the following:

> *12. Cycle and micro-mobility parking*
>
> *Policy statement: AT will provide parking for bicycles (including e-bikes) and other micro-mobility devices, such as e-scooters, to support strategic objectives and ensure their useful placement.*
>
> *Policy detail:*
>
> - *Cycle and micro-mobility parking will be provided in more locations, either on the footpath zone or the kerbside lane zone. It will also be provided at all AT managed off-street parking facilities (unless impractical), including park and rides and Rapid Transit Network stations.*
> - *The locations where these facilities will be provided will be carefully chosen to emphasise: – proximity of key destinations, – proximity of cycle and micro-mobility Strategic Transport Network, – non interference with the safe movement of other modes, with a particular emphasis on walking, – where parked cycle and micro-mobility vehicles (and their users) will be safe and people on foot are not obstructed, – at appropriate*

spacing, and – with consideration for parking demand (current and future). They will be included as part of the Comprehensive Parking Management Planning (CPMP) process.

- *The type of facility chosen will consider expected duration of stay and they will be designed to be inclusive and easy to use.*
- *Private operators of shared schemes will be required to be licenced and will need to comply with the shared bicycle/scooter code of practice*

14. Electric vehicle parking

Policy statement: AT will support EV parking, to encourage uptake

Policy detail:

- *AT may provide dedicated EV car parking spaces within AT-managed parking facilities (which may include charging) and may provide dedicated car spaces on-street at key locations (without charging).*
- *Any EV parking provision will be scaled to support an increase in the overall light vehicle EV fleet, but will ultimately be removed as a dedicated provision once a majority of new light vehicles sold in Auckland are EVs.*
- *AT may facilitate third party installation of publicly available EV chargers at AT-managed off-street parking facilities (subject to formal agreement), consistent with the wider management of that parking space.*
- *AT will not typically permit EV chargers on-street, due to the need to retain future flexibility over the reallocation of space, to avoid issues with perceived privatisation/ commercialisation of road space and to avoid safety issues associated with charging cables.*

17. Loading zones

Policy statement: Where loading zones are provided, these will be managed to maximise access for the delivery of goods and services, as well as the loading and unloading of passengers.

Policy detail:

- *Loading and servicing functions should typically be provided for onsite. AT will not provide loading zone space on-street to compensate for individual businesses which have not provided this space on their property.*
- *AT will work with courier and freight companies to identify loading zone requirements (location, timing and size) and will seek to provide these to meet needs while also recognising other kerbside space needs.*
- *Loading zones may be allocated to specific purposes (such as goods vehicles) and this will be clearly communicated.*
- *Where feasible, AT will employ multi-purpose loading zones (for use by passengers and freight/deliveries), due to the simplicity of their operation. Where this occurs, courier and freight needs will generally need to be met first.*
- *AT will use survey data and industry insight to identify the appropriate time restrictions for specific loading zones, rather than a default time limit.*

- *AT may implement formal management of specific loading zones where there is significant and growing demand at key times with no opportunity for increased capacity.*
- *AT will notify the freight/courier industry of any changes to loading zones (subject to the requirements as set out in other Auckland Parking Strategy policies).*

19. Accessibility/mobility parking

Policy statement: AT will provide mobility parking for people with accessibility needs who possess and display a mobility card and will provide this parking at an appropriate ratio to enable movement by people with accessibility needs.

Policy detail:

- *Accessibility/mobility parking will be provided to support access for mobility card holders.*
- *AT will provide off-street accessibility/mobility parking at all AT managed off-street parking facilities, at a minimum based on the ratios/rates set out in the New Zealand Standard: Design for Access and Mobility – Buildings and Associated Facilities.*
- *For on-street parking, AT will provide parking for accessibility/mobility card holders in-line with demand and in accordance with the Parking Diversity Policy.*
- *Mobility parking will be located with consideration of the surrounding environment, to ensure accessible and safe journeys to nearby destinations.*
- *Time restrictions will be applied to mobility parking spaces where surrounding parking is regulated.*
- *Vehicles displaying a mobility parking permit but parking in a general parking space can remain in time restricted on-street parking spaces for double the posted time.*
- *In all on-street paid parking areas, vehicles displaying a mobility parking permit but parking in a general parking space are given one-hour free parking over and above any period paid for.*
- *Mobility parking in AT off-street parking facilities is free for the first two hours, free after 6pm on weekdays and free all weekend.*
- *In general, mobility parking will not be provided if there are existing and generally available mobility parking spaces within 200 metres of an accessible route to the destination.*
- *Mobility parking spaces will not be implemented in residential areas/streets.*
- *Use of mobility spaces by vehicles without a properly displayed card is strictly prohibited. Vehicles will be ticketed and towed.*

228. Significant polices which influence this evaluation are listed below. As the draft Parking Management Strategy is not due to be finalised until after the local government elections in October 2022, these policies may be subject to change.
    - Mobility parking spaces will not be implemented in residential areas/streets.
    - Loading and servicing functions should typically be provided for onsite. AT will not provide loading zone space on-street to compensate for individual businesses which have not provided this space on their property.
    - AT will not typically permit EV chargers on-street, due to the need to retain future flexibility over the reallocation of space, to avoid issues with perceived privatisation/

commercialisation of road space and to avoid safety issues associated with charging cables.

7.4.8 Waste Management and Minimisation Bylaw 2019

229. This bylaw sets out guidelines for the collection and management of waste, and encourages a transformation in how Aucklanders reduce, reuse and recycle.

(1) A person must dispose of or discard material in one of the following ways –

(a) to a waste collector from a public place when expressly allowed in clause 7 (for example in a kerbside recycling, food scrap or refuse bin);

(b) to a waste collector –

(i) from the premises that person owns or occupies if the material is from activity on that same premises; or

(ii) from any premises with the consent of a person who occupies that premises; (for example the collection of inorganic material or material in a container located on a premises);

230. In response to the bylaw, both the Terrace House and Apartment Building Zone and the Mixed Housing Urban Zone have a proposed residential waste management standard under the IPI Plan Change. The purpose of this standard is to provide accessible on-site storage space for waste bins and safe vehicle access for the collection of waste (refuse, recyclables and food scraps) for dwellings.

231. The standard includes a requirement that developments must provide for either a kerbside collection or a fully on-site collection. This requires:

(a) Developments using a kerbside collection must include kerbside space of at least 1m (per dwelling) contained within the road frontage of the site without impeding the public footpath. Developments that cannot comply with 2 (a) will need to comply with 2(b) and either 2(c) or 2(d).

(b) Developments of four or more dwellings using a private collection service must provide a waste management and minimisation plan.

(c) Developments using on-site collection of individual waste bins must include:

(i) a space of at least 1m2 per dwelling in an accessible location for the collection vehicle for collection of individual bins from shared driveways within the site.

(d) Developments using on-site collection of communal waste bins must include:

(i) an accessible location for collection of communal bins by a collection vehicle within the site.

232. The bylaw and resulting proposed standard has implications for Chapter E27 – Transport of the AUP and this evaluation report. In particular, where an onsite collection is proposed, there must be sufficient space on site so that an 8m heavy vehicle does not need to reverse off the

site or onto or off the road, with a maximum reverse manoeuvring distance within the site of 12m.

7.5 Other Considerations

7.5.1 Legal Advice

233. Legal advice was sought on whether the Council can introduce new district plan rules (and related policy framework) to enable adequate access to residential and business units by emergency personnel with their equipment?

234. In addition, if the Building Code already regulates access and safety to certain buildings for firefighting operations, can the Council manage pedestrian only access for other purposes under the Auckland Unitary Plan Operative in part (AUP) (e.g. furniture and goods delivery, disability access, emergency services other than firefighting such as ambulance)?

235. It was noted that the above would also benefit Fire and Emergency who advise that the Building Code standard is not adequate. Their concerns can be more fully addressed through any review of the Building Act/Code.

236. In advice dated 13 October 2021 council's lawyers commented:

> *"While the Council could attempt to introduce new district plan rules to enable adequate access to residential and business units by emergency personnel, there is a risk in doing so. The Environment Court has previously confirmed that, in relation to the control of building work, there is an important jurisdictional separation between the Building Act 2004 (BA) and the RMA. Accordingly, new district plan rules and a related policy framework to enable adequate access to residential dwellings by emergency personnel with their equipment are likely to be viewed by the Environment Court as additional to and/or more restrictive than performance criteria prescribed in the Building Code and therefore may not be considered permissible. Similar rules relating to business units may be seen as duplicating matters already regulated through the Building Code".*

7.5.2 Impacts on Yield

237. Jasmax undertook testing as part of the Quality Built Environment Workstream from October 2021 to August 2022[33].

238. The purpose of the testing was to determine potential outcomes that arise with different development standards.

239. The testing involved apartment typologies only within a typical, small and large site in the THAB operative, THAB walkable catchments proposed, and THAB outside walkable catchment proposed. The number of dwellings in these scenarios meant testing fell into a 4+ category.

240. The transport assumptions were:

- No private parking or basement;

[33] Apartments – Residential Development Testing, Jasmax, August 2022

- Vehicle access and onsite manoeuvring required for large site (8m truck) and standard site (6.3m van), vehicles must enter and exit in forward direction;
- Private waste collection;
- Bike storage allocation assumes 1m2 per bicycle with double stacked parking.

241. The differences in yield were:

Table 14: Impacts of Transport Assumptions on Yield

Scenario	Baseline Operative THAB Yield – No. of Units (Yield once transport assumptions are included)	4+ Units Outside Walkable Catchments Yield – No. of Units (Yield once transport assumptions are included)	4+ Units Inside Walkable Catchments Yield – No. of Units (Yield once transport assumptions are included)
Typical Site – THAB 18x44.5m	10(9)	12(12)	19(16)
Large Site – THAB 40x40m	34(29)	37(35)	48(48)
Small Site – THAB 10x30m	4(3)	5(4)	8(6)

242. Adding the transport assumptions, therefore does result in a loss of yield. The number of units able to be achieved is however still significantly greater than the baseline operative THAB zone.

243. Further testing of specific standards was also undertaken. The transport assumptions included the following:

- No private residential parking;
- No basement;
- Heavy vehicle access is not required;
- Private waste collection is from the street;
- Bike storage allocation assumes communal space with double stacked.

244. The differences in yield were:

Table 15: Impacts of Additional Transport Assumptions on Yield

Scenario	Baseline Operative THAB Yield – No. of Units (Yield once transport assumptions are included)	4+ Units Outside Walkable Catchments Yield – No. of Units (Yield once transport assumptions are included)	4+ Units Inside Walkable Catchments Yield – No. of Units (Yield once transport assumptions are included)
Yield in THAB zone for sites	n/a	19(17)	48(48)

245. In summary, adding the transport assumptions, therefore does result in a loss of yield. The number of units able to be achieved is however still significantly greater than the baseline operative THAB zone.

246. Multiple residential scenarios for a "typical site" (18m site frontage and 45m site depth), were tested to determine the effects on yield. The following inputs from FLOW were modelled:
    - Heavy vehicle dimensions of 7.2m, 8m, and 10.3m;
    - On site manoeuvring to avoid reversing onto/off the site;
    - Thresholds at which on-site waste collection is provided (10, 20, and 40 dwellings).
247. The implications for yield were:

Table 16: Impacts of Heavy Vehicle Access Assumptions on Yield

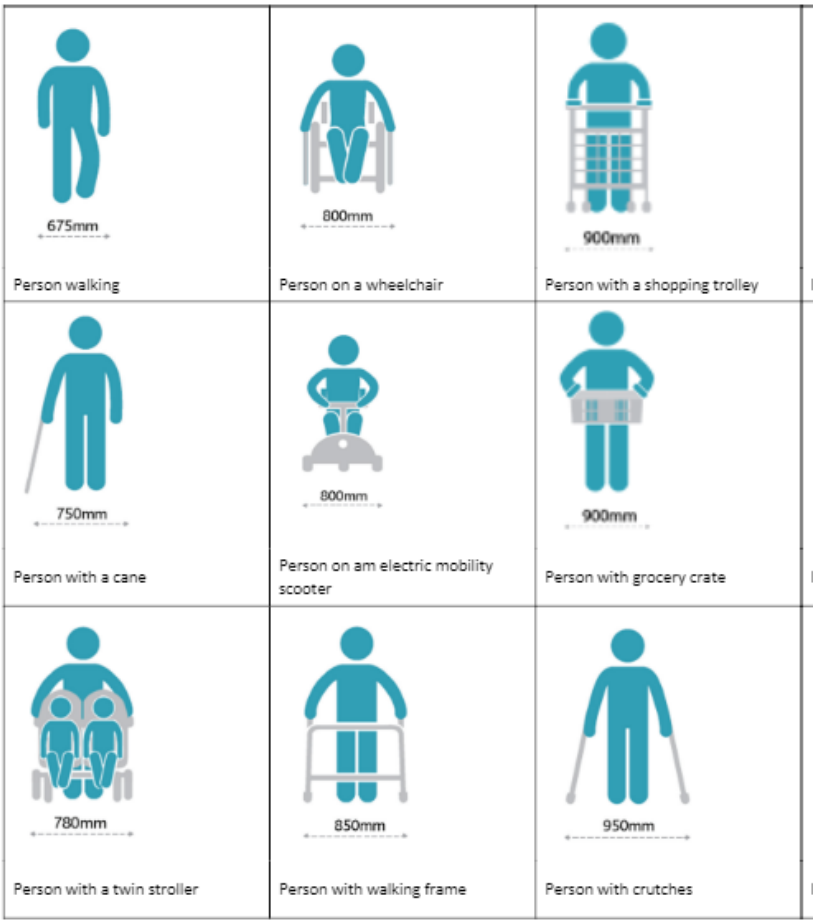
Scenario/Assumptions	Yield (units)	Reduction in Residential GFA
Baseline	21	n/a
Scenario 1 – 3.5m wide vehicle accessway with no turning head	13	20 percent
Scenario 2 - 3.5m wide vehicle accessway with turning head for 7.2m rigid truck	10	35 percent
Scenario 3 - 3.5m wide vehicle accessway with turning head for 10.2m rigid truck	8	49 percent

7.5.3 Design Considerations

7.5.3.1 Pedestrian Only Access

248. The range of potential users of a PPA and their minimum width requirements are set out in Figure 1 below[34].

[34] Auckland Design Manual. Accessible Space Dimensions.


675mm
Person walking
800mm
Person on a wheelchair
900mm
Person with a shopping trolley
750mm
Person with a cane
800mm
Person on am electric mobility scooter
900mm
Person with grocery crate
780mm
Person with a twin stroller
850mm
Person with walking frame
950mm
Person with crutches

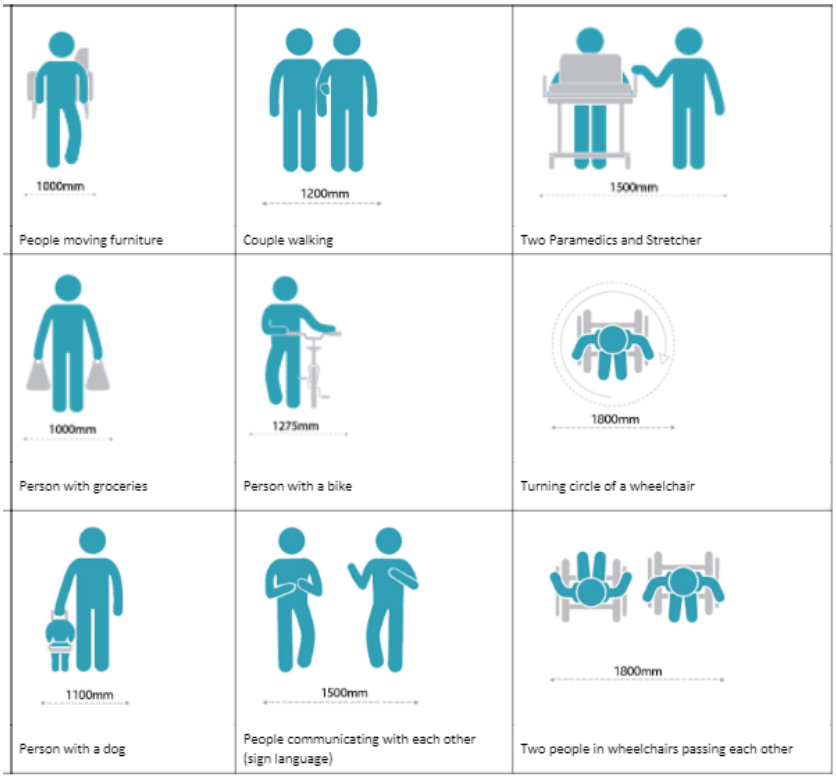

1000mm
People moving furniture
1200mm
Couple walking
1500mm
Two Paramedics and Stretcher
1000mm
Person with groceries
1275mm
Person with a bike
1800mm
Turning circle of a wheelchair
1100mm
Person with a dog
1500mm
People communicating with each other (sign language)
1800mm
Two people in wheelchairs passing each other

Figure 1: Accessible Space Dimensions

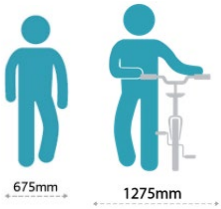
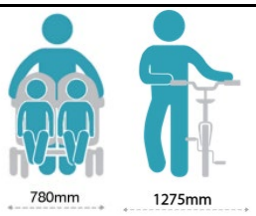
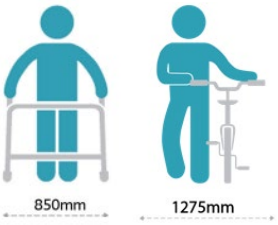
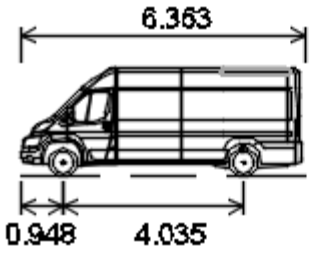
Person wheeling bike past another person	*Person wheeling bike past person with double pram*	*Person wheeling bike past person with walking frame*
		
1.875m	*2.055m*	*2.125m*

Figure 2: Possible Persona Combinations Within Pedestrian Only Access

249. A combination of different PPA users have been analysed (refer Appendix B), and found that 20 percent of user combinations can be accommodated within a 1.8m width. These are the most commonly occurring interactions between users.

7.5.3.2 Loading Spaces

250. Key dimensions for a 6.4m van and its associated tracking curve are set out below.[35]



Delivery Van

Overall Length	6.363m
Overall Width	2.050m
Overall Body Height	2.432m
Min Body Ground Clearance	0.206m
Track Width	1.810m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	7.200m

Figure 3: Key dimensions for 6.4m van tracking curve

[35] Transport Plan Change – Private Accessways, to the Auckland Unitary Plan, Transportation Technical Report, Flow Transportation Specialists, July 2022

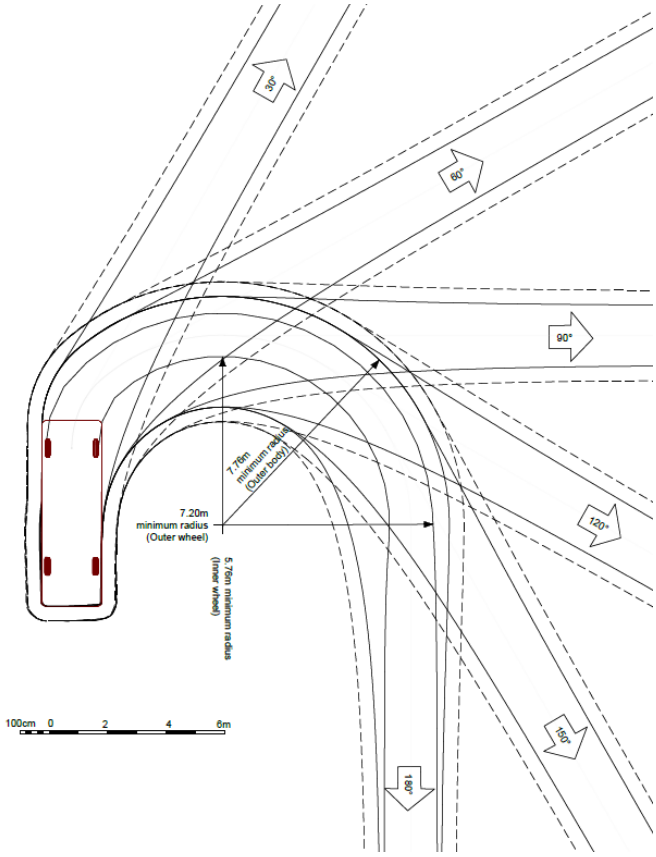


Figure 4: 6.4m van tracking curve

7.5.3.3 Cycle Parking and Access

251. A standard adult bicycle is 1.8m long, 1.25m high, and 500-700mm wide. The wheels of the bicycle range between 0.3 and 0.7m in diameter and tyres are 23–60mm wide. A standard electric bike is roughly the same dimensions[36].

252. A cargo bicycle is longer and wider (typically up to 2.5m long and 1.0m wide), but about the same height[37].

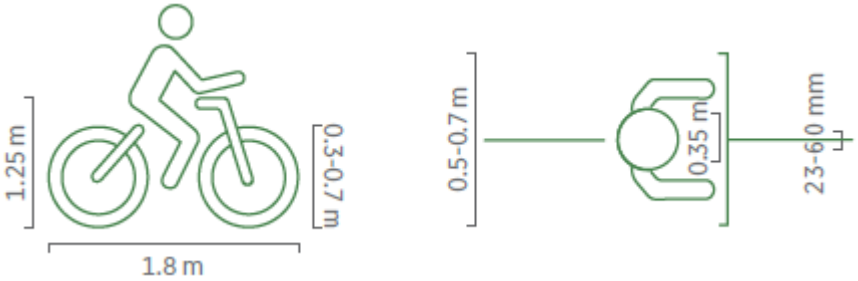


Figure 5: Basic bicycle dimensions.

[36] https://at.govt.nz/about-us/manuals-guidelines/transport-design-manual/
[37] https://at.govt.nz/about-us/manuals-guidelines/transport-design-manual/

253. Single level bicycle parking can be provided with commonly available cycle stands, such as the Sheffield stand.

Figure A.8 Sheffield bicycle stand dimensions. Left: surface mounted. Right: in ground

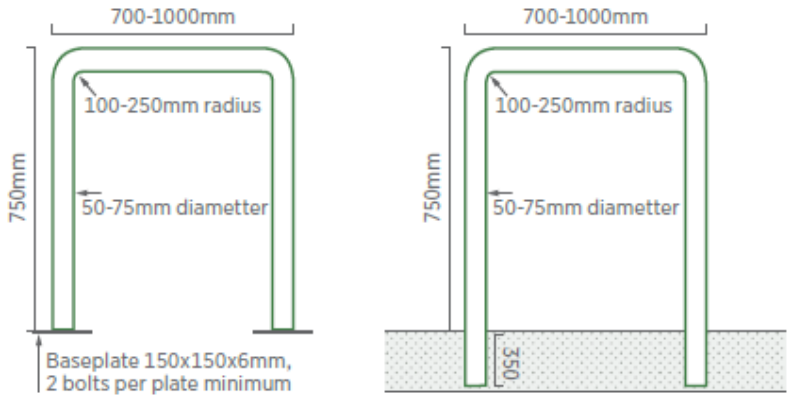


Figure 6: Typical dimensions of a Sheffield type bicycle stand.

254. Spacing dimensions38 are:
    - Lateral spacing between racks: 1.2m
    - Lateral clearance to a wall or edge: 0.9m
    - Width of an access aisle between rows: 1.2m (3.0m stand centre-to-centre)
255. Higher density cycle parking solutions such as two-tiered bicycle stands are also acceptable. Their specific design reduces the lateral spacing between bikes to about 400 mm.
256. Access aisles need to be increased to 2.2m to allow access to the second tier. Cycle parking density of two-tier cycle parking is 2.5 to 3 times that Sheffield stands.
257. Two-tiered cycle parking is not always suited for larger bikes, such as cargo bikes. Additional surface level bicycle stands to accommodate these bikes are needed.

[38] https://at.govt.nz/about-us/manuals-guidelines/transport-design-manual/

8 Development of the Options to Address the Issues

8.1 Methodology

258. The options to identify the issues were identified/developed in the following manner:

- Analysis of the problem/issue or opportunity;
- Consideration of the National and regional Planning context to determine potential options under an RMA context;
- Consideration of other plans, policies and strategies;
- Development of possible options to address the problem/issue or opportunity – both at a high level and a more detailed level;
- Option refinement as a result of consultation and analysis.

8.2 Information Used

259. The list of reports, documents and evidence that have been used in the development of this section 32 evaluation report are listed below:

Table 17: Information Used

Topic	Name of document, report, plan, memo	How did it inform the evaluation
Legislation	The following Legislation: Resource Management Act 1991	Relevant sections of the legislation are used to assess the appropriateness of the recommended option.
National and Regional Planning Context	Auckland Plan 2050 (refresh)	A refresh of Auckland's high level strategic plan – contains directives and focus areas that are relevant to transport Used to assess the appropriateness of the recommended option.
Accessible car parking	Memo from Elise Copeland, Principal Specialist Universal Design – NPS:UD Removal of Parking Minimums: Consequential effects on accessible parking, 30 June 2022	Identifies and analyses the consequential effects of the removal of car parking minimums as required by the National Policy Statement on Urban Development (NPS UD) on the ongoing provision of accessible parking.

	Provision of Accessible Car Parks in Auckland, Be.Lab, April 2022	Provides recommendations for the proposed Accessible Parking Provision for the Auckland Unitary Plan. The scope of the guidance provided is: 1. If current minimum accessible parking ratios outlined in Accessible Parking Provision brief Appendix A are sufficient. 2. Accessible car parking provision for multi-unit residential developments, which includes an appropriate number of dwellings for triggering this requirement and, what the ratio of accessible parking to general parking should be.
Pedestrian only access	Pedestrian Access Routes to Dwellings: issues, Analysis and Recommendations in Support of Proposed Plan Change X: Transport Chapter Tamaki Makaurau Design Ope, Auckland Council, June 2022	Identifies and analyses the consequential effects of the removal of car parking minimums as required by the National Policy Statement on Urban Development (NPS UD) with respect to pedestrian access routes which are the sole means of access to dwellings (referred to as 'pedestrian access routes') and make recommendations in order to support a plan change.
Vehicle and pedestrian access	Proposed Plan Change Auckland Unitary Plan, Transportation Technical Report, August 2022 FLOW Transportation Specialists Ltd	Provides specialist transportation analysis and recommendations relating to vehicle and pedestrian access and loading provisions.
	Auckland Unitary Plan Monitoring report -E27 Transport and E38 Subdivision Urban: Rear site accessways, August 2022, FLOW Transportation Specialists Ltd	Monitoring of large scale rear site developments (10 or more dwellings) to contribute to our knowledge base.
	Auckland Unitary Plan Section 35 Monitoring: B2.3 A quality built environment July 2022 Technical Report TR2022/11 Plans and Places Department, Auckland Council	Monitoring and analysis of the quality of medium (4-9 dwellings) and large scale residential developments in meeting the outcomes intended by the RPS -Quality Built Environment objectives.
	Health data relating to pedestrians injured or killed	Statistical data on pedestrians injured or killed on driveways in Auckland.

	on driveways in Auckland, July 2022, Department of Preventive and Social Medicines, University of Otago	
The Intensification Planning Instrument (IPI) plan change package	Section 32 evaluation – IPI Overall Evaluation Report; David Mead Section 32 evaluation – Policy 3 Intensification; Ryan Bradley Section 32 – Economic Matters; Dr Doug Fairgray	References to housing capacity in the context of the Intensification Planning Instrument, background to the legislative drivers.

8.3 Description of High-Level Options

260. The criteria used to select options for consideration to address the resource management issues and achieve the objectives were:
    i. Achievable/able to be implemented;
    ii. Acceptable RMA practice;
    iii. Timeliness – able to be implemented in a timely manner;
    iv. Addresses the RMA issue.

261. The assessment of possible options against the selection criteria is outlined in the table below:

Table 18: Assessment of Possible Options Against the Selection Criteria

Criteria	Option 1 – Do Nothing	Option 2 – Statutory Options	Option 3 – Non Statutory Options
Achievable/able to be implemented	Requires no change so does not require any implementation.	Requires a plan change. Can be implemented but will take time.	Requires resources to develop guidelines. Can be implemented but will take time.
Acceptable RMA practice	Do nothing is a valid approach if the purpose of the RMA and objectives of the AUP are being achieved.	Plan changes are an acceptable RMA practice to address issues in the AUP.	Likewise non-statutory methods such as guidelines, codes of practice are a valid RMA method.
Timeliness – able to be implemented in a timely manner	No plan change under this option so timeliness is not an issue.	Even simply plan changes invariably take 9mths – 1 year, excluding appeals	There are less steps in developing guidance or codes of practice. They still take time however

	There may however be issues with the time required to prepare and process resource consents if the do nothing option continues a requirement for resource consent.	which can take considerably longer. More complex plan change can take considerably longer. The transport issues identified are reasonably complex, so any plan change would not be a simple one.	and require specialists resources (as plan changes may also require). There are no appeal rights involved in these processes. Incorporated documents do however go through a statutory process.
Addresses the RMA issue	Doesn't address the RMA issues. The issues identified involve either a lack of standards (e.g ev charging) or inappropriate standard in the AUP (e.g pedestrian only access).	Would enable the RMA issues to be addressed by either amending or developing new standards for land uses and/or development.. This may trigger a requirement for resource consents when standards are not complied with.	Can address the RMA issues but have the disadvantage of being non-statutory so cannot be enforced for permitted activities. More appropriate if they work in conjunction with AUP standards.

262. All three options are valid RMA approaches and both have strengths and weaknesses as outlined above.
263. Given the nature of the RMA issues that this evaluation seeks to address, Option 2 – Statutory, is the recommended option. This could be supplemented by Option 3 – Non Statutory Guidelines where appropriate (e.g. design guidance).
264. A more detailed analysis of possible statutory options to address the RMA issues is contained in section 10 of this evaluation.

8.4 Development of detailed options

265. Draft options were developed to address the resource management issues in accordance with the process outlined under section 7.1. These options were used for the basis for the development of draft provisions. The draft provisions were used as the basis for the consultation outlined in section 8 of this report. This was an iterative process, with refinement of the draft provisions taking place during consultation.
266. In summary the draft provisions contained the following:

1. Accessible parking

- Use previous parking standards to calculate theoretical parking demand.
- Apply NZS 4121:2001 & modified standard (for residential) to theoretical parking demand to determine number of accessible carparks.

- For residential developments, accessible car parks shall only be required for developments of 20 or more residential units, unless car parking is provided on site, in which case the required number of accessible car parks shall be determined in accordance with Table 2 below.
- Accessible car parks not required in the following zones, unless car parking is provided on site, in which case the required number of accessible car parks shall be determined in accordance with Table 1 or Table 2 below, whichever is relevant:
  - all the centres;
  - THAB;
  - Mixed Housing Urban (for studio and one-bedroom dwellings).
- Table 1 – Non-residential – same as NZS:4121.
- Table 2 – Residential – modified NZS:4121 (greater number of accessible carparks).
- Accessible car parks to not be located in any required front yard in a residential zone.

2. Pedestrian only access

- Does not apply where there is vehicle access to a residential unit;
- Where pedestrian access is the only access, increase width to 1.8m;
- Require passing bay out to width of 2.5m at 50m spacing;
- Pedestrian only access to also double as access to covered and secure bike parking;
- Gradient & lighting requirements (landscaping addressed in the residential chapters of the AUP).

3. Loading spaces

- No changes to retail and industrial activities and all other activities, except residential.
- For residential - where there is onsite parking provided, the status quo applies.
- For residential - where there is no onsite parking:
  - 1 loading space for a van for developments of 10-19 units;
  - 20+ units required to provide a loading space for a truck.
- Existing standards for “greater than 20,000m2” continue to apply.
- No loading space in front yard of residential zones.
- Revised assessment criteria.

4. Heavy vehicle access

- Linked to new onsite waste management standard.
- Developments must provide for either a kerbside collection (following the council methodology) or a fully on-site collection.
- Developments using a kerbside collection must include adequate clear and unobstructed kerbside space of at least 1m (per dwelling) without impeding the public footpath.

- Where kerb-side collection not possible:
  - Sufficient space must be provided on the site so an 8m heavy vehicle does not need to reverse off the site or onto or off the road, with a maximum reverse manoeuvring distance within the site of 12m, where on site waste management is required.

5. Cycle parking and access

- Apply new cycle parking standard to all residential developments that do not have a dedicated garage or basement carpark:
  - 1 space per 10 (visitor);
  - 2 spaces per unit.
- Cycle parking to be covered, secure and with e-bike charging capability.
- Access –pedestrian only access to also double as access to cycle parking facilities.
- Increase in no. of spaces provides flexibility to accommodate other mobility devices e.g. mobility scooters, micro – mobility devices.
- Revised assessment criteria.
- Design guidance is provided in AT's Code of Practice for Land Dev & Sub.

6. EV Charging

- Any new carpark (covered or uncovered) associated with a residential unit required to have the appropriate electrical capacity & cable ladders in place to enable future EV charger installation.
- 50 percent of covered visitor car park bays to also have the appropriate electrical capacity & cable ladders in place to enable future EV charger installation

7. Effects on the transport network

- Revised threshold for the trip generation standard for residential activities only (this was in response to submissions on PC71) as well as amendments to assessment criteria.

8. Pedestrian Access

- Changes to design of access for pedestrians:
  - Tier 3 – min footpath width of 1.35m;
  - Tier 4 - min footpath width of 1.8m;
  - Max footpath gradient standards (1:20 (5%) over a max length of 45m, max footpath gradient of1:12.5 (8%) over a mx length of 9m);
  - Footpaths to be unobstructed;
  - Footpaths to be provided for access longer than 100m;
  - Tier 4 only – footpaths to be provided on both side of an access.

9. Vehicle Access

- New triggers for determining access thresholds:
  - Retain number of car parking spaces as this is an accurate determinant of peak hour vehicle trip generation for medium density development;
  - Add dwellings as a new trigger as this addresses situations where no or low number of car parking is provided relative to the number of dwellings.
- Revised tiered approach for access based on the scale of development (based on either the number of parking spaces or number of dwellings).
- Improvements to vehicle access management:
  - Speed management requirements for access in excess of 30m;
  - Emergency vehicle access (Note in the AUP);
- Provision for waste vehicle movements.

10. Lighting

- Standards based on Standard AS/NZS1158 3.1 Lighting for Roads and Public Spaces.
- Appropriate P category depends on type of access:
  - Private pedestrian access;
  - Connecting elements;
  - Car parking areas;
  - Varying standards for Tiers 2-4.
- Lighting plan requirements for private pedestrian access serving 4 or more dwellings or access serving 10 or more parking spaces or dwellings in MHS, MHU and THAB zones.

9 Consultation

267. Consultation with iwi, key stakeholders, local boards and council departments took place between July 2021 and August 2022.
268. The objective of early consultation initiatives was to focus on initial options which then helped to shape the preferred options.

9.1 Relevant Sections of Resource Management Act and Local Government Act

269. Schedule 1 of the Resource Management Act 1991 contains the process for the preparation, change and review of policy statements and plans.
270. Section1A – Mana Whakahono a Rohe, requires that a proposed policy statement or plan must be prepared in accordance with any applicable Mana Whakahono a Rohe. At the time of preparing this plan change, Auckland Council had not entered into any Mana Whahono a Rohe with iwi. One request had been received however from Nga Tai Ki Tāmaki and a Mana Whakahono a Rohe is in the process of being developed.
271. During the preparation of a proposed policy statement or plan, the local authority concerned shall consult—

(a) the Minister for the Environment; and

(b) those other Ministers of the Crown who may be affected by the policy statement or plan; and

(c) local authorities who may be so affected; and

(d) the tangata whenua of the area who may be so affected, through iwi authorities; and

(e) any customary marine title group in the area.

(2) A local authority may consult anyone else during the preparation of a proposed policy statement or plan.

(4) In consulting persons for the purposes of subclause (2), a local authority must undertake the consultation in accordance with section 82 of the Local Government Act 2002.

272. Section 82 of the Local Government Act outlines the principles of consultation. These are:

82(1) Consultation that a local authority undertakes in relation to any decision or other matter must be undertaken, subject to subsections (3) to (5), in accordance with the following principles:

(a) that persons who will or may be affected by, or have an interest in, the decision or matter should be provided by the local authority with reasonable access to relevant information in a manner and format that is appropriate to the preferences and needs of those persons:

(b) that persons who will or may be affected by, or have an interest in, the decision or matter should be encouraged by the local authority to present their views to the local authority:

(c) that persons who are invited or encouraged to present their views to the local authority should be given clear information by the local authority concerning the purpose of the consultation and the scope of the decisions to be taken following the consideration of views presented:

(d) that persons who wish to have their views on the decision or matter considered by the local authority should be provided by the local authority with a reasonable opportunity to present those views to the local authority in a manner and format that is appropriate to the preferences and needs of those persons:

(e) that the views presented to the local authority should be received by the local authority with an open mind and should be given by the local authority, in making a decision, due consideration:

(f) that persons who present views to the local authority should have access to a clear record or description of relevant decisions made by the local authority and explanatory material relating to the decisions, which may include, for example, reports relating to the matter that were considered before the decisions were made.

(2) A local authority must ensure that it has in place processes for consulting with Māori in accordance with subsection (1).

Section 4A Further pre-notification requirements concerning iwi authorities

(1) Before notifying a proposed policy statement or plan, a local authority must—

(a) provide a copy of the relevant draft proposed policy statement or plan to the iwi authorities consulted under clause 3(1)(d); and

(b) have particular regard to any advice received on a draft proposed policy statement or plan from those iwi authorities.

(2) When a local authority provides a copy of the relevant draft proposed policy statement or plan in accordance with subclause (1), it must allow adequate time and opportunity for the iwi authorities to consider the draft and provide advice on it.

9.2 Consultation with Mana whenua / iwi authorities

273. Clause 3(1)(d) of Schedule 1 to the RMA, states that local authorities shall consult with tangata whenua of the area who may be so affected, through iwi authorities, during the preparation of a proposed policy statement or plan.
274. Due to the nature and scale of PPC79 and the fact that it affects the entire region, all iwi were consulted with on the content of the plan change.
275. Clause 4A of Schedule 1 to the RMA states that local authorities must:

- Provide a copy of a draft proposed policy statement or plan to iwi authorities to consider;
- Have regard to feedback provided by iwi authorities on the draft proposed policy statement or plan;
- Provide iwi authorities with sufficient time to consider the draft policy statement or plan.

276. In addition to the above, recent legislation changes to the RMA introduced section 32(4A):

(4A) If the proposal is a proposed policy statement, plan, or change prepared in accordance with any of the processes provided for in Schedule 1, the evaluation report must—

(a) summarise all advice concerning the proposal received from iwi authorities under the relevant provisions of Schedule 1; and

(b) summarise the response to the advice, including any provisions of the proposal that are intended to give effect to the advice.

(c) a summary of all advice received from iwi authorities on the PC (section 32 (4)(a) of the RMA).

277. Between October 2021 to July 2022, Mana Whenua groups recognised by Auckland Council, Mana Whenua forums, co-governance and co-management entities were engaged with throughout the course of the council's IPI and non-IPI plan changes as they were developed.

278. Collective feedback received from iwi included:

- concerns about the mandatory removal of on-site car park minimums with no ability for Mana Whenua representatives to change the outcomes from a Treaty Partnership perspective;
- more cars being parked on the street raised issues for larger whanau, and in terms of additional restrictions on road access;
- service industry vehicles having difficulty accessing properties accessed by the street
- support for on-site visitor parking;
- support for on-site accessible parking, with comments regarding the estimated percentage of Aucklanders with a physical disability to be too low, particularly for Māori;
- concerns regarding bicycle usage as a main form of transport (particularly in some South Auckland areas) compared to the proposals for cycle lanes etc;
- electric vehicles as the transport of the future is a presumption, and there is a cost to developments of providing electric vehicle charging points.

9.3 Local Board and Community Engagement

279. Workshops took place with all local boards (except Aotea LB) during February and June 2022. The initial feedback from local boards was from individual board members and did not represent the boards as a whole. The overall themes and key feedback topics were:

9.3.1 Workshop – 5 Issues

Accessible Parking

- Supportive of requiring accessible parking;
- Apply to residential development as well.

Pedestrian Only Access

- Existing widths are too narrow;
- Supportive of changes to increase widths;
- Concerns about emergency services accessing sites.

Loading Spaces

- With the removal of parking, there is a greater need for loading spaces – these are considered very important;
- Can also be used as pick -up and drop – off facilities;
- Work with AT on loading bays in the street.

Cycle Parking

- Issue with bike parking not being secure – need secure facilities;
- Not all areas need bike parking e.g. rural areas;
- Also need e-bike charging facilities;
- Lower the threshold for bike parking.

Electric Vehicle Charging

- Not requiring pre-wiring will slow down progress towards climate change goals;
- No-onsite parking means no e-v charging;
- Government needs to address this issue, but support Auckland Council requiring pre-wiring ahead of central government regulation;
- Needs to be home – based, not somewhere far away;
- Need to future – proof the city.

9.3.2 Workshop – Access

Carriageway Design

- Remove minimum widths;
- Link minimum width to number of parking spaces rather than number of dwellings;
- Remove fencing around entry/exit points;
- Provide turning heads to get rid of the need to reverse out of accessways (especially for rubbish trucks);
- Require lower speed limits;
- Require parking to be provided in accessways;
- Require stormwater retention devices in accessways;

- Provide ways to address effects of new developments occurring on existing poorly designed driveways.

Footpath & Public Realm Design

- Require more fully separated footpaths;
- Require green/community spaces within developments;
- Address overgrowing vegetation along the sides of driveways;
- Ensure bike storage racks are functional for heavier bikes and e-bikes (e.g. don't provide wall-mounted storage);
- Provide for letterboxes within the standards;
- Require developers to provide for walkability and permeability of the street network;
- Require more lighting and safer footpaths;
- Provide higher design standards including forecourts and perimeter blocks for higher density developments;
- Require fences to separate trafficable areas from footpaths and green/community spaces.

Waste Management

- Address access issues for rubbish collection services;
- Require a single large skip to be located on the street rather than many individual bins;
- Provide consistency in waste collection services;
- Mandate on-site rubbish collection for developments of a certain size;
- Require bins to be located within developments rather than on the roadside;
- Require bins to be located outside of the development.

Number of Dwellings Trigger:

- Focus on pedestrian safety for all developments rather than based on the number of dwellings per development;
- Link minimum width to number of parking spaces rather than dwellings;
- Provide design standards for all developments not just large ones;
- Provide maximum limits on the number of dwellings per access.

Shared Maintenance:

- Require residents to collectively pay for maintenance;
- Provide shared maintenance info on LIMS reports;
- Require the need for a body corporate to maintain driveways.

Key Stakeholders:

- Include real estate agents as they discuss with developers on how to maximise yield;
- Include courier companies;
- Include architects.

Data Collection:

- Collect data on driveway run overs and injuries.

Wayfinding:

- Require accessways with 6+ dwellings to be named with signs and associated wayfinding.

Alternative Regulation and Consistency:

- Use the building code to cover private ways;
- Look into non-regulatory options;
- Integrate work with AT's parking standard;
- Require developers to have similar standards to Kainga Ora;
- Use higher standards than those that apply to local roads;
- Provide consistent rules for public and private roads;
- Don't be too strict on driveway standards as developers may be driven away.

9.3.3 Formal feedback from June 2022 Local Board Business Meetings

280. Feedback from all Local Boards (excluding Aotea) was prepared as part of their respective business meetings during June 2022. Staff were in attendance to answer questions and clarify any matters.

281. This formal feedback from all Local Boards was collated and summarised in a document: "Local board feedback on the council's preliminary response to the National Policy Statement on Urban Development 2020 and the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021" and is attached at Appendix 9.

282. The overall themes that came through as part of the formal Local Board feedback in relation to the evaluation can be summarised as follows:

- Overall concerns that the AUP currently meets the goals of the NPS:UD and that the process overall is too rushed, without consideration of local needs and circumstances;
- Concerns raised regarding pressure on infrastructure as a result of intensification;
- A general opposition to the removal of minimum parking requirements;
- Addressing access and parking matters important to ensure the development community responds to growth opportunities appropriately;
- General support for the proposed transport provisions, including EV charging, adding 'dwellings' as a trigger for determining the relevant vehicle access width standards, the tiered approach to access requirements, prioritisation of pedestrian safety and access, and ongoing operation and maintenance requirements;
- General support for cycle parking and encouragement for a safe cycling network to match the intent of cycle provisions;
- Support for accessible parking so that people can participate in everyday life, but also recognise the need for health and disability workforce to be able to access people with disabilities;
- Support for the consideration of emergency and waste vehicle access with further refinement of requirements to ensure improved safety for both residents and Fire and Emergency vehicles;

- Generally support kerbside waste-services, and encourage multi-use kerbside function (including for loading, pick-ups, furniture removal vehicles etc);
- Recognition that there is still a long way to go before people make a modal shift from cars to public transport, and that some (Local Board areas) are under-served by public transport, with limited multi-directional public transport available.

9.4 Key Stakeholder Consultation

283. Meetings were held with key stakeholders from July 2021. A list of key stakeholders and a summary of the main feedback points raised during the consultation process is listed below in Table 16.

284. A wide range of feedback was provided. As was expected, divergent views and perspectives were received, and these are grouped together by 'theme' in the table below.

Table 19: Key Stakeholders (alphabetical order) and Summary of Feedback Received

- Bike Auckland
- Disability Advisory Panel
- Emergency Services (incl. Fire & Emergency, St John, NZ Police)
- Healthy Transport Working Group
- Kainga Ora
- Network Utilities Operators Group
- Property Council
- Safekids Aotearoa
- Senior Advisory Panel
- Universal Design Forum
- Urban Development Institute

Theme	Accessible Parking
	Feedback Received

General comments	• Impact on yield likely to be significant
	• Delivery of accessible parking is already challenging
	• Provision of accessible car parks should be left to the market
	• May work for apartments but not for other typologies
	• There are likely to be issues with enforcement for multi-unit developments
	• Disconnect between the provision of accessible units and accessible car parks -
	  o Owning an accessible unit may not guarantee you will be provided with an accessible car park
	  o There are currently no requirements for a certain proportion of units within residential developments to meet accessibility standards

	○ Potential for accessible car parks to be attributed to an accessible unit through the title agreement • Roading and public transport infrastructure surrounding THAB-zoned land needs to meet accessible user requirements considering THAB zone is excluded from accessible parking requirements.
Location of accessible car parking	• Consensus that the location of accessible parking within developments should not be restricted (i.e., should be allowed in front yards). Reasons stated include - ○ Increased costs for driveway construction ○ Longer driveways pose higher risk for accidents ○ More challenging for persons with a disability to access their dwelling when the accessible car park is further from the dwelling ○ No apparent amenity reason why it is acceptable to have a paired regular car pad in a front yard but not an accessible car park ○ Vehicle crossing width rules already in effect limit the number of sides by side car parks that could be proposed in a front yard • Road corridor or public parks should be used to accommodate accessible car parking • If accessible parking is located on private land, an incorporated society would be required for all developments leading to increased costs for residents
Number of accessible car parks	• Proportion of people with a disability is likely to increase due to an ageing population – requirement for accessible parking needs to reflect this • People with disabilities may be unable to buy into a development due to a lack of accessible parking • Ratio of 1:20 is not enough given 1 in every 10 New Zealander's have some form of disability. Greater weighting required given we are an 'Age-Friendly City'.
Theme	**Pedestrian Only Accessways (POAs)**
	Feedback Received
General comments	• Accessways will be used to transport goods and furniture which may cause congestion and access difficulties • Narrow accessways create challenges for emergency services access – particularly for aerial appliances • Pedestrian footpaths serving individual units or those less heavily trafficked do not require specific regulation and management • Suitable for pedestrian access to also serve as bicycle access where it is the only means of access to/from a unit
Accessway width	• Consensus that current 1m width requirement is too narrow. Support for width to be 1.8 metres or greater. • If PPA is the only form of access then width should be increased to 2.5m, particularly if total length exceeds 30m. • Support PPA width of 1.8m where no vehicle access is provided and consider that a primary POA width of 1.5m is likely to be appropriate where vehicle access is also provided and the number of units within the development exceeds a certain threshold.
Passing bays	• They will interfere with the shape of the building footprint – would be preferable to have a constant width along full length of accessway • Concern around whether passing bays are conducive to CPTED principles

Gradients and surfacing	• Requirements for footpath gradients are generally supported. General concern raised around -
	  o Gradient of accessways being too steep
	  o Stairs located in accessways
	  o Varying footpath levels
	  o Need for surfacing requirements
	• Proposed maximum gradients are more restrictive than existing maximum gradients for roads and JOALs, and footpaths on public roads. This is contradictory and should be deleted – potential to result in more stairs and retaining.

Design and CPTED	• Strong emphasis on the need to require good design in PPA provisions to ensure safety and accessibility is prioritised. General support for -
	  o Lighting requirements
	  o Landscaping and setbacks
	  o Signage and wayfinding
	  o Surveillance and privacy

Maintenance	• 1 metre separation from dwellings to footpath is not a good design outcome. Becomes wasted space as it is not wide enough to grow trees, etc. and maintenance is difficult • Concern around how the accessway will be maintained if there is no body corporate for the development.
Theme	**Loading Zones**
	Feedback Received
General comments	• Provision of loading zones is more important than the provision of accessible parking • Need to accommodate tradespeople in loading zones – particularly for more centrally located development • Loading zones to be used for emergency vehicles and taxi drop-offs/pick-ups as well • On-site car parking may not accommodate loading/unloading requirements – issue is not exclusive to developments that do not provide on-site car parking • Potential for the AUP to also provide direction on the location and distance of loading spaces in relation to residential units
Location and size	• General support/preference for loading and heavy vehicle functions to be located in the road corridor as opposed to on-site, particularly where on-site loading cannot be accommodated or is not practical • Loading spaces need to be large enough for mobility devices and multi-purpose activities (e.g., grocery delivery, etc.)
Drop-off/Pick-up	• Need for drop-off zones, particularly where there is no car parking available • Suggestion for drop-off zones to be raised • Require covered waiting areas for drop-off/pick-up
Theme	**Bicycle Parking**
	Feedback Received
General Comments	• Consider alternative options to strike a more appropriate balance between supply and demand. E.g., shared spaces • Opportunity for bike sharing schemes in multi-unit developments to be incentivised by Council and AT • Support requirements for sheltered and secure cycle parking but consider that there should not be a requirement to integrate e-bike charging (this is better addressed through the Building Code).

	• Noted the planned significant investment in cycling over the next 10 years – provision of adequate cycle parking is an important component of that investment • Cycling requires greater focus if mode shift is to occur • Covered/secure bike parking ensures security • No demand for mandatory cycle parking and potential for it to be under-utilised – demand is not present for all people • Bicycle parking is a high cost to provide and requires large investment • Significant impacts on yield are likely • Design/fire-rating issues relating to covered sheds for bike storage • Potential for standards to be more quantifiable • Previous studies have found that bikes stored within houses or on decks provide a high level of security than if bikes are stored outside • Standard needs greater clarity around what is an acceptable outcome for 'secure' and 'covered' cycle parking • Ground level dwellings with fenced rear yards that are gated (and therefore can be locked) should be an acceptable solution. • Requirement for 'sheltered' cycle parking could lead to storage sheds in front/rear yards
Number of bicycle parks	• Support retention of the existing requirement to provide 1 bicycle parking space per residential unit, except that where residential units are provided with exclusive yard space no bicycle parking should be explicitly required • Provision of cycle parking should be market-driven • Cycle parking standard could apply to all residential developments whether a dedicated garage or basement carpark is or is not provided – council should encourage more short/medium-length bike trips • Reduce requirement to once cycle space if the dwelling has two bedrooms or less or if larger dwellings have a car pad
Design of parking	• Bicycle parking should accommodate non-standard cycles (e.g. electric wheelchairs and mobility devices). There is scope to undertake more research to develop area-based size of parking required relative to GFA of proposed development • Bicycle parking needs to be very secure due to cost of cycles • Address issue of access between cycle parking facility and dwellings – this should be covered and internal where possible
Theme	**EV Charging**
	Feedback Received
General Comments	• Provision of EV charging should be market-driven and should not be regulated by Council – should be a national-level response • Equity concerns around who pays and how is the parking managed when there is no body corporate • Forces developers to provide carports/garages to avoid communal buildings or to erect shed in front of development • Cannot have one rule or standard which applies to different development scenarios • People more likely to charge their EV at home despite fire risk • Feasible to allow EV charging in road carriageway (prevents people who don't have a parking space from owning an EV) • On-footpath chargers not supported • Suggested that EV charging may be better addressed via changes to the Building Code
Visitor Parking	• Don't support visitor parks with EV charging – doesn't fit in with typical visitor behaviour

	• Opposition to provision of EV charging for visitors (distinguish between visitors & residents)
Theme	**Vehicle and Pedestrian Access**
	Feedback Received
General Comments	• Use of broken yellow no stopping lines on accessways to indicate no parking • Support requiring speed management where accesses exceed 30m in length. • Consider entrance treatment where this traverses a footpath – in residential areas it may not be tactile paving or signage
Vehicle access - site layout and reverse manoeuvring	• General support for reverse manoeuvring to be minimised • Consider there are potential safety risks from emerging trends in site layout (e.g., centralised car park areas, long driveways, as these are attractive places for children to play) • Design and accessibility issues around the location of carparks are site and typology specific. Sometimes carparks located centrally in a large development can give better access for older persons, children etc. directly to their unit. Key is having separate well designed pedestrian access and separate play areas • On-site turning and reverse manoeuvring requirements should be deleted – this should be assessed as part of the Waste Management plan requirement and on a case-by-case basis
Pedestrian access	• General support for the increased width to accommodate pedestrian movements for health and safety reasons • Limited support for increases in minimum formed access width in the case of developments involving 4-9 dwellings or 4-9 car parks, so as to sufficiently accommodate for pedestrians and to minimise risk of potential conflict between passing vehicles and pedestrians (i.e. 4-4.5m inclusive of pedestrian access). • Support for requiring grade (or otherwise) separated footpaths of 1.5m of more for developments and subdivisions proposing 10 or more car parks, 10 or more dwellings, or 10 or more vacant rear allotments. • Requirement for a footpath on either side of an access (20+ carparks/dwellings) is unnecessary. Single pedestrian access of high quality is sufficient. Need to also investigate the provision of public lanes (involving reduced public road standards, relative to what is currently required) as an alternative to jointly owned access lots or private rights of way. • Support grade separation of footpaths. Speed bumps, signage, and use of convex mirrors also supported • Support for maximum gradients has mixed support with improved access support by some and opposed by others.
Waste Management	• Potential for issues to be managed via the Waste Management and Minimisation Bylaw • Considers no issue with bins on streets as it is part of city living • Preference for roadside collection and not having heavy vehicles enter site (safety concerns) • Consider different ways for waste management to be managed – not individual but street or site bins • Pick-up times (waste) could be outside peak hours on arterial roads to better manage waste collection • Kerbside collection area needs to be limited to subject site and not neighbouring sites

	• Provide clarity in the standard on the acceptable distance to wheel bins from bin store location to nearest berm
Heavy Vehicles	• Concern at the yield impact from heavy vehicle (on-site) manoeuvring • Supports move away from heavy vehicles having to enter private property • Aerial appliances (with outrigging) have a 5.5m minimum width requirement / challenges for bigger vehicles • Contractually restrict large rubbish truck movements on-site (no reversing out) as an alternative method of management
Vesting of local roads	• Long accessways serving multiple standalone or terrace houses are an issue • Requires a mid-point solution between private access and local road design standards • Need to model difference scenarios – apartment, terraced, individual units on roads and accessways • May need to consider different responses for different road types (arterial / local) • Accessways create a lower amenity environment
Theme	**General Feedback**
	Feedback Received
Emergency Services	• It is important for emergency service vehicles to be able to get past each other. The first unit to arrive on scene may not be the "right one" • Wayfinding is a big issue for multi-unit developments particularly for sites with different access points. Consider need for clear unit numbering and location map for larger developments. • Speed bumps – for every minute that goes by without CPR or using an AED4, the chance of survival [from a cardiac event] drops by 10-15 percent. Quick access is important • Noted Fire & Emergency overseas have better equipment designed for dense urban areas
General	• Plan change likely to have a significant impact on yield • Concern that AT's parking strategy not available to inform the plan change • People and communities should be able to decide what is best for them • Plan Change should tackle the roading environment / make greater use of roads • Unintended consequence of communal facilities is requiring Unit Title subdivision rather than individual titles • Need for consistent approach with other councils

9.5 Significant Amendments as a Result of Consultation

285. A number of key changes/amendments were made during and following the period of engagement and consultation. In summary these were as follows:

Table 20: Significant Amendments as a Result of Consultation

Section	Proposed Provision	Provision as amended
Accessible parking	Threshold for accessible parking for residential development 20 or more units	Reduced the threshold to 10 or more units
	Exclusion of the THAB and Mixed Housing Urban (for studio and one bedroom units/dwellings) from the requirement for accessible parking	Require accessible parking in the THAB and Mixed Housing Urban zones
	Standard requiring no accessible parking be located in a front yard in a residential zone	Deletion of the standard
Loading space	For residential - where there is no onsite parking: - 1 loading space for developments of 10or more units - Existing standards for "greater than 20,000m2" continue to apply	1 loading space for a van for developments of 10-19 units 20+ units required to provide a loading space for a truck
	No loading space in front yard of residential zones Revised assessment criteria.	Deletion of the standard
Heavy vehicle access - waste management	Refer to the loading space requirements above	Linked the requirement for a heavy vehicle loading space to the proposed new residential waste management standard in the THAB and Mixed Housing urban zones (under the IPI Plan Change)
Bicycle parking and access	Provision of two cycle parks per dwelling unit and one cycle park per 20 dwelling units for visitors	Retention of the status quo in terms of the number of required cycle parks
	Options for providing for cycle parking were not specified	Enable a combination of options to provide for cycle parking: - A non-habitable room; - A storage/garden shed or equivalent;

		- A dedicated cycle parking facility
	Cycle dimensions and communal parking space dimensions were not specified	Combination of the above
	Requirement that cycle parking be directly accessible from the pedestrian only access	Added cycle dimensions and communal parking space dimensions Amend to also include the road, vehicle access or car parking area to reflect the different cycle parking options
EV parking/charging	Complex technical standard specifying what is required to enable EV charging equipment, with reference to the relevant standards and guidelines	Replaced the draft "complex" standard with a simple standard describing the key outcomes sought, with reference to the relevant standards and guidelines (incorporated documents)
	EV charging equipment requirement for visitor parking	Clarified that provision for EV charging equipment is not required for visitor parking
Trip generation	PC71 contained a new Travel Demand standard. This was withdrawn from that plan change (on 28 July 2022) and a revised Trip Generation standard now forms part of the Transport Plan Change	Reduced thresholds for residential activities – both subdivision and land use
Provision of pedestrian accesses	Standard requiring a pedestrian access on both sides of a vehicle accessway, for developments of 20+ dwellings or 20+ parking spaces	Standard requiring a pedestrian access to connect to every dwelling, for developments of 20+ dwellings or 20+ parking spaces
Separation of pedestrian access from trafficable areas	Standard requiring vertical or horizontal separation of pedestrian accesses from trafficable areas	Standard requiring vertical separation of pedestrian accesses from trafficable areas
Vehicle access	Amendments to the existing thresholds at which requirements for accessways are applied would add in number of parking dwellings as well as number of parking spaces. Potentially this could apply to dwellings with separate pedestrian access to a road.	Amended new threshold to exclude dwellings that have separate pedestrian access to a road.
Vehicle crossing width	No change to operative plan	Added a note to the Table E27.6.4.3.2 to identify that the specified minimum and maximum width of vehicle crossings at

		site boundaries excludes the width required for pedestrian accesses

10 Evaluation of Detailed Options

10.1 Evaluation Criteria

286. Table 21 below outlines the criteria to assess the options for addressing the resource management issues.
287. The options for each key decision point in relation to the issues are assessed against this criteria.

Table 21: Criteria for the Evaluation of Options

Sections of the RMA		Criteria
Appropriateness	s32(1)(a) and s32(1)(b) of the RMA	Is this option the most appropriate way in which to address the issue at hand? In doing so, is this option the most appropriate way to meet the objective of the AUP and the purpose of the RMA?
Effectiveness	s32(1)(b)(ii) of the RMA	How successfully can this option address the issue? Does this option successfully meet the objectives of the AUP and the purpose of the RMA?
Efficiency	s32(1)(b)(ii) of the RMA	Does this option address the issue at lowest cost and highest net benefit?
Costs	s32(2) of the RMA	What are the social, economic, environmental or cultural costs and/or negative impacts that this option presents?
Benefits	s32(2) of the RMA	What are the social, economic, environmental or cultural benefits and/ or positive impacts that this option presents?

Risks	s32(2)(c) of the RMA	What are the risks of addressing this issue? What are the risks of not addressing this issue?

10.2 Evaluation of the Options

10.2.1 Accessible Parking

288. The options for the key decision points for each of the issues are considered below.

1. How to calculate the required number of accessible car parks.

Options

i. Rely on previous car parking rates to calculate parking demand and apply NZS:2001 to non-residential land uses and a modified NZS:2001 to residential land uses.

ii. Specify a minimum number of accessible parks for each land use activity (i.e the Kapiti District Council option).

Table 22: Evaluation of Possible Options (Accessible Parking – Number of Accessible Car Parks)

Evaluation Criteria	Option 1 – Rely on previous car parking rates to calculate parking demand and apply NZS:2001/Modified NZS:2001	Option 2 - Specify a minimum number of accessible parks for each land use activity
Appropriateness	Enables accessible parking to be calculated but does require a two step process. Previous car parking rates were subject to the AUP process and became operative in part in 2016.	Enables accessible parking to be determined by reference directly to a table.

Effectiveness	Both options are equally effective in determining the number of accessible car parks required.	Both options are equally effective in determining the number of accessible car parks required.
Efficiency	Requires two steps to calculate the required number of accessible car parks.	Enables accessible parking to be determined by reference directly to a table.
Costs	Both options have similar costs – a plan change is required, and a new method of calculating the required number of accessible car parks.	Both options have similar costs – a plan change is required, and a new method of calculating the required number of accessible car parks.
Benefits	Both options enable the required number of accessible car parks to be determined. Option is based on a NZ standard – NZS:2001 and car parking ratios that were the subject of the AUP process (so are relatively up to date). For residential development, a modified NZS4121 is required as the standard is 21 yrs old and the percent of population with a mobility disability has increased and is increasing.	Both options enable the required number of accessible car parks to be determined. This option requires the number of accessible car parks to be determined for each land use activity (although NZS:2001 could be used).
Risks	Although this option is subject to a plan change, the use of a NZ Standard/Modified NZ Standard and the previous AUP car parking ratio's could potentially reduce the likelihood of appeals.	The use of a new approach to determine the number of accessible car parks for each land use activity (although NZS:2001 could be used) potentially could be more likely subject to appeals.
Summary	**Recommended option**	**Not recommended**

2. Which activities, development or zones should accessible car parks apply to?

Options

i. Apply to all activities.

ii. Apply to non – residential activities only (as NZS4121 does).
iii. Apply to all activities but exclude activities in zones where no car parking was previously required (prior to the removal of parking minimums).
iv. Apply to all activities but exclude residential activities of less than 10 units.

Table 23: Evaluation of Possible Options (Accessible Parking – Activities, Development or Zones)

Evaluation Criteria	Option 1 – Apply to all activities	Option 2 - Apply to non – residential activities only	Option 3 - All activities but exclude activities in zones where no car parking was previously required (unless parking is provided)	Option 4 - Apply to all activities but exclude residential activities of less than 10 units
Appropriateness	Results in the greatest amount of accessible parking. Recognises that residential developments may not have any onsite parking. Would have an impact on residential development yield.	Effectively the "status quo" prior to the removal of parking minimums. Reduced amount of accessible parking and none required in residential areas (although developers may choose to provide it).	Balances the provision of accessible parking with the need to intensify. Prior to the removal of parking minimums, the THAB, Mixed Housing Urban (for studio and one bedroom units) zones and all centres did not require parking and therefore accessible carparks. Recognises that some accessible parking is provided within the road reserve especially in centres.	Balances the provision of accessible parking with the need to intensify. A threshold of 10 units or more for accessible parking will result in only the larger developments proving accessible parking. Resource consent data indicates less than 5 percent of development were for 10 units or more.

Effectiveness	Addresses the need for accessible parking for people with mobility difficulties. Prioritises this over other objectives e.g intensification.	Partly addresses the need for accessible parking. Does not achieve accessible parking in residential areas (unless a developer chooses to provide it). Does not recognise that residential development may not have onsite parking and therefore accessible parking.	Addresses the need for accessible parking for people with mobility difficulties but also balances this with intensification objectives. Where parking is provided on site, accessible parking will also be required/provided. Recognises that some accessible parking is provided within the road reserve especially in centres.	Addresses the need for accessible parking for people with mobility difficulties but also balances this with intensification objectives. Where parking is provided on site, accessible parking will also be required/provided. Excludes smaller residential developments (less than 10 units) from a requirement for accessible parking (unless parking is provided). Only a small percentage (less than 5 percent) of developments historically are for 10 units or more.
Efficiency	Highest cost option in terms of impact on development potential as all activities are required to set aside accessible parking. Cost of parking and opportunity costs with the	Nil cost option in residential areas/zones. Same costs as option 1 for non-residential development.	Lower cost option than option 1 in terms of impact on development potential. THAB and Mixed Housing Urban zones excluded from accessible parking requirement, unless parking is provided. Centres also excluded from requirement.	Lowest cost option in terms of impact on development potential. THAB and Mixed Housing Urban zones excluded from accessible parking requirement, unless parking is provided.

	loss of development potential.		Acknowledges that accessible parking is provided in the road reserve and Council owned carparks in centres.	Centres also excluded from requirement. Smaller residential developments (less than 10 units) in other zones also excluded. As less than 5 percent of developments exceed 10 or more units, very little accessible parking would be provided.
Costs	Cost of parking and opportunity costs with the loss of development potential. However, significantly greater provision of accessible parking than the other options.	Cost of parking and opportunity costs with the loss of development potential, especially in centres. No accessible parking associated with residential developments.	Reduced costs in terms of the cost of parking and opportunity costs with the loss of development potential. However, also reduced provision of accessible parking which will impact on people with mobility disabilities. Compensated for by the provision of accessible parking in the road reserve in centres and Council owned carparks in centres.	Least cost in terms of the cost of parking and opportunity costs with the loss of development potential. However, also reduced provision of accessible parking which will impact on people with mobility disabilities. Compensated for by the provision of accessible parking in the road reserve and Council owned carparks in centres.
Benefits	Maximises the provision of accessible parking.	Maintains the status quo prior to February 11, 2022.	Balances the provision of accessible parking with	Balances the provision of accessible parking with

			intensification objectives, particularly in those zones where intensification is likely to be the greatest.	intensification objectives in those zones where intensification is likely to be the greatest and other zones where residential development of less than 10 units occur.
Risks	Intensification objectives are not as fully realised as with the other options.	Residential developments/zones have little accessible parking. Difficulties for people with mobility disabilities to partake in everyday life.	There is no or little accessible parking provided in the THAB & Mixed Housing Urban zones and centres unless developers choose to provide it (although in centres, some accessible parking is provided in the road reserve and council owned carparks). Difficulties for people with mobility disabilities to partake in everyday life.	There is no or little accessible parking provided in the THAB & Mixed Housing Urban zones and centres unless developers choose to provide it (although in centres, some accessible parking is provided in the road reserve and council owned carparks). Also, potentially no or little accessible parking on larger developments elsewhere outside of the THAB and Mixed Housing zones.
Summary	**Not recommended**	**Not recommended**	**Not recommended**	**Recommended Option**

3. Should accessible parking be linked to accessible units?

Options

i. Link the requirement for accessible parking to the provision of accessible units.

ii. Do not link the requirement for accessible parking to the provision of accessible units.

Table 24: Evaluation of Possible Options (Accessible Parking – Linked to Accessible Units)

Evaluation Criteria	Option 1 – Link the requirement for accessible parking to the provision of accessible units	Option 2 - Do not link the requirement for accessible parking to the provision of accessible units
Appropriateness	Accessible housing cannot be required under the RMA, so the provision of it would be voluntary. There is no nationally accepted definition of what an accessible unit is. Kainga Ora has its own definition, as does Eke Panuku, Lifemark and Homestar. All of these have differing requirements as to what is/isn't an accessible unit. Without a standard that could be applied, this leaves interpretation wide open, and may not lead to better outcomes.	Recognises the lack of a definition of accessible unit. If accessible parking were linked to accessible units, there could be a perverse outcome, where if a developer wanted to provide accessible units, but not accessible parking, that they would then choose to remove the accessible units.
Effectiveness	A large proportion of new units achieve basic accessibility (although according to Lifemark only 2 percent of housing is truly accessible). Ministry of Health and ACC are also able to modify homes to suit disabled people, but cannot create car parking where there is no space to do so. Therefore the need to link the requirement for accessible parking to accessible units is questionable.	Many people who have mobility parking permits do not use wheelchairs or even necessarily need an accessible unit. People are able to have mobility parking permits if there are unable to mobilise moderate distances independently. This can include older adults that may walk with the assistance of another person or a stick or frame, people with chronic conditions such as heart or lung impairment which impedes their ability to walk longer distances, and people who are blind or low vision for whom wayfinding is a significant issue.

Efficiency	If it was possible to link or match accessible parking with accessible units, this would be the most efficient option.	May have accessible parking on site but no accessible units. However, accessible parking can be used by disabled visitors to a site. Existing units can be modified to suit disabled people. 80 percent of all housing typologies in the Business – Mixed Use zone (which are usually high-density housing – apartments and terrace housing) were step-free or single-step access and had a habitable room and toilet. Moreover, apartments were made accessible via lifts. Therefore, without the label of an "accessible unit", existing developments are already accessible and have a high chance of disabled people living in these properties since 1 in 4 Aucklanders are disabled.
Costs	There is inadequate housing suitable for people with disabilities. Land owners/developers are discouraged from providing accessible units as they will also be required to provide accessible car parks.	For larger scale developments, an over supply of accessible parking is provided. However, this option is mitigated by the fact that accessible parking can be used by disabled visitors to a site, existing units can be modified to suit disabled people, or many people who have mobility parking permits do not use wheelchairs or even necessarily need an accessible unit. In addition, illness or injury can result in temporary disability.
Benefits	There is a good match between accessible units and accessible parking for residential developments.	A specified number of accessible car parks are provided on site. Accessible parking is not only used by disabled people with long-term mobility parking permits, but also people with

		temporary injuries with short-term mobility parking permits. Currently there are 42,948 active long-term Mobility Parking permit holders and 1,859 active long-term mobility parking permit holders in Auckland. Population ageing and the effects of long Covid are anticipated to greatly increase the need for accessible parking permits in both the short and long term.
Risks	No or little accessible housing is provided by the market, with the exception of public agencies such as Kainga Ora, Eke Panuku and other social housing providers.	For larger scale developments, an over supply of accessible parking is provided.
Summary	**Not recommended**	**Recommended option**

10.2.2 Pedestrian Only Access

289. The options for the key decision points for each of the issues is considered below.

1. How wide should pedestrian only access be?

Options

i. Graduated width depending on site length and/or number of units.

ii. Set width of 1.8m.

iii. Set width of 1.8m plus a requirement for a wider passing bay(s) (2.5m wide by 3.5m long) where the pedestrian only access is over a certain length (50m).

Table 25: Evaluation of Possible Options (Pedestrian Only Access – Width)

Evaluation Criteria	Option 1 – Graduated width depending on site length and/or number of units	Option 2 - Set width of 1.8m	Option 3 - Set width of 1.8m plus a requirement for a wider passing bay(s) where the pedestrian only access is over a certain length (50m)
A graduated width depending on site length and/or number of units recognises that the larger the number of units the more people likely to be using the pedestrian only access. Also the more likelihood of different modes of transport being used – walking, cycling, micro mobility devices. Generally, the longer the pedestrian only access, the more residential units it is likely to service. A graduated width does not reflect that there is a minimum width required for two people to pass each other (whether they be pedestrians, a pedestrian and a wheelchair, or a cyclist and a wheelchair).	A set width of 1.8m recognises that there is a minimum width required for two people to pass each other (whether they be pedestrians, a pedestrian and a wheelchair, or a cyclist and a wheelchair).	A set width of 1.8m recognises that there is a minimum width required for two people to pass each other (whether they be pedestrians, a pedestrian and a wheelchair, or a cyclist and a wheelchair). The requirement for a passing bay where a pedestrian only access is over a specified length (50m) would enable a 1.8m private pedestrian only access to cater for all developments regardless of scale (i.e the width would not need to be variable and increased) and the different scenarios (whether they be pedestrians, a pedestrian and a wheelchair, or a cyclist and a wheelchair).	A graduated width depending on site length and/or number of units recognises that the larger the number of units the more people likely to be using the pedestrian only access. Also the more likelihood of different modes of transport being used – walking, cycling, micro mobility devices. Generally, the longer the pedestrian only access, the more residential units it is likely to service. A graduated width does not reflect that there is a minimum width required for two people to pass each other (whether they be pedestrians, a pedestrian and a wheelchair, or a cyclist and a wheelchair).
A graduated width does not reflect that there is a minimum width required for two people to pass each other (whether they be	Provides pedestrian only access of a set minimum width.	As effective as option 2. In addition, the requirement for a passing bay where a pedestrian	A graduated width does not reflect that there is a minimum width required for two people to pass each

pedestrians, a pedestrian and a wheelchair, or a cyclist and a wheelchair).	Recognises that there is a minimum width required for two people to pass each other (whether they be pedestrians, a pedestrian and a wheelchair, or a cyclist and a wheelchair).	only access is over a specified length (50m) would enable a 1.8m pedestrian only access to cater for all developments regardless of scale (i.e the width would not need to be variable and increased).	other (whether they be pedestrians, a pedestrian and a wheelchair, or a cyclist and a wheelchair).
Potentially requires more land to form the pedestrian only access as the scale of development increases. Has the potential to have a greater effect on yield that the other options.	As the width of the pedestrian only access is fixed, increases in the scale of the development do not require additional width/land. Potentially effects smaller development disproportionally (i.e., they require the same width as larger developments).	As efficient as option 2. With the addition of a requirement for a passing bay for sites over a specified length, some additional land is required. This potentially effects the development yield more than option 2 would.	Potentially requires more land to form the pedestrian only access as the scale of development increases. Has the potential to have a greater effect on yield that the other options.
Has the potential to have a greater effect on yield that the other options. The narrower width of pedestrian only access for smaller development may not provide appropriate access for all scenario's e.g a pedestrian and a wheelchair, or a cyclist and a wheelchair).	Potentially effects smaller development disproportionally (i.e., they require the same width as larger developments). Economic cost and impact on yield.	With the addition of a requirement for a passing bay for sites over a specified length, some additional land is required. This potentially effects the development yield more than option 2. Economic cost and slightly greater impact on yield, than option 2.	Has the potential to have a greater effect on yield that the other options. The narrower width of pedestrian only access for smaller development may not provide appropriate access for all scenario's e.g a pedestrian and a wheelchair, or a cyclist and a wheelchair).
Graduated width recognises that increasing scale of development is likely to mean	Social and environmental benefits of having an appropriate width of pedestrian access.	Social and environmental benefits of having an appropriate width of pedestrian access.	Graduated width recognises that increasing scale of development is likely to mean more people using the

more people using the pedestrian only access at any point in time. Site length can affect the length of the pedestrian only access. Generally, the longer the pedestrian accessway, the more residential units it is likely to service. Social and environmental benefits of having an appropriate width of pedestrian only access.	The wider the access, the more appropriate it is for all scenario's e.g a pedestrian and a wheelchair, or a cyclist and a wheelchair).	The wider the access, the more appropriate it is for all scenario's e.g a pedestrian and a wheelchair, or a cyclist and a wheelchair). A passing bay achieves this without the need for extra width, the entire length of the pedestrian only access.	pedestrian only access at any point in time. Site length can affect the length of the pedestrian only access. Generally, the longer the pedestrian accessway, the more residential units it is likely to service. Social and environmental benefits of having an appropriate width of pedestrian only access.
The width of pedestrian only access at the lower end of the development scale is too narrow and not appropriate. The width of pedestrian only access at the higher end of the development scale is too wide and impacts significantly on yield.	A set width of 1.8m may not be appropriate for all the different scenarios e.g. two people wheeling bikes past each other, person wheeling a bike past a person with a double pram, person wheeling a bike past a person with a walking frame.	While the passing bay caters for all the different scenarios e.g. two people wheeling bikes past each other, person wheeling a bike past a person with a double pram, person wheeling a bike past a person with a walking frame, it does potentially have a greater impact on yield.	The width of pedestrian only access at the lower end of the development scale is too narrow and not appropriate. The width of pedestrian only access at the higher end of the development scale is too wide and impacts significantly on yield.
Summary	**Not recommended**	**Not recommended**	**Recommended option**

2. What scale of residential development should the pedestrian only access minimum width (1.8m with a passing bay) apply to?

Options

i. All residential units without vehicle access;

ii. 2 or more residential units without vehicle access;

iii. 10 or more residential units without vehicle access.

Table 26: Evaluation of Possible Options (Pedestrian Only Access – Scale of Residential Development)

Evaluation Criteria	Option 1 – All residential units without vehicle access	Option 2 - 2 or more residential units without vehicle access	Option 3 - 10 or more residential units without vehicle access
Appropriateness	Residential developments at the lower end of this scale (i.e.1-3 units) are unlikely to generate significant pedestrian movements and the range of other scenario's e.g. two people wheeling bikes past each other, person wheeling a bike past a person with a double pram, person wheeling a bike past a person with a walking frame.	Same comments as for option 1 apply.	When there are 10 or more residential developments greater pedestrian movements are generated and the range of other scenario's e.g. two people wheeling bikes past each other, person wheeling a bike past a person with a double pram, person wheeling a bike past a person with a walking frame, are more likely.
Effectiveness	Not effective at addressing the issue at the lower end of this scale (i.e.1-3 units) as the issue is of much lesser significance.	Effectiveness increases with the increasing number of residential units serviced by pedestrian only access. Not as effective as Option 3 as like Option 1, the issues are of lesser significance at the lower end of the scale.	Effectiveness increases with the increasing number of residential units serviced by pedestrian only access. More effective than Options 1 & 2 as the issues are of lesser significance at the lower end of the scale.

Efficiency	Not as efficient as option 2 or 3 as residential developments at the lower end of this scale (i.e.1-3 units) are unlikely to generate significant pedestrian movements and the range of other scenario's e.g. two people wheeling bikes past each other, person wheeling a bike past a person with a double pram, person wheeling a bike past a person with a walking frame.	More efficient than option 1 but less efficient than option 3 as residential developments at the lower end of this scale (i.e.1-3 units) are unlikely to generate significant pedestrian movements and the range of other scenario's e.g. two people wheeling bikes past each other, person wheeling a bike past a person with a double pram, person wheeling a bike past a person with a walking frame.	The most efficient of the three options. When there are 10 or more residential developments greater pedestrian movements are generated and the range of other scenario's e.g. two people wheeling bikes past each other, person wheeling a bike past a person with a double pram, person wheeling a bike past a person with a walking frame, are more likely.
Costs	There is significant economic cost involved in setting aside the land for pedestrian only access but reduced benefit at the lower end of the development scale (in comparison to larger developments). There are also social and environmental costs of not having an appropriate width pedestrian only access.	There is significant economic cost involved in setting aside the land for pedestrian only access but reduced benefit at the lower end of the development scale (in comparison to larger developments). There are also social and environmental costs of not having an appropriate width pedestrian only access. These increase as the scale of the development increases.	Although there is significant economic cost involved in setting aside the land for pedestrian only access there are increasing benefits (in comparison to smaller developments). There are also social and environmental costs of not having an appropriate width of pedestrian only access at the lower end of the development scale e.g., 1-9 residential units.
Benefits	There are also social and environmental benefits with having an appropriate width pedestrian only access. For option 1 these benefits will be realised at the lower end (1-2 units) of the development scale.	There are also social and environmental benefits with having an appropriate width pedestrian only access. For option 2 these benefits will be realised at the lower end (2 or more units) of the development scale.	There are also social and environmental benefits with having an appropriate width pedestrian only access. For option 3 these benefits will only be realised at the medium and larger end (greater than 10 units) of the development scale.

Risks	The costs of requiring an appropriate width of pedestrian only access outweigh the benefits – i.e. only a small number of people in 1-3 residential units benefit.	Developments at a scale of 1-9 residential units have inappropriate width of pedestrian only access. The issue identified has not been resolved at the lower end of the development scale.	Developments at a scale of 1-9 residential units have inappropriate width pedestrian only access. The issue identified has not been resolved at the lower end of the development scale.
Summary	**Not recommended**	**Recommended Option**	**Not Recommended**

3. Should gradient, surface treatment and lighting be addressed?

Options

i. Address gradient, surface treatment and lighting be addressed.

ii. Do not address gradient, surface treatment and lighting.

Table 27: Evaluation of Possible Options (Pedestrian Only Access – Gradient, Surface Treatment and Lighting)

Evaluation Criteria	Option 1 – Address gradient, surface treatment and lighting be addressed	Option 2 - Do not address gradient, surface treatment and lighting
Appropriateness	With appropriate gradient standards, surface treatment and lighting, pedestrian only access is safer to use. This is particularly important for people with mobility difficulties. This compliments the benefits derived from having a wider accessway.	Potentially pedestrian only access could be unsafe to use without appropriate gradient standards, surface treatment and lighting. This significantly disadvantages people with mobility difficulties. This would negate the benefits derived from having a wider accessway.

Effectiveness	Appropriate gradient standards, surface treatment and lighting result in pedestrian only access that is both useable and safe to use. Useable and safe pedestrian only access will benefit all users, including those with mobility difficulties.	An absence of appropriate gradient standards, surface treatment and lighting result in pedestrian only access that is unusable and not safe to use. This will impact on people differently depending on their mobility and other circumstances.
Efficiency	This option has a high net benefit - useable pedestrian only access for all users at all times of the year for relatively low to moderate additional costs outlay. These costs include the initial development costs and ongoing running (lighting) and maintenance costs which would apply even if there were no standards.	This option has lower net cost (than option 1) but also low benefits and does not address the issue of pedestrian only access that is inappropriate and difficult to use by all user groups.
Costs	Achieving the appropriate gradient standard will add to the economic cost of providing useable and safe pedestrian only access. Appropriate surface treatment and lighting will add minimal costs. (See lighting report). These costs include the initial development costs and ongoing running (lighting) and maintenance.	There will be reduced economic costs (in comparison to Option 1) in not having to achieve gradient standards. There will however be social and environmental costs to users with pedestrian only access not suitable for use by some user groups or at certain times of the year.
Benefits	There will be social and environmental benefits to users with pedestrian only access suitable for use by all user groups and at all times of the year.	Benefits will largely be reduced costs of providing appropriate gradient standards, surface treatment and lighting.

		These costs include the initial development costs and ongoing running (lighting) and maintenance.
Risks	The costs outweigh the benefits if the standards for gradient, surface treatment and lighting are set too high.	Pedestrian only access may be an appropriate width but become unusable or difficult to use by some user groups at all times or at certain times of the year.
Summary	**Recommended option**	**Not recommended**

10.2.3 Loading Spaces

290. The options for the key decision points for each of the issues is considered below.

1. **What is the appropriate threshold for when a loading space is required for residential developments? (Note: loading spaces for residential developments are already required under the AUP but only for large developments – 5,000 sqm or greater).**

Options

i. Status quo - Greater than 5000m2 up to 20,000m2 = 1 loading space.
ii. Less than 10 residential units where onsite parking is not provided.
iii. 10 or more residential units where onsite parking is not provided, small loading space suitable for light vehicles.

Table 28: Evaluation of Possible Options (Loading Spaces – Threshold for When a Loading Space is Required)

Evaluation Criteria	Option 1 – Status quo	Option 2 - Less than 10 residential units	Option 3 - 10 or more residential units
Appropriateness	Assuming an average residential unit size of approx. 100 sqm, a loading space is only required for	A requirement for a loading space at the lower end of the development scale (i.e. 1-9 units) is not appropriate	Once development scale is over 10 residential units there may be a need for a loading space. This will be

	large residential development of over 50 units. The status quo option was based on the presence of onsite parking which can be informally used for loading. This is no longer necessarily the case as a result of the removal of parking minimums.	given the scale of the development and the likely number of trips requiring such a space. Infrequent loading can take place from the road reserve without adversely affecting the transport network. This is particularly so for dwellings that have individual pedestrian only access directly from a public road or otherwise provide vehicle access. In addition, a loading space will have a disproportionate effect on development yield as not only is a loading space required but also a vehicle crossing and manoeuvring areas.	dependant on the scale of the development and its location. Developments with low parking spaces relative to dwellings have been found to generate significantly more light service vehicle movements (e.g. commerce delivery & taxis) compared with development with higher parking provision. A small loading space suitable for light vehicles "fills a gap" between no loading space and 5,000 sqm or more where a larger loading space is required. Having a standard requiring a loading space enables an assessment to be undertaken. This can take into account site suitability and the ability for loading to occur off site.
Effectiveness	Under the status quo option, only larger developments are required to provide a "formal" loading space. This was effective as loading and unloading for light service vehicles (e.g. e – commerce delivery &	While smaller developments (i.e. less than 10 dwellings) can still add to the cumulative effects on the transport network, the impact on development yield is such that option 2 is not the most effective.	The effectiveness of requiring a loading space for developments of 10 or more residential units in order to avoid adverse effects on the transport network will depend on the both the scale of development and its location.

	taxis) typically occurs within residential sites through informal parking within private accessways, without the need for an allocated space. Parking minimums however have been removed.		10 or more units is an appropriate threshold to consider whether a loading space(s) for a light service vehicle is required in order to avoid adverse effects on the transport network. This option fills a gap until the operative plan's requirement for a loading space at 5,000 sqm of residential development applies. A loading space for light service vehicles is not required for dwellings that have individual pedestrian only access directly from a public road or otherwise provide vehicle access.
Efficiency	This option addresses the issue at a relatively low cost i.e. a loading space is only required for larger developments. The status quo option was based on the presence of onsite parking which can be informally used for loading. This is no longer necessarily the case as a result of the removal of parking minimums.	This option has a high net cost – i.e. the provision of a loading space at a low net benefit – the need for such a space at the lower end of the development scale. The scale of the development and the likely number of trips requiring a loading space means Infrequent loading can take place from the road reserve without adversely affecting the transport network.	This option potentially is relatively high cost if a loading space is deemed necessary (through the resource consent process) for developments of a scale that just exceed the threshold of 10 units or more. These costs are reduced if the loading space required is for light service vehicles. If that is the case, there are potentially high benefits as adverse

			effects on the transport network are avoided.
Costs	Residential developments of less than 50 units are not provided with a loading space. Potentially there are adverse effects or economic and environmental costs on the transport network. The scale and nature of these will depend on the location and size of the development.	This option adds economic costs to the development as a loading space is required. These costs are greatest at the lower end of the development scale. In addition, a loading space will have a disproportionate effect on development yield as not only is a loading space required but also a vehicle crossing and manoeuvring areas.	This option adds economic costs to the development as a loading space is required. These costs are greatest at the lower end of the development scale. As the scale of the development increases, the economic costs are reduced proportionately. Costs are further reduced if the loading space required is for light service vehicles.
Benefits	The same benefits as for options 2 and 3, although these only are realised on developments of 50 units or more.	Residents benefit from the presence of a loading space on site. This provides economic (the time taken to receive deliveries and the convenience) and social (space onsite for caregivers, taxis etc) benefits. There are also economic and environmental benefits to users of the transport network in terms of	The same benefits as for option 2, although these only are realised on developments of 10 units or more. This option fills a gap until the operative plan's requirement for a loading space at 5,000 sqm of residential development applies.

		less delays/streets blocked by vehicles unloading goods.	
Risks	With onsite parking no longer required, there are potential adverse effects on the transport network of not having a loading space onsite for developments of between 1-50 units.	A loading space is provided but is infrequently used and/or there is the ability to load from the road network without having adverse effects.	At the lower end of the development scale – i.e. just over 10 units, the same risks for option 2 applies. These risks are mitigated significantly if the loading space required is for light service vehicles. Modelling indicates that a small loading space suitable for a light service vehicle can be accommodated within a residential site of typical dimensions (18mx45m) without overly impacting on development yield.
Summary	**Not recommended**	**Not recommended**	**Recommended Option**

2. Should loading bays be required for residential developments in the high-density THAB and Mixed Housing Urban zones? (i.e. the areas where the greatest intensification will occur)

Options

i. Include the requirement for a loading space in the high-density zones

ii. Exclude the requirement for a loading space in the high-density zones

Table 29: Evaluation of Possible Options (Loading Spaces – High Density Residential Zones)

Evaluation Criteria	Option 1 – Include the requirement for a loading space in the high-density zones	Option 2 - Exclude the requirement for a loading space in the high-density zones
Appropriateness	The high-density zones comprise 74.5 per cent of land zoned residential (under the IPI Plan Change). They are also located in and around centres and adjacent to BRT and rail station and along rapid transit routes. Likely to be intensively developed over time. Building heights enable development of a large scale. The current requirement for a loading space is greater than 5000m2 up to 20,000m2 = 1 loading space. Onsite loading spaces avoid or reduce the potential for adverse effects on the transport network.	The high-density zones comprise 74.5 percent of land zoned residential (under the IPI Plan Change). They are also located in and around centres and adjacent to BRT and rail station and along rapid transit routes. Likely to be intensively developed over time. Building heights enable development of a large scale. The current requirement for a loading space is greater than 5000m2 up to 20,000m2 = 1 loading space. Without onsite loading spaces, there is potential for adverse effects on the transport network.
Effectiveness	The effectiveness of requiring a loading space for developments of 10 or more residential units in order to avoid adverse effects on the transport network will depend on both the scale of development and its location. 10 or more units is an appropriate threshold to consider whether a loading space(s) is required in order to avoid adverse effects on the transport network.	Without onsite loading spaces, there is potential for adverse effects on the transport network. The extent and nature of adverse effects on the transport network will depend on the both the scale of development, cumulative effects of multiple developments in a locality and the location.

	A higher threshold could be applied to the higher density zones e.g 50 units (as per the status quo).	
Efficiency	This option potentially is relatively high cost if a loading space is deemed necessary (through the resource consent process) for developments of a scale that just exceed the threshold of 10 units or more. In addition, a loading space will have a disproportionate effect on development yield at the lower end of the development scale, as not only is a loading space required but also a vehicle crossing and manoeuvring areas. If that is the case, there are potentially high benefits as adverse effects on the transport network are avoided.	This option would not address the issue of the adverse effects of loading offsite on the transport network.
Costs	This option adds economic costs to the development as a loading space is required. Not only is a loading space required but also a vehicle crossing and manoeuvring areas. These costs are greatest at the lower end of the development scale. As the scale of the development increases, the economic costs are proportionately reduced.	Residential developments are not provided with a loading space. Potentially there are economic and environmental costs on the transport network. The scale and nature of these will depend on the scale and location of the development.

Benefits	Residents benefit from the presence of a loading space on site. This provides economic (the time taken to receive deliveries and the convenience) and social (space onsite for caregivers etc) benefits. There are also economic and environmental benefits to users of the transport network in terms of less delays/streets blocked by vehicles unloading goods.	This option has a reduced cost effect on residential development (The current requirement for a loading space is greater than 5000m2 up to 20,000m2 = 1 loading space, does not apply).
Risks	A loading space is provided but is infrequently used and/or there is the ability to load from the road network without having adverse effects. The costs of providing a loading space impacts on the development yield and are passed onto the purchasers of residential unit adding to the cost of housing.	There are economic and environmental costs on the transport network associated with loading within the road reserve. The scale and nature of these will depend on the scale and location of the development. There is no ability to assess whether a loading space is appropriate.
Summary	**Recommended Option**	**Not recommended**

10.2.4 Heavy Vehicle Access

291. The options for the key decision points for each of the issues is considered below.

1. Should there be a requirement for heavy vehicle (8m long trucks) access to residential sites for waste management collection?

Options

i. No, status quo – rely on the road network for loading/unloading of heavy vehicles.

ii. Yes, but only for residential developments exceeding a threshold of 10 units or more.

iii. Yes, but only for residential development accessing an arterial road.

iv. Yes, but only for residential developments that are unable to comply with the new proposed residential waste management kerbside standard (Note: under this proposed standard, residential developments are required to provide either a kerbside collection, or fully onsite collection).

Table 30: Evaluation of Possible Options (Heavy Vehicle Access – Heavy Vehicle Access to Residential Sites for Waste Management Collection)

Evaluation Criteria	Option 1 – Status quo, rely on the road network for loading/unloading of heavy vehicles	Option 2 – Residential development exceeding a threshold of 10 or more units	Option 3 – Residential developments accessing an arterial road	Option 4 – Residential developments that are unable to comply with the new proposed residential waste management kerbside standard
Appropriateness	Relying on the road network for the loading/unloading of heavy vehicles (i.e waste management trucks) is an appropriate option, in some instances. This option is the current practice for the vast majority of residential properties in the Auckland region (excluding those larger developments of 20+	This option recognises that a requirement for a heavy vehicle loading space at the lower end of the development scale (i.e. 1-9 units) is not appropriate given the scale of the development and the likely number of trips requiring such a space. Infrequent loading for smaller residential	This option recognises that the most significant adverse effects of loading are likely to occur on arterial roads which carry the greatest amount of traffic, as well as having bus and cycle lanes. A requirement for a heavy vehicle loading space at the lower end of the development scale is not appropriate given the scale of the development and the likely number and	This option links the provision of an onsite heavy vehicle access standards with the new proposed residential waste management standards. Having a standard requiring a heavy vehicle access standards where insufficient kerbside space is available enables an assessment to be undertaken. This can consider site suitability and the ability

	units that have a private on-site waste collection). The operative AUP provisions however do not adequately respond to private accessways that require onsite waste collection.	developments can typically take place from the road reserve without adversely affecting the transport network. It is loading associated with larger developments (10 or more units) that potentially has the greatest adverse effects. Threshold scenario modelling and consideration of case studies demonstrated that this option was too blunt to allow an appropriate balance between maximising site yield and minimising on-street effects.	frequency of trips requiring such a space. Infrequent loading can typically take place from the road reserve without adversely affecting the transport network. In addition, a heavy vehicle loading space will have a disproportionate effect on development yield as not only is a loading space required but also a vehicle crossing and manoeuvring areas, as reverse manoeuvring onto an arterial road is not permitted. Threshold scenario modelling and consideration of case studies demonstrated that this option was too blunt to allow an appropriate balance between maximising site yield and minimising on-street effects.	for loading to occur off site, including the extent to which a private collection vehicle can undertake collection within the road corridor while managing adverse effects on the safe and efficient operation of the local transport network. Threshold scenario modelling and consideration of case studies demonstrated that waste collection needed to be considered on a site by site basis, rather than setting rigid thresholds at which on-site waste collection was required.

Effectiveness	The option is effective for low to medium density residential areas. As densities and the scale of development increase, particularly in the THAB zone, on-street loading may have adverse effects on the road network with potential delays. Adequate consideration of waste collection for residential developments is not well addressed by the operative provisions of E.27.	A requirement for a heavy vehicle access standard at the higher end of the development scale (i.e. 10 or more units) potentially would avoid adverse effects on the transport network given the scale of the development and the likely number and frequency of trips requiring such access. Refer to comments above about thresholds being a blunt tool.	A requirement for a heavy vehicle access standard at the lower end of the development scale is not likely to be effective at avoiding adverse effects on the transport network given the scale of the development and the likely number and frequency of trips requiring such access. The effectiveness of this option does increase as development size increases. Refer to comments above about thresholds being a blunt tool.	The effectiveness of requiring a heavy vehicle access standard for developments that do not have sufficient kerbside space more residential units in order to avoid adverse effects on the transport network will depend on the both the scale of development and its location. These are matters that can be considered in a resource consent assessment. Waste collection needs to balance the competing demands of maximising site yield (by avoiding on-site waste collection) and minimising on=street effects (by avoiding on-street waste collection). This option provides a good balance and can be assessed on a site by site basis.
Efficiency	This option maximises the development of sites.	This option has a high net cost – i.e. the provision for heavy vehicle access at a	This option has a high net cost – i.e. the provision of a heavy vehicle access at a low	This option recognises that on-street loading is the preferred option, unless there

	On – site loading for heavy vehicles requires a vehicle crossing, a loading space and manoeuvring areas. This potentially has a significant effect on yield (see the results of modelling). For many sites, particularly those fronting local roads, loading from the road network can occur without overly affecting the safe and efficient operation of the transport network.	low net benefit – the need for such access at the lower end of the development scale (i.e. just over 10 or more units). The costs are in terms of the loss of development yield. The scale of the development and the likely number of trips requiring heavy vehicle access means Infrequent loading can take place from the road reserve without adversely affecting the transport network. Any onsite heavy vehicle access would also need to address the safety of pedestrians and manoeuvring requirements for heavy vehicles. A lack of separation between	net benefit – the need for such a space at the lower end of the development scale. The scale of the development and the likely number and frequency of trips requiring a heavy vehicle access means infrequent loading can take place from the road reserve without adversely affecting the transport network. The efficiency of this option does increase as development size increases. Any onsite heavy vehicle access would also need to address the safety of pedestrians and manoeuvring requirements for heavy vehicles. A lack of separation between pedestrians and vehicles within private accessways is a major factor in the likelihood of injury or death for pedestrians.	is insufficient kerbside space to accommodate bins. Potentially this option is relatively high cost if a heavy vehicle access is deemed necessary (through the resource consent process) for developments of a scale that just exceed the capacity for kerbside loading. Highest benefits are likely for large scale rear lot residential development with insufficient kerbside collection space for bins for. If that is the case, there are potentially high benefits as adverse effects on the transport network are avoided. Any onsite heavy vehicle access would also need to address the safety of pedestrians and manoeuvring requirements for heavy

		pedestrians and vehicles within private accessways is a major factor in the likelihood of injury or death for pedestrians.		vehicles. A lack of separation between pedestrians and vehicles within private accessways is a major factor in the likelihood of injury or death for pedestrians.
Costs	Potentially there are adverse effects or economic and environmental costs on the transport network. The scale and nature of these will depend on the location of the development. Larger developments on arterial roads potentially have the greatest impact.	This option adds economic costs to the development as a heavy vehicle access is required. These costs are greatest at the lower end of the development scale. In addition, heavy vehicle access standards will have a disproportionate effect on development yield as it will require a vehicle crossing and manoeuvring areas. There are also potential health and safety costs associated with vehicle crossings, driveways and manoeuvring areas, with	This option adds economic costs to the development as a heavy vehicle access is required. These costs are greatest at the lower end of the development scale. In addition, heavy vehicle access standards will have a disproportionate effect on development yield as it will require a vehicle crossing and manoeuvring areas. There are also potential health and safety costs associated with vehicle crossings, driveways and manoeuvring areas, with greater risk of driveway run-over accidents.	This option adds economic costs to the development if heavy vehicle access is required. These costs are greatest at the lower end of the development scale. That is, smaller scale development with insufficient kerb space to accommodate bins. As the scale of the development increases, the economic costs are proportionately reduced. In addition, a heavy vehicle access standards will have a disproportionate effect on development yield as it will require a vehicle crossing and manoeuvring areas.

		greater risk of driveway run-over accidents.		
Benefits	This option maximises the development of sites. On-street loading for heavy vehicles avoids a vehicle crossing and manoeuvring areas. There are also potential safety benefits by not needing vehicle crossing, driveways and manoeuvring areas, thus avoiding potential driveway run-over accidents.	Residents benefit from the ability for a heavy vehicle to access the site, as does the waste management company with a more convenient waste collection point. This provides economic benefits (the time taken to load and unload bins and the convenience). There are also economic and environmental benefits to users of the transport network in terms of less delays/streets blocked by heavy vehicles uploading waste bins.	Residents benefit from the ability for a heavy vehicle to access the site, as does the waste management company with more convenient waste collection for sites access arterial roads. This provides economic benefits (the time taken to load/unload bins and receive deliveries and the convenience). There are also economic and environmental benefits to users of arterial roads in terms of less delays/streets blocked by heavy vehicles uploading waste bins.	The same benefits as for options 1, 2 and 3, apply depending on whether a kerb side option can be used or onsite loading is required. In addition, this option achieves the best balance between the competing demands of maximising site yield and minimising on-street effects.
Risks	There will be some localised areas of congestion and safety effects on rubbish collection day when trucks	Heavy vehicle access is provided but is infrequently used and/or there is the ability to load from the road network	At the lower end of the development scale, heavy vehicle access is provided but is infrequently used and/or there is the ability to load from the road network	The same risks as option 1, 2 and 3 apply, depending on whether a kerb side option can be used or onsite loading is required.

	stop to load and block traffic. The greatest potential for this to occur is larger developments (with multiple bins) on arterial roads. The operative provisions do not adequately respond to private accessways that require on-site waste collection.	without having adverse effects. In providing a heavy vehicle loading space, there is significant loss of development yield. This option relies on a threshold which does not adequately address the tension between maximising yield and minimising on-street effects.	without having adverse effects. This issue could be addressed by adding a development threshold (e.g option 2) to this option. In providing a heavy vehicle access, there is significant loss of development yield. This option relies on a threshold (albeit a different one from option 2) which does not adequately address the tension between maximising yield and minimising on-street effects.	
Summary	**Not Recommended**	**Not Recommended**	**Not Recommended**	**Recommended Option**

10.2.5 Cycle Parking and Access

292. The options for the key decision points for each of the issues is considered below.

1. The required number of cycle parks and visitor parks per residential unit.

Options

i. Status quo - 1 per unit, 1/20 visitors, 20+ units threshold.
ii. 2 per unit, 1/10 visitors, no threshold.

Table 31: Evaluation of Possible Options (Cycle Parking and Access – Number of Required Cycle Parks and Visitor Parks Per Residential Unit)

Evaluation Criteria	Option 1 – Status quo - 1 per unit, 1/20 visitors, 20+ units threshold	Option 2 – 2 per unit, 1/10 visitors and no threshold
Appropriateness	Moderately appropriate as it requires cycle parking to be provided but at quite a high threshold. This option will be less appropriate for new developments that do not provide car parking as there will be limited transport alternatives for residents.	A more appropriate option for developments that do not provide car parking as it will provide space for residents to store a bicycle that can be used as an alternative form of transport to private vehicle. Considered to be an appropriate and justified option given proposed investment in region-wide cycle infrastructure. In order to meet mode shift goals as well as climate change objectives better provision for on-site cycle parking needs to be made. On-site cycle parking provision will also be supported by the ongoing expansion of Auckland's cycling network
Effectiveness	Low effectiveness as the current threshold of 20+ dwellings is high given that a large proportion (95 percent +) of new developments in Auckland are under 20 dwellings. The current provisions will become less effective as developments are no longer required to provide on-site car parking, therefore leaving residents with limited transport options. Maintaining the status quo is not an effective option for addressing weaknesses in the current assessment criteria for cycle parking.	An effective option as it will require cycle parking to be provided for all developments where no secure garage is provided. This will provide an alternative to private vehicle travel if no on-site car parking is provided as it ensures that each residential unit is provided with an opportunity to store a bicycle. Pursuing a plan change will also enable the current assessment criteria for cycle parking to be strengthened which is effective at addressing the current issues which have emerged through the consenting process.

	The parking rates could however remain the same but the threshold deleted. This would require cycle parking to be provided for all developments where no secure garage is provided.	
Efficiency	Not efficient as this option does not address the issue or provide better outcomes for residential developments in relation to cycle parking. However, this is the lowest cost option as no change is required. This option would be more efficient if the parking rates were to remain the same but the threshold of 20 or more units was deleted.	A less cost-efficient option as a plan change would be required. However, this option has a higher net benefit as it provides an opportunity to address the current issue relating to weak assessment criteria for cycle parking and requires all new residential developments to provide an appropriate number of cycle parks.
Costs	A lower cost option for developers as cycle parking is only required for larger-sized developments (20+ dwellings). Potential for there to be greater environmental costs as developments which do not provide adequate cycle parking are less likely to encourage modal shift towards more sustainable transport options.	Would impose additional economic costs on developers as all developments would be required to provide cycle parking facilities. Fewer environmental costs anticipated as greater provision of cycle parking is likely to encourage more of a modal shift away from private vehicle usage, with the support of regional improvements to the cycle network. Despite requiring cycle parking for new residential developments, there is the risk that residents will not transition to cycling as a mode of transport if supporting regional infrastructure is not adequate.
Benefits	Little benefit as the current standard does not require cycle parking to be provided for small-medium sized developments (less than 20 dwellings).	Establishes a lower threshold in the AUP which will requires all developments, regardless of size, to provide cycle parking facilities if there is no dedicated garage or basement carparking.

	This could however be addressed by deleting the threshold for cycle parking but retaining the current cycle parking numbers. The current assessment criteria for cycle parking is also weak and has been resulting in poor outcomes for cycle parking to date. Maintaining the current standard for cycle parking may result in greater residential yield given there will be no requirement for cycle parking for small-medium sized developments. This would be a benefit to landowners/ developers.	Also accommodates households which have more than one person who owns a bicycle by requiring two cycle parks per dwelling. This option has the potential to encourage modal shift across the region, in conjunction with proposed regional investment in cycle infrastructure which could lead to environmental benefits. Cycling also has notable benefits on physical and mental wellbeing, so encouraging this form of transport in new developments could have long-term social benefits.
Risks	If this option is pursued, then it is unlikely that the issue will be addressed. There is a high risk of new developments less than 20 dwellings not providing any car parking or cycle parking facilities for residents. This would leave residents with limited mobility options. This issue can however be addressed by deleting the threshold of 20 or more units for cycle parking.	If the issue is addressed via this option, it may add time to the consenting process if a proposed development does not comply with the standard. It could also impact development yield if a separate structure for cycle parking is required which may result in push-back from the development sector. Additional risk of developers passing increased costs of having to provide cycle parking onto residents through increased prices for residential units.
Summary	**Recommended option, but modified by deleting the threshold**	**Not recommended**

2. Whether cycle parking should be covered, secure etc.

Options

i. Not covered, secure (status quo).
ii. Covered, secure.

Table 32: Evaluation of Possible Options (Cycle Parking and Access – Covered and Secure Cycle Parking)

Evaluation Criteria	Option 1 - Not covered, secure (status quo)	Option 2 – Covered, secure
Appropriateness	Effectively the "status quo". Relies on either government action to implement EV charging ducting and wiring, or willing developers/landowners.	Balances the provision of EV charging with the provision of covered car parking. Recognises that some developments may not have covered car parks. However, uncovered carparks are suitable for EV supply equipment.
Effectiveness	Does not address the need for EV charging in residential development. Relies on government action at the national level. AT also does not anticipate supporting EV chargers within the road reserve due to various reasons (at this point in time) – see Draft Auckland Parking Strategy.	Partly addresses the need for EV supply equipment. Excludes residential development with no covered parking.
Efficiency	Nil cost option as maintaining status quo. Excludes all development from a requirement for EV supply equipment, so does not address the issue. Relies on government action at the national level.	Lower cost option, than option 3. Development with nil covered car park excluded from EV supply equipment.

		However, only partly effective in addressing the need for future EV charging.
Costs	Cost of future upgrades and establishment of EV charging equipment. Greater costs to retrofit than to provide at the time of development. Potentially environmental costs as the uptake of EV's is slowed due to the absence of home-based charging facilities.	Cost of providing the EV charging equipment. No EV charging associated with development that has no covered car park. Less likely to address climate change goals (than option 3) if there is future inadequate provision for EV charging.
Benefits	No upfront additional costs to developers or land owners. Maintains the status quo.	Could be viewed as interim action to address EV charging needs until central governmental addresses the issue.
Risks	No or little EV charging capability is provided on residential sites. Relies upon further actions and direction from central government. Limited capacity to accommodate the growing demand for electric vehicles.	Development with no covered parking but surface parking missing out on the provision of EV charging equipment at the time of development. Future additional costs to retrofit these developments. Could be some mis-alignment with future govt action and direction.
Summary	**Not recommended**	**Recommended option**

10.2.6 Electric Vehicle Charging

293. The options for the key decision points for each of the issues is considered below.

1. Should the AUP require the necessary EV supply equipment (space on the switchboard, appropriately sized mains and necessary conduit, cable route and/or cable ladders) at the time of development.

Options

i. Don't require the necessary EV supply equipment.
ii. Require the necessary EV supply equipment where covered car parks for residential development are provided.
iii. Require the necessary EV supply equipment where any car parking (covered or uncovered) for residential development is provided.

Table 33: Evaluation of Possible Options (Electric Vehicle Charging – EV Supply Equipment)

Evaluation Criteria	Option 1 – Don't require the necessary EV supply equipment	Option 2 - Require the necessary EV supply equipment where covered car parks for residential development are provided	Option 3 - Require the necessary EV supply equipment where any car parking (covered or uncovered) for residential development is provided
Appropriateness	Effectively the "status quo". Relies on either government action to implement EV charging ducting and wiring, or willing developers/landowners.	Balances the provision of EV charging with the provision of covered car parking. Recognises that some developments may not have covered car parks. However, uncovered carparks are suitable for EV supply equipment.	Results in the greatest provision of EV charging facilities. Recognises that some residential developments may not have any onsite covered parking but may have uncovered parking. Uncovered carparks are suitable for EV supply equipment.
Effectiveness	Does not address the need for EV charging in residential development. Relies on government action at the national level.	Partly addresses the need for EV supply equipment. Excludes residential development with no covered parking.	Address the need for EV supply equipment for all residential developments that provide onsite parking.

	AT also does not anticipate supporting EV chargers within the road reserve due to various reasons (at this point in time) – see Draft Auckland Parking Strategy.		
Efficiency	Nil cost option as maintaining status quo. Excludes all development from a requirement for EV supply equipment, so does not address the issue. Relies on government action at the national level.	Lower cost option, than option 3. Development with nil covered car park excluded from EV supply equipment. However, only partly effective in addressing the need for future EV charging.	Higher cost option. All car parks are required to provide EV supply equipment. Cost of ducting and wiring is required at the initial development stage. Does however fully address the issue of provision for future EV charging. Recognises that provision of EV charging equipment is most efficiently provided at the time of development.
Costs	Cost of future upgrades and establishment of EV charging equipment. Greater costs to retrofit than to provide at the time of development. Potentially environmental costs as the uptake of ev's is slowed due to the absence of home-based charging facilities.	Cost of providing the EV charging equipment. No EV charging associated with development that has no covered car park. Less likely to address climate change goals (than option 3) if there is future inadequate provision for EV charging.	Cost of EV charging equipment occurs at the initial development phase. Advice is that the costs are minimal at the time of development (a few hundred $ per residential unit) but may be substantially higher if future retro-fitting is required. This depends on individual circumstances.

Benefits	No upfront additional costs to developers or land owners. Maintains the status quo.	Could be viewed as interim action to address EV charging needs until central governmental addresses the issue.	Maximises the provision of EV supply equipment. Avoids future retro-fitting which is likely to be more expensive. Potentially greater environmental benefits as the uptake of ev's is facilitated by greater provision of EV charging equipment.
Risks	No or little EV charging capability is provided on residential sites. Relies upon further actions and direction from central government. Limited capacity to accommodate the growing demand for electric vehicles.	Development with no covered parking but surface parking missing out on the provision of EV charging equipment at the time of development. Future additional costs to retrofit these developments. Could be some mis-alignment with future govt action and direction.	Higher upfront costs of implementing EV charging equipment for all car parks. Could be some mis-alignment with future govt action and direction.
Summary	**Not recommended**	**Not recommended**	**Recommended option**

10.2.7 Effects on the Transport Network

294. The options for the key decision points for each of the issues is considered below.

1. **Does the trip generation standard require amendment to enable a fuller assessment of the effects of activities on the transport network?**

Options

i. No, retain the status quo.

ii. Yes, modify the standard, matters of discretion and assessment criteria relating to residential activities only.

iii. Yes, modify the standard, matters of discretion and assessment criteria relating to residential and other activities.

Table 34: Evaluation of Possible Options (Effects on the Transport Network – Trip Generation Standard)

Evaluation Criteria	Option 1 – Retain the status quo	Option 2 - Modify the standard etc relating to residential activities only	Option 3 - Modify the standard etc relating to residential and other activities
Appropriateness	Not the most appropriate option to address the issue as the existing threshold to assess trip generation effects (Standard E27.6.1) is set at a high level, particularly for activities that may generate high car parking demand. This is not the most appropriate way to achieve the objectives of the evaluation.	A more appropriate option (than Option 1) to address the issue as the residential threshold to assess trip generation effects (i.e. E27.6.1 Trip generation rule) is reduced to a lower level. Lower residential thresholds for the operative E27.6.1 rule ensure that the trip generation effects of an increased number of residential developments are considered, and where necessary, mitigated. This will therefore reduce the pressure added to the transport network.	The mandatory residential intensification provisions do not apply to non-residential land uses. Is therefore not necessary to meet the objective of the evaluation and the purpose of the RMA.

		Will therefore meet the objective of the evaluation and the purpose of the RMA.	
Effectiveness	Does not address the issue of trip generation and travel demand effects for activities under the thresholds specified in the standard, that were previously subject to minimum car parking requirements. This therefore does not enable an assessment of effects on the transport network. Therefore, does not meet the objectives of the plan change and the purpose of the RMA.	Would address the issue of trip generation and travel demand effects at a level below the current trip generation standard for residential activities only. Therefore, would meet the objectives of the AUP and the purpose of the RMA.	Would address the issue of trip generation and travel demand effects at a level below the current trip generation standard for all activities. However, non-residential activities are not affected by the mandatory residential intensification provisions. A wider ranging change to the thresholds may not be necessary to meet the objectives of the AUP and the purpose of the RMA.
Efficiency	A low/no cost option as no plan change is required, but not efficient as the issue of enabling an assessment of trip generation and travel demand effects is not addressed for activities under the threshold.	A more efficient option than option 1 as the issue of enabling an assessment of trip generation and travel demand effects is addressed at a level below the current trip generation standard. Higher cost than Option 1 but much more efficient as the issue is addressed and objectives are achieved.	Less efficient option than option 2 as the issue of enabling an assessment of trip generation and travel demand effects is addressed at a level below the current trip generation standard for all activities – residential, education facilities, office, retail and industrial activities. Potentially a less efficient option than Option 2 as this would be the highest cost option and would not necessarily address the issue.
Costs	Would not result in an additional consenting cost for applicants. However, this potentially may lead to adverse effects including effects on	Lowering the threshold would result in increased application costs for residential activities. However, the lower threshold will	Lowering the threshold would result in increased application costs for all activities – residential, education facilities, office, retail and industrial activities.

	road user safety, transport network efficiency and amenity values.	only capture a small additional proportion of consent applications. Based on residential developments with private accessways consented between October 2016 and March 2022[39], 0.27% were 100 dwellings or more (total of 12 developments), and 0.85% were 60 dwellings or more (total of 38 developments). This indicates that lowering the threshold would only affect a small proportion of residential activities.	This option will only capture a small additional proportion of consent applications.
Benefits	This option would not incur any plan change related resources.	This option would mean that a greater number of proposed residential developments and activities would be able to be assessed for their trip generation and travel demand effects in light of the mandatory residential intensification provisions. This would ensure these effects are able to be managed.	This option would mean that a greater number of proposed developments and activities – residential, education facilities, office, retail and industrial activities, would be able to be assessed for their trip generation and travel demand effects. This would ensure these effects are able to be managed.
Risks	There may be instances where there are adverse effects on the transport network including safety, efficiency and amenity and these are unable to	Potential for significant opposition from the development community through the plan change process.	Potential costs may outweigh benefits however.

[39] Source: Auckland Unitary Plan Resource Consents Database: unitaryplan@aucklandcouncil.govt.nz

	be adequately assessed and addressed because the thresholds are set at a high level. Removal of parking minimums is exacerbated by mandatory intensification provisions.		Potential for significant opposition from the development community through the plan change process.
Summary	**Not recommended**	**Recommended option**	**Not recommended**

10.2.8 Pedestrian Safety

295. The options for the key decision points for each of the issues is considered below.

1. How wide should the pedestrian access be when adjacent to a vehicle access, to better prioritise pedestrian safety and convenience?

Options

i. No change, retain the status quo width of 1.0m
ii. Increase the minimum footpath width to 1.35m for developments of 10 – 19 dwellings or 10 – 19 parking spaces, and 1.8m for developments of 20+ dwellings or 20+ parking spaces
iii. Increase the minimum footpath width to 1.8m.

Table 35: Evaluation of Possible Options (Pedestrian Access Width – Adjacent to a Vehicle Access)

Evaluation Criteria	Option 1 – No change, retain the status quo of 1.0m	Option 2 - Increase the minimum footpath width to 1.35m – 1.8m	Option 3 - Increase the minimum footpath width to 1.8m
Appropriateness	Not an appropriate option for achieving improved design outcomes for multi-unit	A somewhat appropriate option for achieving improved design outcomes for multi-unit	An appropriate option for achieving improved design outcomes for multi-

	developments in terms of safety and amenity for pedestrians. The operative provisions are not sufficient to enable pedestrians to pass each other. The significantly disadvantages people with mobility difficulties.	developments in terms of safety and amenity for pedestrians. 1.35m is the minimum width required for two people to pass each other. This is not wide enough to allow a pedestrian and a wheelchair user to pass each other. The minimum width for publicly accessible footpaths is 1.8m. This is wide enough to allow a pedestrian and a wheelchair user to pass each other.	unit developments in terms of safety and amenity for pedestrians. The minimum width for publicly accessible footpaths is 1.8m. This is wide enough to allow a pedestrian and a wheelchair user to pass each other.
Effectiveness	The operative width results in pedestrian accessways may not be unusable and not safe to use. This will impact on people differently depending on their mobility and other circumstances.	Appropriate widths result in pedestrian access that is both useable and safe to use. Useable and safe pedestrian access will benefit some users, but not those with mobility difficulties.	Appropriate widths result in pedestrian access that is both useable and safe to use. Useable and safe pedestrian access will benefit all users, including those with mobility difficulties.
Efficiency	This is the lowest cost option as no change is required. However, it is not efficient as this option does not address the issue or provide better outcomes for residential developments in relation to the safety of pedestrians.	This option will require wider accessways. However, having a two tiered approach provides some relief to the tension between development yield and pedestrian accessway width.	This option will require wider accessways and will have the greatest effect on yield of the three options.

Costs	This option does not incur any plan-change or development related costs. There will however be social costs to users with pedestrian access not suitable for use by some user groups.	Will add to the economic cost, but less so than Option 3. There will be social and environmental costs to users with pedestrian access not suitable for use by some user groups.	Highest economic costs, both in terms of development cost and potential effect on yield
Benefits	The most cost effective option due to reduced costs in terms of effect on yield and development costs, compared with Option 2 and Option 3.	Social and environmental benefits of having an appropriate width of pedestrian access for most users. Having a two tiered approach provides some relief to the tension between development yield and pedestrian access width. It is appropriate for larger residential developments to provide pedestrian accesses that are consistent with public road standards due to the increased exposure of pedestrians to higher traffic volumes leading to increased safety risks.	Social and environmental benefits of having an appropriate width of pedestrian access for all users.
Risks	The width of pedestrian access is too narrow and not appropriate. This option does not address the identified issues.	The costs may outweigh the benefits if the standards for width are set too high.	The costs may outweigh the benefits if the standards for width are set too high.

		The two tiered approach means some pedestrian access will not be suitable for use by some user groups. May be difficult to achieve for some brownfield sites.	Likely to be difficult to achieve for some brownfield sites.
Summary	**Not recommended**	**Recommended option**	**No recommended**

2. Should pedestrian accesses be separated from trafficable areas, to better prioritise pedestrian safety and convenience?

Options

i. No change, retain the status quo that permits pedestrian accesses within trafficable areas.
ii. Require vertical separation, for example using a kerb.
iii. Require horizontal separation, for example using a berm or landscaping strip.

Table 36: Evaluation of Possible Options (Pedestrian Access Separation from Trafficable Areas)

Evaluation Criteria	Option 1 – No change, retain the status quo	Option 2 – Require vertical separation	Option 3 – Require horizontal separation
Appropriateness	Not an appropriate option for achieving improved design outcomes for multi-unit developments in terms of safety and amenity for pedestrians. The lack of separation results in negative safety outcomes for pedestrians, with greater risk of run-overs (injury and death).	An appropriate option for achieving improved design outcomes for multi-unit developments in terms of safety and amenity for pedestrians. This reduces the risk of pedestrian injury due to run-overs.	An appropriate option for achieving improved design outcomes for multi-unit developments in terms of safety and amenity for pedestrians. This reduces the risk of pedestrian injury due to run-overs.

Effectiveness	Not effective at addressing safety issues such as driveway runovers causing death and injury.	Vertical separation is effective at preventing vehicles driving within pedestrian areas.	Horizontal separation is effective at preventing vehicles driving within pedestrian areas.
Efficiency	This is the lowest cost option as no change is required. However, it is not efficient as this option does not address the issue or provide better outcomes for residential developments in relation to the safety of pedestrians.	This option will require wider accessways, as the operative provisions permit pedestrian accesses to be within the vehicle carriageway. However, this option has a lower effect on yield compared to Option 3.	This option will require wider accessways and will have the greatest effect on yield of the three options.
Costs	This option does not incur any plan-change or development related costs. However, there will be social cost from pedestrian injury due to run-overs.	Will add to the economic cost, but less so than Option 3.	Highest economic costs, in terms of potential effect on yield, as horizontal separation requires wider accessways compared to Option 2.
Benefits	The most cost effective option due to reduced costs in terms of effect on yield and development costs, compared with Option 2 and Option 3.	Social benefits from a reduction in pedestrian injury due to run-overs.	Social benefits from a reduction in pedestrian injury due to run-overs.
Risks	Pedestrian injury due to run-overs.	Limited risks.	The costs outweigh the benefits if the standards for horizontal separation are set too high. Difficult to achieve for some brownfield sites.
Summary	**Not recommended**	**Recommended option**	**No recommended**

3. Should pedestrian accesses be clear from obstruction, to better prioritise pedestrian safety and convenience?

Options

i. No change, retain the status quo that permits obstructions (e.g. lighting poles, letterboxes etc) within pedestrian accesses.

ii. Require pedestrian accesses to be free from obstruction.

Table 37: Evaluation of Possible Options (Pedestrian Access Free from Obstruction)

Evaluation Criteria	Option 1 – No change, retain the status quo	Option 2 – Require pedestrian accesses to be free from obstruction
Appropriateness	Not an appropriate option for achieving improved design outcomes for multi-unit developments in terms of safety and amenity for pedestrians. The operative provisions are not sufficient to ensure pedestrian accesses are free from obstruction and trip hazards.	An appropriate option for achieving improved design outcomes for multi-unit developments in terms of safety and amenity for pedestrians
Effectiveness	The operative provisions are not effective at prioritising pedestrian convenience. Obstructions in pedestrian accesses limits the usability, particularly for mobility impaired users.	Recognises that there is a minimum width required for two people to pass each other (whether they be pedestrians, a pedestrian and a wheelchair, etc).
Efficiency	This option has lower net cost but also low benefits and does not address the issue of pedestrian accesses that do not prioritise pedestrian safety and convenience.	This option may require wider accessways, as additional width may be required for letter boxes, lighting poles etc.
Costs	There will be reduced economic costs (in comparison to Option 2).	Will add to the economic cost, due to effect on yield.

	There will however be social cost from reduced pedestrian accessibility and convenience.	
Benefits	Benefits will largely be reduced costs in terms of effect on yield.	Social benefits from improved pedestrian accessibility and convenience.
Risks	Pedestrian may need to use the adjacent carriageway to pass other pedestrians, due to "pinch points".	Limited risks.
Summary	**Not recommended**	**Recommended option**

4. Should additional pedestrian accesses be provided based on accessway length and/or development intensity, to better prioritise pedestrian safety and convenience?

Options

i. No change, retain the status quo for determining when a pedestrian access is required.
ii. Require more intensive developments to provide a footpath on both sides of an accessway.
iii. Require more intensive developments to provide a footpath that connects to every dwelling.
iv. Require a pedestrian access when the accessway is more than 100m long.

Table 38: Evaluation of Possible Options (Pedestrian Access Provision Based on Accessway Length and/or Development Intensity)

Evaluation Criteria	Option 1 – No change, retain the status quo	Option 2 – pedestrian accesses both sides	Option 3 – pedestrian access to every dwelling	Option 4 – pedestrian accesses for accessways over 100m
Appropriateness	Not an appropriate option for achieving improved design outcomes for multi-unit developments in terms	An appropriate option for achieving improved design outcomes for multi-unit developments in terms of	An appropriate option for achieving improved design outcomes for multi-unit developments in terms of	An appropriate option for achieving improved design outcomes for multi-unit developments in terms of

	of safety and amenity for pedestrians. This option does not reflect that increasing development intensity and/or increasing accessway lengths lead to increasing need to provide pedestrian access.	safety and amenity for pedestrians. This option recognises that, with increasing development intensity, there is an increased pedestrian demand, and that an accessway fulfils a function similar to a public road.	safety and amenity for pedestrians. This option is similar to Option 2, however it allows a more site specific approach.	safety and amenity for pedestrians. This option recognises that, with increasing accessway length, there is an increased frequency of pedestrian/vehicle conflicting movements.
Effectiveness	The operative provisions are not effective at prioritising pedestrian safety or convenience for larger developments and longer accessways. Pedestrian/vehicle conflicts within accessways are an identified safety concern.	Provides pedestrian accesses similar to a public road standard.	Provides pedestrian accesses similar to a public road standard.	The option effectively addresses pedestrian/vehicle conflict within longer accessways
Efficiency	This option has lower net cost but also low benefits and does not address the issue of pedestrian accesses that do not prioritise pedestrian safety and convenience.	This option may require wider accessways, as additional width may be required for the additional pedestrian access.	This option may require wider accessways, as additional width may be required for the additional pedestrian access. However, this option is more efficient that Option 2, as it would only require a	This option may require wider accessways, as additional width may be required for the pedestrian access.

			pedestrian access on both sides of a vehicle access, if dwellings front both sides of the vehicle access	
Costs	This option does not incur any plan-change or development related costs. There will however be social cost from reduced pedestrian accessibility and convenience.	Will add to the economic cost, due to effect on yield.	Will add to the economic cost, due to effect on yield, but less so compared with Option 2.	Will add to the economic cost, due to effect on yield.
Benefits	Benefits will largely be reduced costs in terms of effect on yield.	Social benefits from improved pedestrian accessibility and convenience.	Social benefits from improved pedestrian accessibility and convenience.	Social benefits from improved pedestrian accessibility and convenience.
Risks	Do not address the issue of pedestrian/vehicle conflicts within accessways, which are an identified safety concern.	The costs outweigh the benefits if the standards for width are set too high. Difficult to achieve for some brownfield sites.	The costs outweigh the benefits if the standards for width are set too high.	The costs outweigh the benefits if the standards for width are set too high. Difficult to achieve for some brownfield sites.
Summary	**Not recommended**	**Not recommended**	**Recommended option**	**Not recommended**

10.2.9 Footpath Gradients

296. The options for the key decision points for each of the issues is considered below.

1. Should a maximum pedestrian accessway gradient be specified, to better prioritise pedestrian safety and convenience?

Options

i. No change, retain the status quo.
ii. Require a maximum pedestrian accessway gradient, consistent with public road standard, for more intensive developments.
iii. Require a maximum pedestrian accessway gradient, consistent with public road standard, for all pedestrian accessways.

Table 39: Evaluation of Possible Options (Pedestrian Access Gradient)

Evaluation Criteria	Option 1 – No change, retain the status quo	Option 2 – maximum gradient for more intensive developments	Option 3 – maximum gradient for all pedestrian accesses
Appropriateness	Not a very appropriate option for achieving improved design outcomes for multi-unit developments in terms of safety and amenity for pedestrians. The operative provisions significantly disadvantage people with mobility difficulties. This option would negate the benefits derived from having a wider accessway.	An appropriate option for achieving improved design outcomes for multi-unit developments in terms of safety and amenity for pedestrians. With appropriate gradient standards, pedestrian access is safer to use. This is particularly important for people with mobility difficulties. This option targets larger developments, meaning some developments would disadvantage people with mobility difficulties. This compliments the benefits derived from having a wider accessway.	A very appropriate option for achieving improved design outcomes for multi-unit developments in terms of safety and amenity for pedestrians. With appropriate gradient standards, pedestrian access is safer to use. This is particularly important for people with mobility difficulties. This compliments the benefits derived from having a wider accessway

Effectiveness	An absence of appropriate gradient standards result in pedestrian access that is unusable for all people. This will impact on people differently depending on their mobility and other circumstances.	Appropriate gradient standards result in pedestrian access that is useable for all people. Useable pedestrian access will benefit all users, including those with mobility difficulties.	Appropriate gradient standards result in pedestrian access that is useable for all people. Useable pedestrian access will benefit all users, including those with mobility difficulties.
Efficiency	This is the lowest cost option as no change is required. However, it is not efficient as this option does not address the issue or provide better outcomes for residential developments in relation to pedestrian accessibility.	Somewhat effective as it ensures that pedestrian accesses for larger developments are accessible for all users.	Effective as it ensures that pedestrian accesses are accessible for all users
Costs	This option does not incur any plan-change or development related costs. There will however be social cost from reduced pedestrian accessibility and convenience.	May add to the economic cost, due to effect on yield, but less so than Option 3.	May add to the economic cost, due to effect on yield.
Benefits	The most cost effective option due to reduced costs in terms of effect on yield and development costs, compared with Option 2 and Option 3.	Social benefits from improved pedestrian accessibility.	Social benefits from improved pedestrian accessibility.
Risks	Pedestrian access may be an appropriate width but be unusable	The costs outweigh the benefits if the standards for gradient are set too high. May be difficult to	The costs outweigh the benefits if the standards for gradient are set too high. May be difficult to

	or difficult to use by some user groups.	achieve for many sites due to topography.	achieve for many sites due to topography.
Summary	**Not recommended**	**Not recommended**	**Recommended option**

10.2.10 Fire and Emergency Access

297. The options for the key decision points for each of the issues is considered below.

1. **Whether vehicle accessways are adequately designed for Fire and Emergency New Zealand (FENZ) vehicles, as required by the Building Code and recommended in FENZ guidance.**

Options

i. Retain the status quo.

ii. Amend the operative provisions to either require compliance to NZBC requirements for FENZ access and/or amend to reference the FENZ F5-02 GD Designers' guidance for access.

iii. Issue a note in Chapter E27 to highlight the relevant section of the Building Code (Clause C6) in terms of fire and emergency access requirements, and recommend that a Practice Note for AUP users is developed which provides further guidance in regards to these requirements.

Table 40: Evaluation of Possible Options (Vehicle Access – Carriageway Design for Fire and Emergency Vehicles)

Evaluation Criteria	Option 1 (status quo)	Option 2 – Amend operative provisions to require compliance to NZBC requirements for FENZ access, or incorporate references to FENZ guidance for access	Option 3 – Develop a Practice Note on the requirement of the Building Code and a note to E27 and E38 to identify requirements of the Building Code
Appropriateness	Not an appropriate option as it does not address the lack of any reference	Amending the provisions to include direct rules/standards according to these external	The most appropriate option, as a note added to Chapter E27 highlighting the need

	in the AUP to the specific guidance for FENZ vehicles. Consents have been issued with no consideration for fire-fighting vehicle access, even though the operative provisions allow for the consideration of access for fire-fighting vehicles.	documents is not considered appropriate because the operative provisions of E27 already allow for the consideration of access for fire-fighting vehicles. Amending to include reference to the FENZ F5-02 GD Designers' guide is not appropriate because this is a non-prescriptive guidance document only. The Building Code already regulates access requirements for fire-fighting operations and it would be inappropriate to include this document as part of the AUP provisions.	for AUP users to consider the relevant section of the code (Clause C6) when considering access design in the context of fire and emergency vehicles will direct plan-users to the appropriate third-party regulations. The recommendation of the development and distribution of a practice note, while non-statutory in its application, is an effective tool to highlight and explain the requirement of the building code for all users to ensure that the design of access for FENZ vehicles is optimised.
Effectiveness	Not effective as the status quo will not achieve the outcomes required to provide a greater level of recognition for the access requirements needed by fire-fighting vehicles	Amending the provisions to specifically include rules/standards relating to the guidance contained in these documents would be effective in the sense that it would incorporate definitive requirements for FENZ access, but not efficient (see below) because specific provisions already exist in the Building Code.	Effective because the requirements of the Building Code are referred to in an appropriate section of Chapter E27 so that users of the AUP are directed to the Code as part of their assessment of access requirements for FENZ. In addition, a Practice Note to further explain and assist users in the context of the requirements of the code is an effective method to ensure awareness and appropriate decision-making in terms of design.
Efficiency	Not the most efficient of the options because there is no information as part of the provisions which directs processing planners to the appropriate sections of the Building Code	Incorporating amendments which already exist in a regulatory document and a non-statutory document is not efficient. In addition, any amendments to the third party documents would mean that future	Providing a reference to third-party documents is considered to be the most efficient method of highlighting both an additional regulatory regime and non-statutory guidance. In addition, a Practice Note would provide guidance for users

		plan changes may have to be undertaken to reflect any updates.	without having to access the full Building Code for every assessment that needed to consider FENZ access requirements.
Costs	This option does not incur any plan-change related costs and thus is the most cost-effective option	This option would incur plan-change related costs.	This option would incur plan change-related costs as well as staff time and resources to develop a Practice Note and to disseminate the Note via training or similar.
Benefits	As no change is required, there are no benefits	This option has minimal benefit because there is no reason to amend provisions when the requirements for FENZ access are determined by the Building Code, and may not provide for any consideration of alternative solutions on a case by case basis.	Of most benefit because it provides a clear note/instruction to plan-users that specific requirements exist within the Building Code which should be considered as part of the design process, and provides enough flexibility to allow for design alternatives on a case by case basis.
Risks	The risks of this option include the continued granting of consents where no access for fire-fighting vehicles is considered, thus resulting in sub-optimal access situations for emergency vehicles	The option of flexibility of design in terms of alternative solutions for FENZ vehicles would not be an option under this approach. Basing rules and standards on third party documents may also pose a risk in terms of them becoming out of date and therefore conflicting with updated recommendations.	There is a risk that, without rules and standards included in the AUP, that reliance on non-prescriptive third party guidance documents will be inadequate to ensure that all accessways are designed to accommodate FENZ vehicles.
Summary	**Not recommended**	**Not recommended**	**Recommended option**

10.2.11 Speed Management Measures

298. The options for the key decision points for each of the issues is considered below.

1. Inadequate speed management measures for private accessways .

Options

i. Retain the status quo.
ii. Modify E27 to reflect the consideration of speed management in E38.
iii. Amend E27 and E38 to require speed management standard for accessways exceeding 30m in length.

Table 41: Evaluation of Possible Options (Vehicle Access – Speed Management Measures)

Evaluation Criteria	Option 1 (status quo)	Option 2 – Amend E27 to reflect the consideration given to speed management in E38	Option 3 - Amend E27 and E38 to require speed management standard for accessways greater than 30m in length
Appropriateness	Not a very appropriate option for achieving improved design outcomes for multi-unit developments in terms of safety and amenity for pedestrians. The operative provisions of E27 and E38 are not adequate to ensure that vehicle speeds in longer accessways are controlled to a safe limit because they do not require speed management measures for private accessways. Longer driveways result in greater risk of run-overs (injury and death).	The operative provisions of E38 are not directive, and only require consideration of speed management, so are not appropriate to achieve the outcome of enhanced safety and amenity for pedestrians. The provisions of E27 (currently) make no reference to speed management measures for accessways.	Considered the most appropriate option because it introduces AUP standards which will have a direct impact on speed control and therefore is appropriate to address the problem. Speed is a major factor in the severity of injury and likelihood of death when a vehicle collides with a pedestrian. Impact speeds should be limited to less than 30 km/hr, to reduce the likelihood of serious injury or death for pedestrians.
Effectiveness	Not effective at addressing safety issues such as driveway runovers causing death and injury.	Not effective as this option would offer no direct change to improving safety for pedestrians.	The most effective option as it introduces new standards to be complied with which

			would make a tangible difference to the speed restrictions of at-risk accesses.
Efficiency	This is the lowest cost option as no change is required. However, it is not efficient as this option does not address the issue or provide better outcomes for residential developments in relation to the safety of pedestrians.	Limited efficiency because there is no direct requirement to meaningfully influence and promote a lower-speed environment for accesses.	Efficient because speed restriction controls can be introduced at the time of construction.
Costs	This option does not incur any plan-change related costs.	This option would incur plan-change related costs.	Plan-change related costs and costs to developers in terms of an extra financial burden for constructing speed restrictive devices
Benefits	The most cost-effective option as no change is required.	A cost-effective option as a minimum amount of change would be required. However, it would still incur plan change-related costs with no tangible benefit ensuing from the amendment.	Although introducing the most cost, the benefits are significant in terms of delivering speed-management measures that can be constructed as part of an access, providing a lower-speed environment to ensure the safety of pedestrians.
Risks	If this option is pursued, the issues will not be addressed and the ongoing risk to human life and safety will remain.	Similar to the status quo, as the issues will not be addressed as the amendments reflect a non-directive approach to speed requirements.	A greater number of accesses will require a higher upfront cost to construct.
Summary	**Not recommended**	**Not recommended**	**Recommended option**

10.2.12 Carriageway Widths

299. The options for the key decision points for each of the issues is considered below.

1. Are the operative provisions for carriageway widths for private accessways appropriate? Should carriageway width requirements be based on the number of dwellings and/or parking spaces?

Options

i. Retain the status quo.
ii. Amend the minimum formed widths specified in Chapters E27 and E38.
iii. Include "dwellings" as a determinant of carriageway width for E27, instead of or in conjunction with "number of parking spaces."
iv. Amend Chapter E27 to identify that the specified minimum and maximum width of vehicle crossings at site boundaries excludes the width required for pedestrian accesses.

Table 42: Evaluation of Possible Options (Vehicle Access – Carriageway Widths for Private Accessways)

Evaluation Criteria	Option 1 (status quo) carriageway widths specified in the operative provisions are appropriate	Option 2 - Amend the minimum formed widths that are specified in Chapters E27 and E38	Option 3 - Include "dwellings" as a determinant of carriageway width for E27, instead of or in conjunction with "number of parking spaces".	Option 4 – amend Table E27.6.4.3.2 to identify that the specified minimum & maximum width of vehicle crossings at site boundaries excludes the width required for pedestrian accesses.
Appropriateness	Not an appropriate option because it would result in an inconsistency between the required carriageway widths when a separation between	Not an appropriate option because the carriageway widths specified in the operative provisions fall within the minimum lane widths	Not an appropriate option because although research into vehicle trip generation rates for residential developments shows a high	The most appropriate option because carriageway widths specified in the operative provisions are appropriate.

	pedestrian footpaths and vehicle access is considered.	identified in Auckland Transport's engineering standards, are therefore considered appropriate.	correlation between parking spaces and peak hour vehicle trip generation, the correlation between dwellings and peak hour vehicle trip generation is limited.	Thresholds for carriageway widths should be based on parking spaces (Chapter E27) and rear sites (Chapter E38). 'Dwellings' does not need to be introduced as a threshold for carriageway width. Amending Table E27.6.4.3.2 to identify that the specified minimum and maximum width of vehicle crossings at site boundaries excludes the width required for pedestrian accesses is the most appropriate option and is a consequential amendment.
Effectiveness	Neither effective nor efficient because of the resulting plan inconsistency if the consequential amendment is not made	Neither an effective nor efficient option because it does not reflect the consequential changes as a result of the amended pedestrian footpath widths	Not effective because it does not reflect the research which indicates that 'dwellings' are an inappropriate way to determine carriageway width.	This option is effective as it enables an accurate assessment in terms of carriageway widths in the context of separated pedestrian accesses.
Efficiency	Neither effective nor efficient because of the resulting plan inconsistency if the consequential amendment is not made	Neither an effective nor efficient option because it does not reflect the consequential changes as a result of the amended pedestrian footpath widths	Not an efficient option because amending carriageway widths based on 'dwellings' would not reflect the low correlation between dwellings and peak hour vehicle trip generation.	An efficient option as it reflects the consequential changes as a result of the amended pedestrian footpath widths.

Costs	Costs are deemed to be negligible	Plan change costs incurred with this option	Plan change costs incurred with this option	Plan change costs incurred with this option
Benefits	The most cost-effective option as no change is required.	Limited benefit. The operative plan specifies appropriate widths.	Limited benefit. The use of parking spaces as a determinant of the required carriageway width is appropriate.	Safety and efficiency benefits, as this option clarifies that vehicle crossing widths specified in the operative plan should not include pedestrian accessways.
Risks	Results in inadequate and inaccurate provisions given that consequential amendments are not reflected.	New carriageway widths are too wide, or too narrow.	Wider carriageways would be required for intensive developments that have low parking provision.	Limited risk.
Summary	**Not recommended**	**Not recommended**	**Not recommended**	**Recommended**

10.2.13 Integration Between Chapters E27 Transport and E38 Subdivision Urban

300. The options for the key decision points for each of the issues is considered below.

1. How should the lack of integration between E27 and E38 in relation to the minimum legal width of accessways be addressed?

Options

i. Retain the status quo.

ii. Amend E27 to reflect the minimum legal width of accessways serving 6 to 10 rear sites required in E38's operative provisions.

iii. Amend E27 and E38 to incorporate consequential amendments as a result of changes to the pedestrian accessways serving 4 to 10 rear sites.

Table 43: Evaluation of Possible Options (Vehicle Access – Integration Between E27 and E38)

Evaluation Criteria	Option 1 (status quo)	Option 2 – Amend E27 to reflect the minimum legal width of accessways to rear sites in E38's operative provisions.	Option 3 – Amend E27 and E38 to incorporate consequential amendments to pedestrian accessways in this Plan Change.
Appropriateness	Not an appropriate option. Does not address inconsistencies in E27 and E38 and issues identified in relation to minimum legal widths, maximum accessway lengths and provision of service strips. This has resulted in unintended outcomes for developments where land use consent has been granted prior to subdivision consent, including insufficient legal widths.	Improved integration between E27 and E38, in relation to legal width requirements for accessways. Introduction of maximum accessway length and provision of service strip standards may not be appropriate, as the transport effects associated with these can be mitigated by the provision of separated pedestrian accesses and speed management measures.	Considered the most appropriate option. The changes to E27 and E38, particularly in relation to legal widths, are consequential from changes to pedestrian access standards, as a result of this plan change.
Effectiveness	Not effective as the status quo will not achieve the outcomes required to provide a greater level of safety and accessibility within the vehicle access.	Not effective at addressing the integration issue. The E27 amendments do not address the safety and accessibility issues identified as a result of the currently operative provisions.	The most effective option, as this option also provides a correlation between the different legal width triggers in E27 and E38 – the amendments to E38 state that the legal width is based on the number of parking spaces or the number of dwellings, whichever is lesser. The amended widths are also consequential to the changes to the widths required for pedestrian accessways, with the standards reflecting this plan change. Although this does not introduce maximum accessway length or service strip requirements, it is noted that the effects associated with these are managed through this plan change's amended pedestrian accessway and speed management provisions.

Efficiency	Not efficient, as this option does not address the integration issue or provide better pedestrian safety and accessibility outcomes for rear sites.	Not efficient, as this option does not provide any mitigation on the pedestrian safety or accessibility issues within accessways that are associated with the currently operative provisions.	Most efficient, as this option addresses the integration issue between transport and subdivision's access width standards. Notably – the consequential changes in relation to legal width will accommodate the amendments to and outcomes for pedestrian access and safety, as sought by this plan change.
Costs	This option does not incur any plan-change related costs.	Plan-change related costs incurred; potential effects on economic cost and development yield, due to vehicle accessways requiring a minimum width.	Plan-change related costs incurred; potential effects on economic cost and development yield, due to vehicle accessways requiring a minimum width. Economic costs and development yield impact would be greater than Option 2 due to the increase in vehicle accessway widths to accommodate 1.35m or 1.8m wide pedestrian accessways, as sought by this Plan Change.
Benefits	The most cost-effective option as no change is required.	A cost-effective option as a minimum amount of change would be required. However, it would still incur plan change-related costs with no tangible benefits ensuing from the amendment.	Although introducing the most cost, the social and environmental benefits are significant and greater than Option 2 in terms of addressing accessibility and safety to rear sites. The additional width is consequential to the changes to the pedestrian accessway standards, and enables for the accommodation of wider and physically separated pedestrian access within the accessway, to ensure the safety of pedestrians.
Risks	If this option is pursued, developments may continue to have inappropriate vehicle access widths, with the issues identified in relation to safety and	Similar to the status quo, this may not necessarily align the E27 and E38 provisions, or minimise any of the issues currently generated by the misaligning provisions.	Developments which infringe the proposed standards may be constructed, due to potential impacts on development yield as a result of the minimum legal width requirements.

	accessibility continuing to remain.		
Summary	**Not recommended**	**Not recommended**	**Recommended option**

10.2.14 Lighting

301. The options for the key decision points for each of the issues is considered below.

1. Requiring specific artificial lighting for developments.

Options:

i. No specific lighting required for multi-unit developments or those with no vehicle access (status quo).

ii. Require specific artificial lighting in residential zones where no vehicle access is provided or where there are 10 or more parking spaces or 10 or more dwellings (excluding dwellings which have separate pedestrian access directly from the front door to the road).

Table 44: Evaluation of Possible Options (Lighting – Artificial Lighting for Developments)

Evaluation Criteria	Option 1 – Status Quo	Option 2 – Proposed Standard
Appropriateness	Moderately appropriate as although lighting standards are specified, these relate predominantly to the effect of light from a property and how it impacts adjoining sites, not the effect of lighting within a site and how it impacts pedestrian safety and/or way-finding. Under the status quo, the provision of lighting in the latter regard is left up to the developer and property-owner and may be inconsistent and sub-standard.	A more appropriate option for developments, where lighting during hours of darkness is required to ensure safety, access and way-finding. Considered to be an appropriate and justified option because it will provide a more consistent approach to ensuring the safety of people, while meeting minimum technical standards.

Effectiveness	Low effectiveness as the status quo does not provide an effective solution for all developments and dwellings where safety and access visibility may be an issue. In addition, the likelihood of more developments without vehicle access means that there will be a corresponding increase in dwellings with inadequate artificial lighting which will require additional lighting for the purpose of way-finding and access. The current standard describes 'adequate' lighting which is vague and subjective.	An effective option as it will require specific lighting to be provided as part of developments and thereafter managed by landowners. The proposed plan change will also enable appropriate assessment criteria for proposed lighting to be assessed for its effectiveness in all aspects (including placement, design, orientation and durability) particularly where solar lighting is proposed as an alternative. Information would also be required at the consent stage so that a bespoke lighting design for the development can be assessed.
Efficiency	Not efficient as this option does not adequately address the issues raised which include pedestrian safety, way-finding and access which are issues that are expected to become more prevalent with an increase in residential intensification, particularly those developments without car parking minimums.	The option is efficient for all owners and users as it provides a solution at the consent-stage to address the issues relating to safety and access. Thereafter the lighting can be maintained as part of the development.
Costs	Financial costs are relatively low as there is currently no formal requirement to install any lighting for developments with no vehicle access or where there are 10 or more dwellings or car parks. Any cost of such lighting is at the discretion of the developer/landowner, and 'adequate' lighting is subjective. Other costs, such as social and environmental, are considered to be moderate given the consequences of inadequate lighting.	This option would impose additional economic costs on developers as a lighting plan would be required to be implemented and maintained as part of developments with no vehicle assess or where there are 10 or more dwellings or car parks. The ongoing maintenance of the lighting would be borne by a residents' association or similar instrument. facilities

Benefits	More discretion allowed for the consent applicant/developer to determine what is 'adequate' lighting. No requirement to provide a detailed plan for lighting. A wider scope of options available to a consent applicant/developer for varying lighting solutions or potentially none at all.	Reduces the subjectivity of determining what is 'adequate' lighting. Because an Australian/NZ Standard is required to be complied with, this alleviates any doubt as to the efficacy and efficiency of the final lighting product.
Risks	Ongoing poor outcomes for pedestrians and other users if inadequate lighting solutions are provided. Overall risk to the health, safety and wellbeing of all users.	A risk that lighting solutions would not be maintained on an ongoing basis. Inability by council to require a residents' group or similar to maintain lighting. Up to residents to maintain it.
Summary	**Not recommended**	**Recommended option**

10.3 Summary of Analysis and Recommendations

302. A summary of the recommended option and principal reasons for each of the issues is outlined below.

10.3.1 Accessible Parking

Recommendations

- Use previous parking standards to calculate theoretical parking demand.
- Apply NZS 4121:2001 (non-residential) and modified NZS 4121:2001 (residential) to theoretical parking demand to determine number of accessible carparks.
- Require accessible parking for residential development 10 units or more.
- No accessible parking requirement in those business zones that previously did not require parking under the AUP (but if parking is provided, then NZS 4121:2001 applies).

Principal Reasons

- Policy 11 of the NPS:UD enables accessible parking to be required.
- At least 10 percent of the population have a mobility impairment or agility impairment. 24 percent of NZers have a disability, this includes mobility, sensory, intellectual, neurodiversity, etc.
- Additionally, Auckland (and NZ) have a rapidly ageing population, and it is expected the number of people with mobility parking permits to continue to rise.
- Catering for people with disabilities is part of enabling a well – functioning urban environment.
- Historically the requirement for accessible parking has not been applied to residential developments. The deletion of a requirement for onside carparking has however changed the original basis for accessible parking.
- The Draft Parking Strategy addresses accessible parking, especially in centres.

10.3.2 Pedestrian Only Access

Recommendations

- Does not apply where there is vehicle access to a residential unit.
- Where pedestrian access is the only access, increase width to 1.8m.
- Require passing bay out to width of 2.5m if pedestrian only access is greater than 50m in length.
- Pedestrian only access potentially can also double as access to covered and secure bike parking.
- Gradient & lighting requirements (landscaping addressed in the residential chapters of the AUP).

Principal Reasons

- Issues with current 1m wide pedestrian access where this is the only form of access to a residential unit.
- Problems include narrow width, changes in gradient, lack of lighting.
- Results in difficulty moving bulky items (e.g. furniture), access for people with disabilities, elderly, caregivers with young children, safety issues with changes in gradient and poor or no lighting.
- Fire and Emergency have also raised concerns regrading accessing such developments. However, as there are provisions in the Building Act addressing this, it can't be a reason for any AUP changes.
- A wider pedestrian only access can also double as access to cycle storage and parking (i.e. walking a bike).

10.3.3 Loading Space

Recommendations

- No changes to retail and industrial activities and all other activities, except residential.
- For residential - where there is onsite parking provided: status quo applies.
- For residential - where there is no onsite parking: 1 small loading space (van size) for developments of 10 or more units.
- Existing standards for "greater than 20,000m^2" continue to apply.
- Revised assessment criteria.

Principal Reasons

- Increasing demand/growth for/in deliveries (especially parcels).
- Potential adverse effects on the transport network without adequate provisions in the AUP.
- Current threshold for residential development is too high.
- No guarantee of onstreet loading spaces in the future.
- Home carers and home health visitors are having increasing difficulty finding car parks which diminishes the time that they are able to spend assisting people.
- Resource consent process enables site specific response i.e. to consider whether a loading space is required given the location of the proposed development and other site specific factors.
- Approach aligns with the proposed travel plan in PC71.

10.3.4 Heavy Vehicle Access

Recommendations

- Introduce Standards to relevant Land Use Chapters of the AUP, to allow determination of when on-site waste collection is required.
- Introduce a Standard in E27 to address access and safety outcomes when heavy vehicle access within a residential site is required.

Principal Reasons

- The operative provisions do not adequately respond to private accessways that require on site waste collection.
- Scenario modelling and consideration of case studies has demonstrated that set thresholds within E27 are too blunt to allow an appropriate balance between maximisation of site yield and minimisation of on-street effects.

10.3.5 Cycle Parking and Access

Recommendations

- Apply new cycle parking standard to all residential developments that do not have a dedicated garage or basement carpark.
- 1 space per 20 (visitor) for developments 20 units or more; 1 spaces per unit.
- Cycle parking to be covered, secure and with e-bike charging capability.
- Enable a combination of options to provide for cycle parking – a non-habitable room, a storage/garden shed or equivalent, a dedicated cycle parking facility or a combination of options.
- Cycle parking to be directly accessible from the road, vehicle access, car parking area or pedestrian only access.
- Revised assessment criteria.
- Design guidance is provided in AT's Transport Design Manual.

Principal Reasons

- Response to climate change/facilitate mode shift.
- Increasing demand/growth for/in e-bikes and other micro mobility devices.
- Current threshold for residential development is too high.
- Lowering the threshold will mean greater provision of cycle parking.
- Also provides space for non-standard cycles, whether cargo bikes, tricycles or tandems for example.
- The removal of the requirement for onsite parking also potentially removes the provision of covered, safe and secure storage for bikes.
- E – bike charging inside a residential dwelling is a potential fire hazard (according to Fire and Emergency).
- Alignment with the Auckland Cycling & Mobility Business case.

10.3.6 Electric Vehicle Charging

Recommendations

- Any new carpark (covered or uncovered) associated with a residential unit required to have sufficient space on the switchboard for RCD, appropriately sized mains and the necessary conduit, cable roue and/or cable ladders in place to enable future EV charge equipment installation.

Principal Reasons

- Response to climate change.

- Requiring car parks to be future proofed for electric vehicles.
- The expected additional cost is several hundred dollars per car park or "in the order of 1 percent of the cost of providing the undercover car park if it is implemented at the time of development. The costs are significantly higher if retrofitting is required".
- The obligations on developers to provide car parks has been removed. If developers choose to provide car parking it is appropriate that these facilities are future proofed and able to meet the needs of Auckland's residents as they transition to greater use of electric vehicles.
- Auckland Transport does not anticipate supporting on-street charging facilities (see draft Parking Strategy).
- There is currently no national approach or guidance on this matter.

10.3.7 Effects on the Transport Network

Recommendations

- Reduce the thresholds in the trip generation standard for residential activities - subdivision – 60 dwellings, dwellings – 60 dwellings, integrated residential development – 100 units, and visitor accommodation – 60 units.
- Amendments to assessment criteria to refer to consideration of all modes of transport.

Principal Reasons

- The mandatory residential intensification provisions will result in additional demands and effects on the transport network.
- Lower Trip Generation (Standard E27.6.1) thresholds will ensure that the effects of an increased number of residential developments are considered, and where necessary, mitigated. This therefore reduces pressure on the transport network.
- A lower threshold means cumulative effects are potentially not potentially as great.
- Standard E27.6.1A does not apply to activities in the Business – City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone, or Residential – Terrace Housing and Apartment Building Zone or Centre Fringe Office Control as shown on the planning maps. These zones generally did not have minimum parking. requirements prior to the NPS:UD coming into force. They are also generally well located in relation to PT.
- The Mixed Housing Urban and other residential zones which potentially overall are not as well serviced by PT as the centres and THAB zone.
- The proposed thresholds are comparable to other NZ cities.

10.3.8 Pedestrian Safety

1. Width of pedestrian access when adjacent to a vehicle access

Recommendations

- For developments between 10 – 19 dwellings or 10-19 parking spaces, it is recommended that a minimum wide footpath of 1.35m is required adjacent to vehicle accessways, unless alternative pedestrian access is provided to dwellings.
- For developments of 20+ dwellings or 20+ parking spaces, it is recommended that a minimum wide footpath of 1.8m is required adjacent to vehicle accessways, unless alternative pedestrian access is provided to dwellings.

Principal Reasons

- The operative provisions of E27 and E38 are not fit for purpose in terms of minimum pedestrian access width for residential accessways.
- A minimum width of 1.8m is required to provide access for people of all ages and abilities. While there may be a benefit in applying this to all situations where a pedestrian access is required within a private accessway, it is recommended that it is only required for developments with more than 20 dwellings.
- For developments between 10 – 19 dwellings it is recommend that a minimum width of 1.35m is required. This is sufficient to allow two able bodied people to pass each other. It is expected that the pedestrian and vehicle traffic volumes for developments with fewer than 20 dwellings are likely to be low, and therefore a reduced safety risk posed if able bodied pedestrians have to navigate into the carriageway to pass mobility impaired pedestrians.

2. Pedestrian accesses separated from trafficable areas

Recommendations

- That pedestrian access must be vertically separated from trafficable areas, including manoeuvring areas associated with parking.

Principal Reasons

- The operative provisions of E27 and E38 are not fit for purpose in terms of minimum pedestrian safety in residential accessways.
- A minimum width of 1.8m is required to provide access for people of all ages and abilities. While there may be a benefit in applying this to all situations where a pedestrian access is required within a private accessway, it is recommended that it is only required for developments with more than 20 dwellings.
- Pedestrian accesses should be separated from trafficable areas (including carriageways and manoeuvring spaces), to achieve a high level of safety for pedestrians.
- Vertical separation is preferred to horizontal separation, as this will have a lesser effect on site yield. Horizontal separation may be appropriate as an alternative to vertical separation, however this should be at the discretion of the developer.

3. Pedestrian accesses clear from obstruction

Recommendations

- Amend the operative provisions to identify a horizontal clear corridor requirement for all pedestrian accesses within private accessways.

Principal Reasons

- The operative provisions are failing to ensure that pedestrian accesses within private accessways are free from obstructions and trip hazards.

4. Additional pedestrian accesses based on accessway length and/or development intensity

Recommendations

- Amend the operative provisions to identify a requirement that pedestrian accesses connect to every dwelling, when more than 20 dwellings or parking spaces are served.

Principal Reasons

- The operative provisions are failing to ensure that pedestrian accesses are provided on both sides of private accessways for larger developments. The recommended option ensures that every dwelling has access to a pedestrian access. For instances where dwellings are only on one side of an accessway, only one pedestrian access would be required. However, when dwellings access on both sides of an accessway, a pedestrian access would be required on either side.
- Investigations into child safety have linked the length of accessways and the lack of pedestrian accesses with increased risk of serious injury and death. However the introduction of improved design standards when pedestrian accesses are required, and better speed calming measures to control driver speeds and awareness, will improve pedestrian safety within longer accessways.

10.3.9 Footpath Gradients

Recommendations

- Identify a maximum gradient for all pedestrian accesses.

Principal Reasons

- The gradient permitted by the operative provisions is too steep for some users (e.g. people with prams and young children, people in wheelchairs, people with bulky goods/items). This is inconsistent with Policies B2.3.2.(1)(d) and (2)(a).
- Consistent with Auckland Transport's public footpath standards, it is recommended that a maximum gradient of 1:12.5 (8%) and identify the requirement for rest areas where pedestrian accesses exceed a gradient of 1:33.3 (3%). Where the pedestrian access includes steps, a step-free option must be provided.

10.3.10 Fire and Emergency Access

Recommendations

- A Practice Note is developed and distributed to Planners and Transport Engineers that outlines the requirements of the Building Code.
- Add a Note to E27.6.4.3 and E38.8.1.2 identifying that, where vehicle accessways are provided, consideration of fire emergency vehicle access is required by the New Zealand Building Code Clause C6.

Principal Reasons

- Council has identified issue with some consents being granted without considering firefighting vehicle access.
- The NZBC provides acceptable solutions for firefighting vehicle access but is not prescriptive. Alternative approaches are possible. It would not be appropriate to include standards/rules within the AUP relating to NZBC acceptable solutions.
- FENZ F5-02 CD Designers' guide to firefighting is a guidance document only, therefore the AUP should not require compliance to it. Further, Council has received legal advice that the AUP cannot require higher standards than what are required by the Building Code.
- There is sufficient scope in E27.6.4.4 to consider gradients for accessways that require FENZ access. The Building Code provides discretion for infringements on the minimum accessway width of 4m.

10.3.11 Speed Management Measures

Recommendations

- Amend E27 and E38 to require speed management at a maximum of 30m spacing to achieve a maximum operating speed of less than 30 km/hr.

Principal Reasons

- Longer accessways without speed management measures can encourage higher vehicle speeds and result in negative safety and amenity outcomes for pedestrians. This is inconsistent with Policies B2.3.2.(1)(d) and (2)(a).
- The operative provisions of E38 are not directive, and only require consideration of speed management.
- It is considered appropriate to design private accessways to operate at less than 30 km/hr, which requires speed management measures to be located at approximately 30m spacing.

10.3.12 Carriageway Widths

Recommendations

- Amend operative rules to address consequential changes from the recommended amendments for footpath separation.

Principal Reasons

- The carriageway widths specified in the operative provisions fall within the minimum lane widths identified in Auckland Transport's engineering standards, and thus it was determined that these require no change.
- Research into vehicle trip generation rates for residential developments shows a high correlation between parking spaces and peak hour vehicle trip generation. However, the correlation between dwellings and peak hour vehicle trip generation is limited.

- It is recommended that pedestrian accesses be separated from vehicle accesses. This requires a consequential change to Table E27.6.4.3.2 to identify that the specified minimum and maximum width of vehicle crossings at site boundaries excludes the width required for pedestrian accesses.

10.3.13 Integration Between Chapters E27 Transport and E38 Subdivision Urban

Recommendations

- Amend E27 and E38 to be consistent.

Principal Reasons

- Without the largely consequential amendments, the provisions would be inconsistent.

10.3.14 Lighting

Recommendations

- Require artificial lighting for pedestrian accesses in residential zones which serve two or more dwellings where there is no vehicle access or where there are 10 or more parking spaces or 10 or more dwellings (except for dwellings which have individual pedestrian access directly from the road).
- Require artificial lighting to be measured and assessed in accordance with the appropriate standard (Standard AS/NZS1158.3.1 Lighting for Roads and Public Spaces), and be lit in accordance with the specific 'P' category depending on its location (i.e. pedestrian access, parking space etc).
- In addition, require that the efficiency and durability of the lighting is demonstrated and that it can be supplied from a reliable electrical source.

Principal Reasons

- Currently, the lighting standards address the effects of light 'spill' from within developments but do not consider lighting 'within' developments to address issues such as pedestrian safety. This has been recognised as a gap in the AUP particularly in the context of an increase in multi-unit developments in the future.
- Provision of adequate lighting during hours of darkness will address issues of security and way-finding, and contribute to the wellbeing of people in terms of their physical and psychological health.
- Lighting plans, required as part of resource consent, can be established and implemented to respond to the layout and design of a development, and thereafter privately maintained.

11 Conclusion

303. The objectives of this evaluation are to determine the most appropriate methods for achieving the following outcomes:
    - a well-functioning urban environment and a reduction in climate change impacts;
    - accessible parking provided in locations and at a level that enables people with disabilities to fully take part in everyday life;
    - the safety of pedestrians on sites with pedestrian-only access;
    - the loading/unloading of goods can occur in a manner that does not compromise the safe and efficient functioning of the transport network;
    - heavy vehicle access to developments (in particular waste collection vehicles) are managed to ensure safety of pedestrians;
    - Auckland's transport infrastructure is future-proofed to cater for emerging changes in transport, including greater use of bicycles, including e-bikes, micro-mobility devices and electric vehicles;
    - an appropriate assessment of effects of larger scale residential subdivision and developments on the transport network is provided for;
    - pedestrian access and safety along vehicle accessways is prioritised by providing safe and convenient pedestrian access, including footpaths of adequate gradients and widths to suit most users, and implementing appropriate artificial lighting to ensure way-finding and safety;
    - reducing the likelihood of death or serious injury on accessways by implementing speed management methods;
    - encourages people to walk and cycle and reduces the risk of accidents or death on accessways for all users;
    - the provision of vehicle accessways is commensurate with the scale of development;
    - relevant chapters of the AUP are integrated to ensure consistency (Chapters E27 Transport (E27) and E38 Subdivision – Urban (E38).
304. Section 32 of the RMA requires that before adopting any objective, policy, rule or other method, the Council shall carry out an evaluation to examine:
    - The extent to which each objective is the most appropriate way to achieve the purpose of the Act, and
    - Whether, having regard to their efficiency and effectiveness, the policies, rules or other methods are the most appropriate for achieving the objective.
305. The evaluation must also take into account:
    - The benefits and costs of policies, rules, or other methods; and
    - The risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules or other methods.
306. A section 32 analysis of options has been undertaken in accordance with section 32(1)(b) and (2) of the RMA. A number of options have been analysed. At a high level, these include:

- *Option 1: Status Quo/Do Nothing*
- *Option 2: Plan Change*
- *Option 3: Non Statutory Methods e.g. guidelines, advice, lobbying for changes to other legislation e.g. Building Act etc.*

307. Option 2 is the recommended option for each of the issues. This option could be supplemented by non – statutory methods such as guidelines and Practice Notes for Plan users.
308. Within the plan change option a number of options for change have been considered. The options for the key decision points for each of the issues has been considered.
309. The recommended options best achieve Part 2 of the Resource Management Act and the purpose or objectives of relevant national and regional planning documents. These include:
    - National Policy Statement: Urban Development 2021;
    - The Auckland Plan 2018;
    - The Unitary Plan's Regional Policy Statement 2016.
310. PPC79 is considered to be the most efficient, effective and appropriate means of addressing the resource management issue identified.
311. This evaluation will continue to be refined through the plan change process. For example, any Section 42A Hearing Report and the decision on submissions builds upon this evaluation.

12 List of Attachments

Attachment	Name of Attachment
1	Proposed Plan Change 79 – Track Changes
2	Memo from Elise Copeland, Principal Specialist Universal Design – NPS:UD Removal of Parking Minimums: Consequential effects on accessible parking, 30 June 2022
3	Provision of Accessible Car Parks in Auckland, Be.Lab, April 2022
4	Pedestrian Access Routes to Dwellings: Issues, Analysis and Recommendations in Support of Proposed Plan Change 79: Transport Chapter Tamaki Makaurau Design Ope, Auckland Council, June 2022
5	S35 Monitoring Report on the RPS B2.3 Quality Built Environment (QBE report), Plans and Places Department, Auckland Council, February 2022
6	Transport Plan Change – Private Accessways, to the Auckland Unitary Plan, Transportation Technical Report, Flow Transportation Specialists, July 2022
7	Auckland Unitary Plan – E27 Transport and E38 Subdivision Urban, Rear Site Accessways Report, Flow Transportation Specialists, August 2022
8	Report on Lighting Provisions for Private Pedestrian Access for Proposed Auckland Unitary Plan Change, S&T Lighting, September 2021
9	Summary of Local Board Feedback – "Local Board Feedback on the council's preliminary response to the NPS-UD2020 and the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act. 23 June, 2022; Ōrākei Local Board feedback on the National Policy Statement on Urban Development 2020 and RMA amendments 2021 - Council's preliminary response. 23 June 2022.

Attachment 1: Proposed Plan Change 79 – Track Changes

Attachment 2: NPS:UD Removal of Parking Minimums: Consequential effects on accessible parking

Attachment 3: Provision of Accessible Car Parks in Auckland

Attachment 4: Pedestrian Access Routes to Dwellings: Issues, Analysis and Recommendations in Support of Proposed Plan Change 79: Transport Chapter

Attachment 5: S35 Monitoring Report on the RPS B2.3 Quality Built Environment (QBE report)

Attachment 6: Transport Plan Change – Private Accessways, to the Auckland Unitary Plan, Transportation Technical Report

Attachment 7: Auckland Unitary Plan – E27 Transport and E38 Subdivision Urban, Rear Site Accessways Report

Attachment 8: Report on Lighting Provisions for Private Pedestrian Access for Proposed Auckland Unitary Plan Change

Attachment 9: Summary of Local Board Feedback