Resource Consents

Practice and Guidance note

Carparking – design, access and dimensions

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1 Introduction

Chapter E27 Transportation in the Auckland Unitary Plan (Operative in part) AUP(OP) includes standards for the design of parking and manoeuvring where carparking is to be provided with development.

These standards seek to ensure that car parking and manoeuvring areas are safe, efficient, and effective. To achieve this, the functional size, dimension, location and access width standards at Rule E27.6.3 should be followed. While discretion may be exercised involving some departure from these minimum standards, there remains a need to ensure that the standards' function and purpose continue to be adequately and appropriately met.

This practice and guidance note (PGN) sets out the council's interpretation and application of these standards. It further covers the relevance of AS/NZS 2890.1:2004, its difference from the AUP standards and its need for compliance with the building code.

A wider review of access and the design of parking and manoeuvring is also needed with applications for four or more dwellings in mixed housing zones. This PGN also notes a number of things to look out for when applying the standards to development projects.

Recent amendments to the Chapter E27 Transport provisions by Plan Change 79 (PC79) have now been incorporated into the AUP(OP). These have not changed the standards or the assessment associated with the parking and manoeuvring standards. The changes introduced by PC79 will be covered in a separate PGN.

Vehicle Access Restrictions and Vehicle Crossing Standards are separately covered in PGN 3.2.29.

2 Background

The National Planning Standard for Urban Development 2020 required the mandatory removal of carparking minimums from district plans in February 2022. The development community, guided by the market, and not the Council, will therefore determine what level of on-site carparking is necessary for a development. The current trend appears to be for many developments to provide at least one onsite parking /garaging space per dwelling even if the carparking demand is well above this.

The space needed onsite for carparking/ garaging and its access from the street can influence the number, design and size of dwellings proposed. In many circumstances, the site area set aside for parking and access with an efficient layout, will be minimised to ensure that the developable site area is prioritised for the location of dwellings and their outdoor space and landscaping requirements.

Minimising site space for parking and manoeuvring to help maximise yield has led to different interpretations of and approaches to these AUP standards. The purpose of this PGN is to ensure consistency and compliance with the standards. This direct application of the standards' metrics is separate from an assessment as to whether a discretion should be granted or not if the standard is not met.

The policy framework supporting on-site carparking is to ensure that it is safe and efficient for the proper functioning of the adjacent transport network and pedestrian safety both on and off site, where carparking is provided. These outcomes are relevant where the standards in Chapter E27.6.3 are not met.

3 Rules and Standards

3.1 What standards apply?

All activities in Table E27.4.1 must comply with the E27.6 Standards.

Rule (A1) states that parking, loading and access which is an accessory activity must comply with the standards for parking, loading and access to be a permitted activity.

Rule (A2) states that parking, loading and access which is an accessory activity, but which does not comply with the standards for parking, loading and access is a restricted discretionary activity. There are both specific Matters of Discretion and Assessment Criteria for any activity that does not comply with these standards.

Table E27.4.1 Activity table

Activity		Activity status
(A1)	Parking, loading, and access and Electric Vehicle Supply Equipment which is an accessory activity and complies with the standards for parking, loading, and access and Electric Vehicle Supply Equipment.	P
(A2)	Parking, loading, and access and Electric Vehicle Supply Equipment which is an accessory activity but which does not comply with the standards for parking, loading, access and Electric Vehicle Supply Equipment.	RD
...	...	...

E27.6.3 sets out the standards for the design of parking and loading spaces and their access and manoeuvring dimensions.

This PGN focuses on these E27.6.3 standards, and the assessment of any activity or development where these standards are not met.

3.2 Table E27.6.3.1

Standard E27.6.3.1. 'Size and location of parking spaces' states that,

(1) Every parking space must:

(a) comply with the minimum dimensions given in Table E27.6.3.1.1 and Figure E27.6.3.1.1.

Accessible spaces however must comply with the dimensions and accessible route requirements of the New Zealand Standard for Design for Access and Mobility – Buildings and Associated Facilities (NZS:4121-2001).

Figure E27.6.3.1.1 Minimum parking space and manoeuvring dimensions

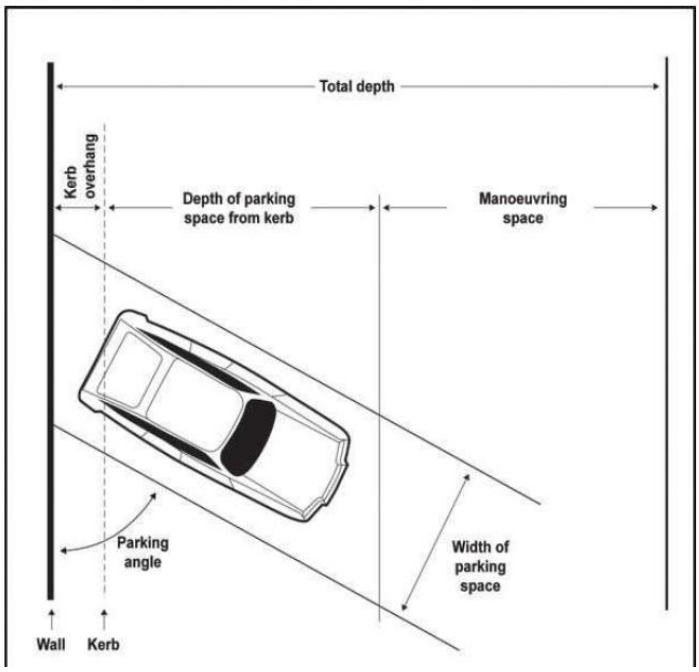


Table E27.6.3.1.1 Minimum Car parking space and manoeuvring dimensions

Car parking angle		Width of parking space	Depth of parking space		Manoeuvring space[3]	Total
			From wall[1]	From kerb[2]		
(T117)	90 degrees (regular users)[4]	2.4	5.0	4.0	7.1	12.1
(T118)		2.5			6.7	11.7
(T119)		2.6			6.3	11.3
(T120)		2.7			5.9	10.9
(T121)	90 degrees (casual users)[4]	2.5	5.0	4.0	7.7	12.7
(T122)		2.6			7.0	12.0
(T123)		2.7			6.7	11.7
(T124)	75 degrees	2.5	5.2	4.2	6.3	11.5

Set out above is an extract from Table E27.6.3.1.1 and Figure E27.6.3.1.1.

The '**T**' numbers are all individual standards that relate a parking space width and angle to the corresponding manoeuvring space that is required in each situation. These are the relevant metrics to determine compliance with the standard in terms

of rule (A1), or if not, whether consent under rule (A2) is needed, even if the dimensions of AS/NZS 2890.1:2004 are met.

The Table includes footnote references to Notes sitting below the Table, which clarify and explain references to terms used in the Table. The Notes are part of the Table and inform its interpretation and application to carparking scenarios. The Notes explain for example:

1. The depth of a parking space from a wall or a kerb, where a parking space adjoins a wall or high kerb that does not allow vehicles to overhang.

2. Where a **kerb overhang** is permitted, i.e., it must be **unobstructed -** not part of another parking space, pedestrian walkway/footpath and not be an overhang of more than 1 metre.

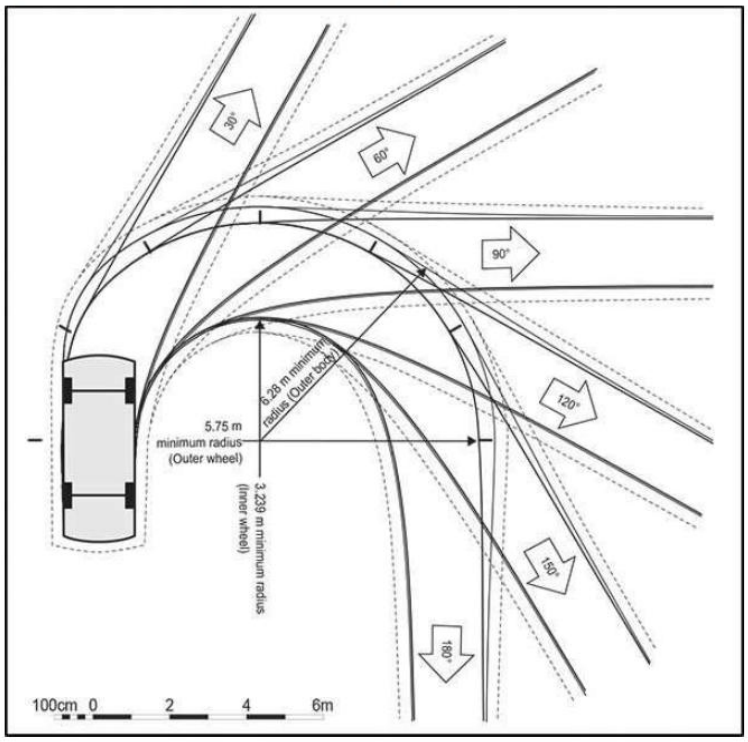
3. That all **angled spaces** assume **one way traffic flow** except for a 90-degree angle.

4. What is a **Regular user,** - residents, employee parking, (only available for 90-degree parking).

These dimensions are for open surface carparking i.e., supermarket carparks, where there is some reliance on the neighbouring space for the opening of doors to exit vehicles, and/or some ability to turn across the front corners of the adjacent parking space.

3.3 Applying the E27.6.3.3 tracking curve

Figure E27.6.3.3.1 85 percentile car tracking curve



Note 1

The dotted line about the vehicle depicts a 300mm clearance about the vehicle. See following key in Figure E27.6.3.3.2

E27.6.3.3. Access and manoeuvring

"(1) Every parking space must have driveways and aisles for entry and exit of vehicles to and from the road, and for vehicle manoeuvring within the site. Access and manoeuvring areas must accommodate the 85 percentile car tracking curves in Figure E27.6.3.3.1 "

The minimum manoeuvring space dimension for a parking space is in Table E27.6.3.1.1. (previous page). E27.6.3.3(1) above states that parking spaces must have driveways and aisles for entry and exit of vehicles to and from the road, as well as enabling vehicle manoeuvring (as addressed in Table E27.6.3.1.1 and the tracking curve in Figure E27.6.3.3.1).

The tracking curve is applied in a forward direction when entering or leaving an on-site parking space. Reversing into a parking space is permitted as long as the forward movement when exiting the parking space complies with the Table and tracking curve standards. Reversing into a space is a separate matter to reversing off site, which is covered by Standard E27.6.3.4.

The 300mm clearance is part of the tracking curve in Figure E27.6.3.3.1 and this clearance is required to be from any physical structures. This enables a 300mm movement overhang of kerbs but no movement overhang in terms of other parking spaces or walkways/footpaths. The tracking curve clearance can be over low-level landscaping but not if it is part of a required landscape area. (See para. 7.4)

This tracking curve diagram does not allow multiple parking manoeuvres. If a multiple manoeuvre is needed to meet the parking dimensions, then the standard is infringed and consent for a restricted discretionary activity is required under Rule E27.4.1(A2).

While multiple manoeuvres are referred to elsewhere in Chapter E27, these are not on the basis that multiple manoeuvres are permitted by the standard. The practicality and adequacy of parking, loading and access arrangements are relevant assessment criteria at E27.8.2(8)(c) and includes whether multiple manoeuvres in a particular circumstance is an acceptable outcome.

Standard E27.6.3.3 covers on site vehicle movement from the street frontage to all parking spaces. Access and manoeuvring areas must include the necessary distance in approaching the parking space entry to accommodate the car tracking curve. This may not be possible to achieve where the entrance to the parking space is constrained by the proposed position of dwellings or an entrance strip.

3.4 Applying Formation and Gradient E27.6.3.6.

Unless in an identified rural zone, the whole area of parking, manoeuvring and access aisles must be formed with an all-weather surface, drained and marked out where relevant. This must be done before the activity to which those parking and loading spaces relate commences and maintained for as long as that activity is continued. The need to form these surfaces applies to the full tracking curve area, not just the area over which the wheels of an 85 percentile car will track. However the 300mm clearance area of the tracking curve around the car does not need to be formed as long as it remains free of any physical obstructions, and the relevant minimum formed vehicle access width as set out in Table 27.6.4.3.2 is still met.

When applying the gradient standard, development plans will need to show the extent of gradient (plus any cross fall) with finished levels at both ends of a parking space.

4 What if you don't meet the Standards?

Rule (A2) of the 27.4.1 Activity Table states that parking, loading and access which is an accessory activity, but which does not comply with the standards for parking, loading and access is a restricted discretionary activity. E27 Transport is a large chapter in the AUP(OP), so the focus of any assessment of non-compliance must relate to the relevant 'Matters of Discretion' at E27.8.1(9) and the 'Assessment Criteria' at E27.8.2(8) (and C1.9 may also be relevant, see further below).

4.1 E27.8 .1 (9) Matters of Discretion

(9) any activity or development which infringes the standards for design of parking and loading areas or access under Standards E27.6.3, E27.6.4.2, E27.6.4.3, and E27.6.4.4

(a) adequacy for the site and the proposal;

(aa) site limitations;

(ab) effects on the function and the safe and efficient operation of the transport network;

(aaa) adequacy of emergency responder access;

(b) design of parking, loading and access;

(ba) effects on pedestrian safety and accessibility;

(c) <u>effects on pedestrian and streetscape amenity; and</u>

(d) effects on the transport network.

4.2 E27.8.2(8) Assessment Criteria

- ***(8) any activity or development which infringes the standards for design of parking and loading areas or access under Standard E27.6.3, E27.6.4.2, E27.6.4.3 and E26.6.4.4:***

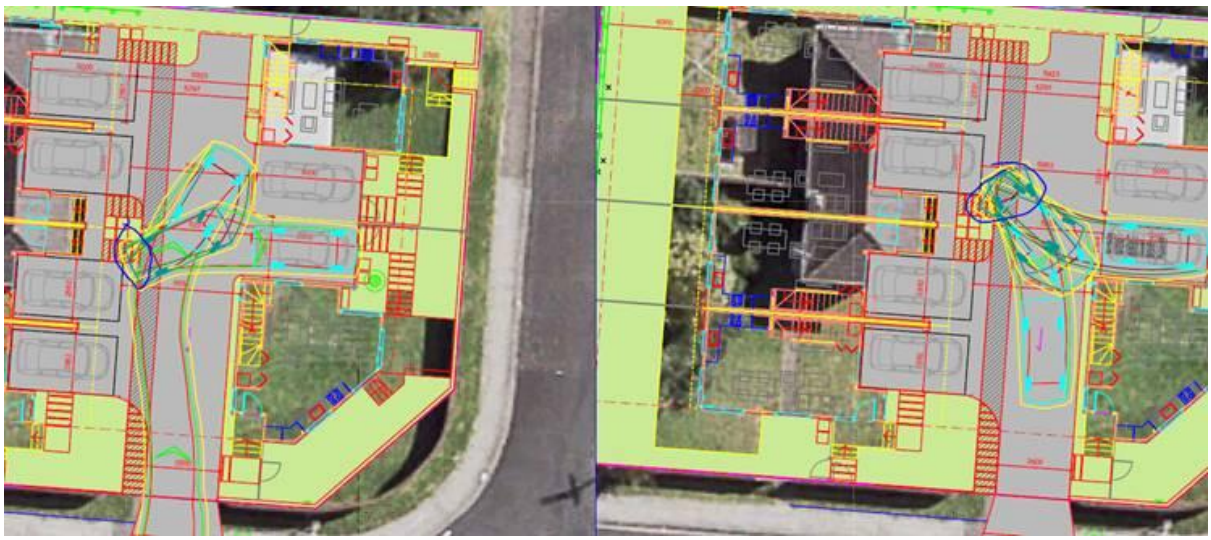
...

- ***(c) the practicality and adequacy of parking, loading and access arrangements having regard to:***
- ***(i) site limitations, configuration of buildings and activities, user requirements and operational requirements;***
- ***(ii) the ability of the access to accommodate the nature and volume of traffic and vehicle types expected to use the access...***
- **...**

A starting point for any assessment should be in terms of the practicality and adequacy of parking, loading and access arrangements with regard to the matters in (c) (i)-(iv), and not whether a proposed design that does not comply with the standards is appropriate. E27.8.2(8)(c)(i) requires that regard is had to *"site limitations, configuration of buildings and activities, user requirements and operational requirements"*. That is, matters such as site limitations, or user / operational requirements may be relevant in relation to an activity's non-compliance with the standards. Often, residential developments commence with a vacant, regular shaped and generally flat site where there are no site limitations. In these situations (and particularly in terms of housing in mixed housing urban or suburban zones), user or operational requirements are less likely to be a relevant consideration as part of any assessment. Ensuring functional and operational needs will likely best be achieved with designs that meet the parking and access dimension standards.

When considering the "*ability of the access to accommodate the nature and volume of traffic and vehicle type...*", access relates to all of that on site area between the street and the edge of the parking space. Standard E27.6.4.3 relating to the width of vehicle access is also relevant. It is the immediate functionality of the access adjacent to car parking, that is likely to be the important consideration where

multiple parking spaces need to utilise the same manoeuvring / access area. The example below shows the potential issues with manoeuvring exacerbated by vehicles accessing a development using a single width entry lane leading to traffic confusion and possible backflow onto the street.



4.3 C1.9(2) Infringement of Standards

An infringement of standards is a restricted discretionary activity, and the relevant matters of discretion are set out under E27.8.1(9) and corresponding assessment criteria in E27.8.2(8).

In addition, C1.9(2) provides that where an activity is classed as a permitted, controlled or restricted discretionary activity but that activity does not comply with one or more of the standards applying to that activity, then it is a restricted discretionary activity unless otherwise specified by a rule applying to the particular activity.

In that case, when considering an application for a resource consent for a restricted discretionary activity for an infringement under Rule C1.9(2), the council must also then restrict its discretion to the following relevant matters in C1.9(3):

- *any objective or policy which is relevant to the standard;*
- *the purpose (if stated) of the standard and whether that purpose will still be achieved if consent is granted;*
- *any specific matter identified in the relevant rule or any relevant matter of discretion or assessment criterion associated with that rule;*
- *any special or unusual characteristic of the site which is relevant to the standard;*
- *the effects of the infringement of the standard; and*

- *where more than one standard will be infringed, the effects of all infringements considered together.*

Consent applications for housing proposals often trigger non-compliances with a number of standards within the same application, which is relevant in terms of assessing the effects of all the infringements together. Best practice should identify infringements with the parking and manoeuvring standards as a result of poor design at the initial planning stages, rather than as an afterthought once the development has been designed. Where these parking, access and manoeuvring infringements are coupled with other infringements (such as in terms of building coverage, landscaping, outlook and/or outdoor space) it is likely that the site is being overdeveloped. While applications for four or more dwellings need to be assessed on their merits, where there are multiple infringements, it is unlikely that a similar or better outcome that is relative to a development complying with the standards would be possible, and where the purpose of the standards will still be able to be achieved.

5 AS/NZS 2890 Standard and the Building Act 2004

There are several references to the New Zealand Standard for Off-Street Parking - Parking Facilities Part 1: Off-Street Car Parking (AS/NZS 2890.1 2004) (**AS/NZS 2890 Standard)** within the E27 Transport Chapter. The AS/NZS 2890 Standard is a document incorporated by reference into the AUP(OP) that may assist applicants in designing parking areas. These are a separate set of standards, but do not replace the E27 standards.

5.1 E27.8.2(8) Assessment Criteria

The first reference to the AS/NZS 2890 Standard is located as the following note below E27.8.2.(8)(c)(ii) Assessment Criteria:

- *Note: Parking spaces for regular users can be designed to undertake more than one manoeuvre to enter and exit parking spaces in accordance with AS/NZS 2890.1: 2004 Off-Street Parking.*

The note only refers to the design of parking spaces using more than one manoeuvre using the AS/NZS 2890 Standard (i.e. such as a three-point turn manoeuvre) but it does not make such a manoeuvre a permitted activity. A three-point turn manoeuvre still infringes the E27 Standards.

Three-point turns in the AS/NZS 2890 Standard are only enabled with ‘90-degree’ ‘regular’ parking. This is an acceptance that 15% of the car fleet will not meet the 85 percentile minimum tracking curve.

An application with a parking design relying on a three-point turn manoeuvre will be considered and assessed against the relevant E27 Assessment criteria and in terms of C1.9.(2). Three-point turns will not be accepted in all circumstances. It should be noted that three-point turns should not involve any more than three turning movements.

5.2 AS/NZS 2890 Standard and Special Information

The AS/NZS 2890 Standard is also referred to under *E27.9(1)(b) Special information requirements* as follows (with emphasis added):

(1) Parking plans submitted to Council must show:

> *(a) the locations and dimensions of any pillars and/or other structures that may restrict parking space, or inhibit access and manoeuvring, as well as clearances between parking spaces and vehicle tracking curves and those pillars and/or other structures; and*
>
> *(b) the proposed gradients of parking, manoeuvring and access areas*
>
> ***New Zealand Standard for Off-Street Parking - Parking Facilities Part 1: Off-Street Car Parking (AS/NZS 2890.1 2004) may assist applicants in designing parking areas.***

The focus of these provisions is to ensure there is a sufficient level of detail provided to assess parking plans submitted to Council, and that the AS/NZS 2890 Standard can assist applicants in designing parking areas. AS/NZS 2890 Standard is not an alternative to the E27 standards, however, AS/NZS 2890 Standard more comprehensively set out car parking dimensions within buildings and are a functional requirement in terms of the Building Code (see in particular D1.2.2).

5.3 AS/NZS 2890 Standard relationship with the Building Act 2004

D1 of the Building Code addresses Access Routes. D1.2.2 states that "...where a building is provided with loading or parking spaces, they shall be constructed to permit safe and easy unloading and movement of vehicles, and to avoid conflict between vehicles and pedestrians." D1.3.5 refers to the requirements for vehicle spaces and circulation routes.

The Ministry of Business, Innovation and Employment (MBIE) identifies acceptable solutions as a way of complying with the Building Code. Acceptable solution D1/AS1 refers to the AS/NZS 2890 Standard as an acceptable solution for compliance with car parking areas and circulation routes in D1.3.5 of the Building Code. MBIE

determination 2019/044 found that a garage that did not comply with the AS/NZS 2890 Standard as the acceptable solution, did not therefore comply with D1.3.5.

While the AUP and AS/NZS 2890 Standard both refer to the 85 percentile car tracking curves, the dimensions referred to in E27 Transport relate to external surface parking and not for confined (or enclosed) spaces. Further, while the AS/NZS 2890 Standard enables a three-point turn (only for a 90-degree right angle turn), this parking manoeuvre triggers a reason for consent under the AUP.

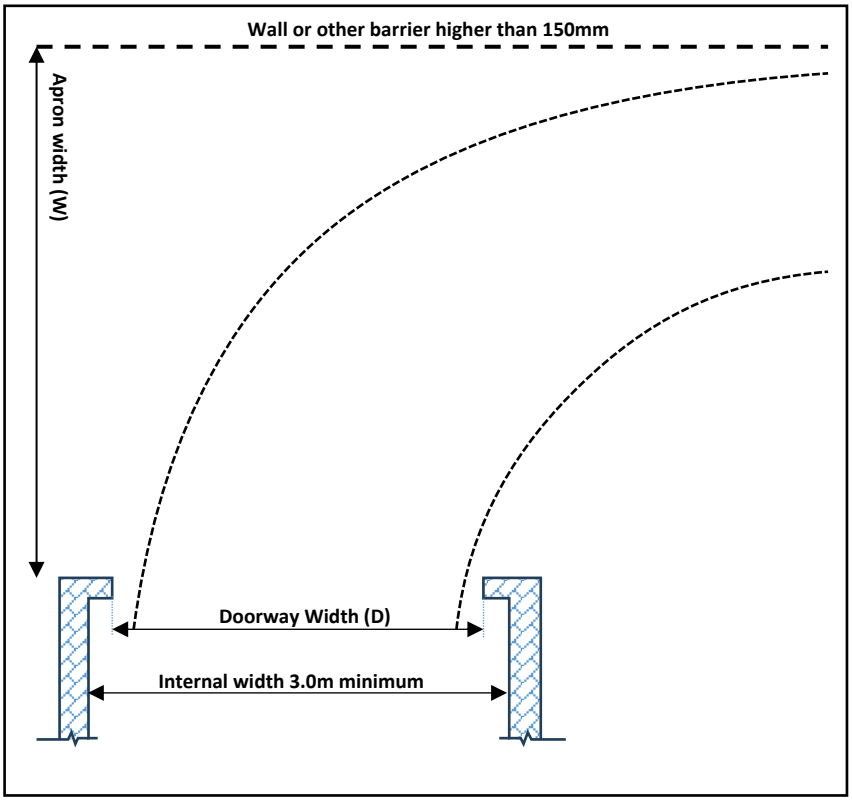
5.4 Garage Width Assessments

The AUP does not directly refer to the dimensions and manoeuvring of parking in confined or enclosed spaces, that is addressed by the AS/NZS 2890 Standard. However, Rule E27.9(1) Special information requirements set out what must be shown in parking plans submitted to council. It is considered best practice to avoid situations where a resource consent is granted for a development that shows parking and manoeuvring that then cannot obtain building consent. In such a scenario, it is not likely that the purpose of the manoeuvring standards will be met.

The AS/NZS 2890 Standard 5.4 Design of Enclosed Garages specifies the minimum garage dimensions as 5.4m in length x 3m width.

Narrow access points to garages (less than 2.7m in width) will require a wider manoeuvring apron than that provided by the AUP for outside surface parking. See diagram below). The relevant AUP E27 standard (see Table E27.6.3.1.1 and Figure E27.6.3.1.1) may be met, but not the AS/NZS 2890 5.4 Design Figure 5.4 apron width.

The AS/NZS 2890 5.4 Design is based on a single front in manoeuvre but acknowledges the use of a three-point turn manoeuvre for larger than 85 percentile cars if at 90 degrees. For guidance the relevant AS/NZS 2890 5.4 Design Figure 5.4 is replicated below however you should refer to the actual document.



Doorway Width (D)	**Apron width (W)** **(Refer Note)**
2.4m	7.0m
2.7m	6.3m
3.0m	5.6m

For garages designed for two cars, each internal parking space shall separately meet the tracking curves for ingress and egress. Any garage of a 4.8m width or more shall be considered as a double garage.

Carports should also have a 3-meter minimum width where these have partial walls on both sides or are adjacent to dwellings or future property boundaries. Space is required for door openings.

6 Carparking discretions with RD Activities

6.1 Four or more dwellings/ care centres / boarding houses (10 people plus)

For these RD activities within the mixed housing and terrace house/apartment residential zones there are matters of discretion that include traffic. These include:

'the effects on the neighbourhood character, residential amenity, safety, and the surrounding residential area from all of the following: …

traffic;

location and design of parking and access

…'

Safety both on and off site can therefore be considered and assessed, such as:

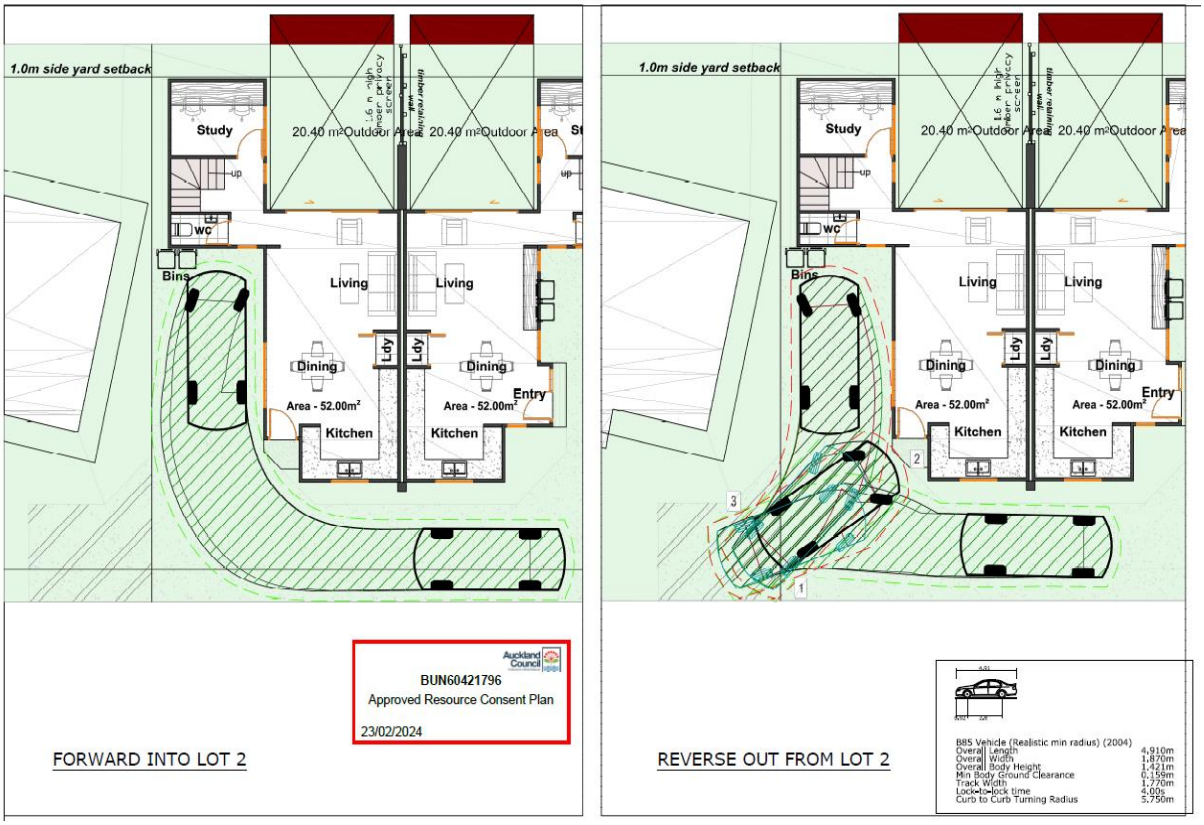
- internal separation of pedestrians on driveways with larger developments;
- whether poor parking design may lead to on-street parking that then creates an adverse traffic effect, such as emergency access on narrow street; or
- adverse safety effects of kerb-side drop off /collection of children associated with a childcare centre.

These matters will be considered in addition to the parking and manoeuvring standards themselves. The on-site child drop of / collect spaces with childcare centres should not be considered as parking spaces, but part of the necessary functional need for safe operation of the centre.

The 'amenity effects' of kerbside parking however, are not able to be considered as this would be outside the matters of discretion (further to the High Court's findings at paras [133]-[134] in *Wallace v Auckland Council* [2021] NZHC 3095). Internal pedestrian safety is addressed further under PC79.

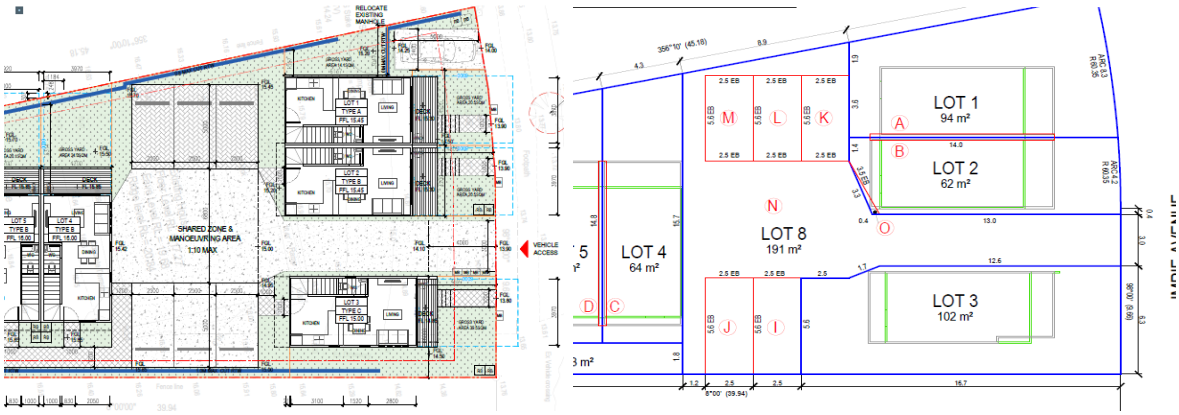
7 Things to look out for and FAQs

7.1 Cars moving sideways?



Note the position of the car within the parking space differs, as the exit manoeuvre would not be possible from the resulting position of the entry manoeuvre. Also ensure that cars are drawn at an 85-percentile size.

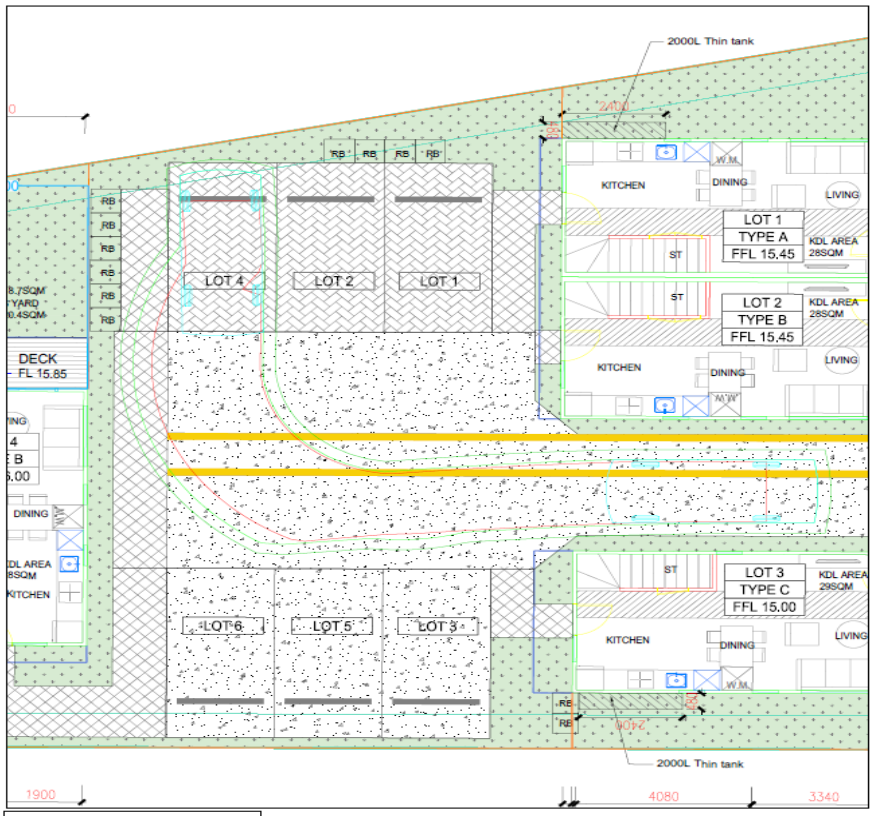
7.2 Can tracking into carparks relying on adjoining spaces when these are to be unit titled into separate ownership?



Tracking curves should not rely on areas that will end up in other titles. As an example, the future owner of parking space “L” cannot rely on the exclusive areas of parking spaces “M”, “K”, “J” or “I” when manoeuvring in and out of parking space “L”.

You can ask for a live demonstration of the tracking curves.

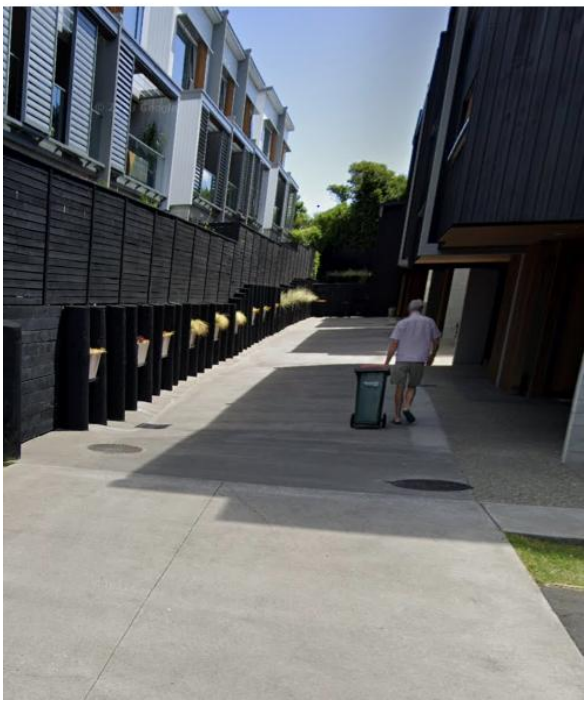
The following example shows live tracking curves for corner spaces.



7.3 Can structures be accommodated within the 300mm clearance space?

The 85-percentile car tracking curve at E27.6.3.3.1 contains a 300mm clearance around the body of the vehicle and its tracking manoeuvre. To meet the curve the 300mm must be clear of any structures that could otherwise restrict the manoeuvre. It is a clearance area so does not need to be paved.

Be aware of retaining walls and their width that may not be fully noted on plans. Walls might be ~ 800mm or so wide and must be fully contained within a site. The 300mm clearance must be taken from the face of the wall or any protruding posts.



7.4 Can the parking space and manoeuvring dimensions overhang landscaping area, outdoor living spaces or other parking spaces?

The definition of landscaped area:

> "*excludes any area which:*
>
> *is used for the parking, manoeuvring or loading of motor vehicles.*"

Likewise, the definition of Outdoor living space notes;

> • *clear of any parking or manoeuvring area;*

The 300mm clearance is part of the tracking curve. The 300mm clearance often acts as an ‘overhang area ‘and may accommodate a low kerb and low planting beyond. However, any landscaping here is excluded by definition as being part of the landscape area.

7.5 Does the AS/NZS 2890.1.2004 still reflect the current size of the vehicle fleet?

These are old standards and the 85-percentile car was based on the old 1990s Aussie Ford Falcon. More recent research has noted that while the percentage of Utes/SUVs in NZ has increased there is also a larger percentage of smaller cars and the 50th percentile car dimension has not changed. The size of larger cars over the 85-percentile has likely increased however the tracking curves based on minimum dimensions already acknowledged that 15% of the car fleet cannot meet the standard and will require 3 -point turns. For the purpose of applying the AUP standards the additional size and numbers of SUVs is not something that can be considered.

8. Who at Council is involved in assessing applications concerning discretions to parking and manoeuvring standards?

Council planners are responsible for processing all resource consent applications. It is the planner's role to determine whether the parking and manoeuvring standards are met or not, and a Development Engineer will be asked to review the application and assessment of effects on these matters. For larger and/or more complex applications the planner may also seek input from council's Traffic Engineering specialist.