

12 Transportation

12-1

12.1	Introduction.....	12-1
12.2	Transportation Issues	12-1
12.3	Transportation Objectives and Policies	12-3
12.3.1	Transport System Effectiveness and Safety	12-3
12.3.2	Passenger Transport	12-8
12.3.3	Cycleways and Walkways	12-9
12.3.4	Car parking	12-10
12.3.5	Loading and Access	12-12
12.3.6	Objective: Private Helipads/Helicopter Landing Areas	12-12
12.4	Transportation Rules	12-13
12.4.1	Rules: Activity Status	12-13
12.4.1.1	Rules: Controlled Activities	12-13
12.4.1.2	Rules: Limited Discretionary Activities	12-13
12.4.2	Rules: Controls	12-14
12.4.2.1	Parking Standards	12-14
12.4.2.2	Parking Standards - Business 11 Zone	12-21
12.4.2.3	Parking Standards - Business Park 7A Zone at Smales Farm	12-24
12.4.2.4	Loading Space Standards	12-25
12.4.2.5	Compliance with Parking or Loading Space Standards	12-26
12.4.2.6	Design of Parking and Loading Spaces	12-27
12.4.2.7	Access to Parking and Loading Spaces	12-28
12.4.2.8	Vehicle Crossings	12-30
12.4.2.9	Access Requirements for Drive Through Activities	12-32
12.4.2.10	Building Line Restrictions	12-33
12.4.2.11	Cyclist, Pedestrian and Passenger Transport Facilities	12-33
12.4.2.12	Transport of Hazardous Materials	12-33
12.4.3	Roading Hierarchy	12-34
12.4.3.1	General	12-34
12.4.3.2	Specific Rules for Classified Roads	12-36
12.4.3.3	Minimum Road and Service Lane Widths	12-36
12.5	Assessment Criteria	12-36
12.5.1	Assessment Criteria for Limited Discretionary Applications	12-37
12.5.1.1	General Assessment Criteria for Control Flexibility	12-37
12.5.1.2	Additional Assessment Criteria for Control Flexibility	12-37
12.5.1.3	Assessment Criteria for Limited Discretionary Activities	12-40
12.5.2	Additional Assessment Criteria for Limited Discretionary Activities	12-41
12.5.2.1	Access Requirements for High Vehicle Generating Activities	12-41
12.5.3	Assessment Criteria for Discretionary Activities	12-44
12.5.4	Additional Assessment Criteria for Specified Discretionary Activities	12-44
12.5.4.1	Private Helipads/Helicopter Landing Areas	12-44
12.5.4.2	Road Construction/Reconstruction	12-45

Appendices

12A:	Car Manoeuvring and Parking Space Dimensions	12-46
12B:	Car Tracking Curve.....	12-47
12C:	Truck Tracking Curve.....	12-48
12D:	Truck and Trailer Tracking Curve	12-49
12E:	Articulated Truck Tracking Curve.....	12-50
12F:	Defined Private Helicopter Landing Area.....	12-51
12G:	Defined Private Helicopter Landing Areas	12-52
12H:	Defined Private Helicopter Landing Areas	12-53
12I:	Road Design in the Structure Plans Zone: Technical Supplement	12-54

12.

Transportation

12.1 Introduction

This section is concerned with the management of transportation facilities in a manner that avoids, remedies or mitigates the adverse effects of transportation activity and infrastructure on the environment and contributes to the sustainable use of natural and physical resources. This management should enable the people and community of North Shore City to provide for their social, economic and cultural well being by providing for the safe and efficient movement of people, goods and services in the city, in keeping with the purpose of the Resource Management Act 1991 (RMA).

Particular sections of the RMA which are fundamental to the management approach adopted in this section are as follows:

- *Section 5*: the sustainable management purpose of the RMA
- *Section 7*: the efficient use and development of resources, the maintenance and enhancement of amenity values and of the quality of the environment

The *Auckland Regional Policy Statement* contains objectives and policies on transport which need to be taken into account in this section of the Plan and include the following:

- Supporting the preferred form of urban development (based on containment and selective intensification)
- Enabling the efficient movement of people, goods and services in a cost-effective, affordable and safe manner
- Increasing the efficiency of congested transport corridors, by increasing the person carrying rather than vehicle capacity of these corridors
- Reducing adverse effects of transport on the environment
- Reducing the need to use non-renewable fuels
- Managing the public transport system more effectively.

The *Auckland Regional Land Transport Strategy* has objectives and policies which expand upon those of the *Auckland Regional Policy Statement*, many of which are reflected in this Plan. In enabling and promoting the purpose of the Resource Management Act 1991 the resource management goals (Section 6) that have particular application to transportation are Ease of Movement, Built Environment, Natural Environment and Employment and Economic Growth.

12.2 Transportation Issues

Significant transportation issues which need to be addressed in the objectives and policies of the Plan are:

- *The adverse effects that both the infrastructure that supports the transport network and transport activity itself have on the natural and built environment of the city. Such effects include traffic noise, exhaust emissions, contamination of stormwater runoff from roads, severance of communities by major roads and degradation of urban landscape amenity values.*

While the transport system makes a vital contribution to the city's continued economic and social vitality, it is also a source of adverse environmental effects, many of which are becoming more severe with traffic growth. At a neighbourhood level, the noise produced by growing volumes of traffic on main arterial routes increasingly degrades otherwise attractive environments. At a city level, consideration of a second harbour crossing to

accommodate traffic demand inevitably raises concerns as to the magnitude of the environmental impacts arising from such a scheme if it were to proceed.

One of the key challenges facing the city is to strike an appropriate balance between on one hand, the growing demands on the transport network, and on the other hand, the need to maintain and protect those features of the natural and built environment which are most valued by residents. It is important that the benefits arising from improvements to the transport network are not outweighed by the potential for environmental disruption and damage which often accompanies and follows such changes.

In dealing with these matters it is important to recognise that, while the primary focus of district plans is on addressing local matters, transport activity within the city impacts on wider regional and national concerns. While there are local air quality concerns, vehicle exhaust emissions are also considered a contributor to global issues such as the greenhouse effect. The increasing rate of consumption of non-renewable fossil fuels raises questions of the long-term availability of these resources. Arising from these concerns is the need to encourage the efficient use of energy resources and achieve more environmentally acceptable transport systems.

- *That an increasing number of people commuting in private motor vehicles create adverse effects on urban amenity values, particularly for local residents and businesses.*

While North Shore City is no longer a dormitory suburb of metropolitan Auckland, a significant number of residents cross the Auckland Harbour Bridge to work. As the majority of employment-related trips are made by private motor vehicle, the resulting congestion and its associated economic and environmental costs on the Northern Motorway corridor and its feeder roads is all too obvious. Queues of cars waiting to enter the motorway line city streets, hindering the progress of those making shorter trips within the city or those travelling by less environmentally damaging modes such as buses, bicycles or on foot.

Because of the growth in traffic flows on the city's roads and its adverse environmental effects, there is support in the community for the development of forms of passenger transport which are more efficient than the private motor vehicle in the use of road space and energy resources and producing less exhaust emissions per user. While the development of an urban form less reliant on the private motor vehicle and more supportive of passenger transport, walking and cycling is desirable, changes to the urban fabric take some time; and the challenge is to make the most of the existing situation.

Unless land use and transportation planning initiatives are closely integrated, there is the risk that the emerging urban form will place increasing pressure on transport systems and limit the use of alternative transport modes. The resulting transport system may itself serve the urban area poorly, limiting ease of movement of the community and affecting business efficiency and competition as well as consumer choice. It may also result in a range of other adverse effects including noise, local congestion and poor air quality.

Firm proposals to advantage buses over other traffic by enabling them to bypass congestion are being considered. Such tools as bus-only lanes, turning movements and traffic signal pre-emption save time on a peak period bus journey. The proposed Priority Lane for buses and high occupancy private vehicles alongside the Northern Motorway is expected to save 20 minutes in the morning peak on a journey across the Harbour Bridge. Bus routes linking existing and establishing residential areas to developing employment will have to be considered. While increasing congestion and parking difficulties in the Auckland CBD have led to increased bus and ferry patronage between 1994 and 1996, the motor car clearly remains the preferred form of transport for the city's residents. In part this is due to a reduction in the real cost of car ownership, but also to the development of new employment centres away from traditional bus routes. It is likely that the majority of person trips will be made by private motor vehicle for the foreseeable future.

- *That the nature and timing of financial investment in the transport network may result in inappropriate development, causing adverse environmental effects such as excessive noise, exhaust emissions, reduced access or decreased urban amenity values.*

The provision of transport infrastructure can influence the rate and direction of urban development to either enhance or degrade environmental quality and the amenity values of the city's environs. In this regard, the emerging role of Albany as a focus for business activity could be influenced to a significant extent by the nature and timing of investment in the transport network for the northern part of the city; conversely, development pressures throughout the city can force upgrading of arterial routes to accommodate traffic demand.

The relative locations of activities can also determine the amount of travel residents are required to undertake and the mode of travel used, and therefore the quantum of effects such as exhaust emissions which are proportional to the amount of vehicle use. By encouraging activities to make appropriate location decisions relative to transportation infrastructure and other activities, demand for travel can be reduced, avoiding some of the adverse effects associated with vehicle use.

It is important therefore that on-going investments in the city's transport network are carefully considered and the likely effects of their development taken into account. If the avoidance or mitigation of the adverse effects of car travel through the development of a city less dependent on the private motor car, or where fewer, shorter trips are needed in resident's daily activities is a goal aspired to, the nature and timing of new transportation infrastructure can be seen as one tool to avoid, remedy or mitigate adverse environmental effects.

- *That an imbalance in the city's transport network between its traffic carrying capacity and its traffic generating capacity and overflow of transport related activities from individual sites may adversely affect the safe and efficient movement of people, goods and services and in particular the amenity values of the city's business and residential streets.*

As the city grows and develops, demands on the transportation network also grow, notably in areas where there is an imbalance between the traffic carrying capacity of the network and the traffic generating capacity of the land use activity which it serves. Often a strong element of through traffic accentuates this imbalance. While traffic management can assist in reducing congestion, one of the keys to maintaining an efficient system is to achieve a balance between the level of land use activity and the available network capacity. The *Auckland Regional Land Transport Strategy* also speaks of concentrating on the movement of people and goods rather than simply moving vehicles.

While the Plan seeks to protect the amenity of local (particularly residential) streets by directing through traffic to arterial routes, these routes themselves may present daunting obstacles to pedestrians wishing to cross them. They can also reduce the amenity of their environs through traffic noise and exhaust emissions, while degrading landscape amenity values of the city's natural and built environment.

As the motorway and state highway system performs an important local and regional function in addition to its national role, its safe and effective operation is important to the city's transportation network. The city has to remain aware of the potential impacts on the motorway system of adjacent developments and avoid or mitigate the effects of these on these heavily trafficked routes as a part of the integrated management of the effects of the development of land within the city.

12.3 Transportation Objectives and Policies

12.3.1 Transport System Effectiveness and Safety

Objective

To enable a transport system that avoids, remedies or mitigates the adverse effects of transport activity on the natural and physical environment and protects the amenity value of open spaces and streets, while maintaining the health and safety and the economic, social and cultural well-being of the people and community of North Shore City. These adverse effects include noise, stormwater contamination of receiving waters and air quality degradation.

To facilitate integrated transport management and a multi-modal transport network and to integrate transport and land use provisions to support a quality, compact and contained urban form.

Policies

1. By reducing the need for travel by private motor vehicle within the city.
2. To encourage the most efficient and safe use of transportation infrastructure within the city.
3. Through the development and implementation of integrated transport and land use provisions, consistent with Schedule 5 of the Local Government (Auckland) Amendment Act (2004):
 - support the concentration of retail, employment, and community activities within High Density Centres and Intensive Corridors identified in Table 6.1 with passenger transport infrastructure;
 - enable high density residential and mixed use development within High Density Centres and Intensive Corridors identified in Table 6.1
 - set high standards for urban amenity and design to facilitate a range of quality retail, employment, mixed use and living environments within High Density Centres and Intensive Corridors identified in Table 6.1; and
 - where appropriate, enable commercial activities in locations other than those listed in Table 6.1, where those locations do not compromise the achievement of 2.6.5 Strategic Policies Urban Structure of the Auckland Regional Policy Statement.
 - where appropriate, enable urban intensification of Passenger Transport Nodes (having regard to Policy 2.6.5.15 and 2.6.11.1(o) of the Auckland Regional Policy Statement) that will not compromise the achievement of 2.6.5 Strategic Policies Urban Structure of the Auckland Regional Policy Statement.
4. To classify roads by their function to mitigate the adverse effects of through traffic on residential areas.
5. To reduce the severance of communities caused by major roads, through the provision of facilities where pedestrians and cyclists can cross safely.
6. To protect all busy roads, together with State Highways, from the adverse effects of adjacent activities and developments, including those which are high generators of pedestrian or vehicle traffic or may have adverse effects on the safety of motorists.
7. To increase the person carrying capacity of congested corridors and to provide viable alternatives to the private motorcar.
8. To encourage the use of fuel-efficient and less polluting modes of travel, particularly passenger transport, cycling and walking.
9. To support studies of the likely effects and feasibility of economic instruments as techniques for managing travel demand on congested corridors and discouraging inefficient modes of travel.
10. To avoid, remedy or mitigate the significant adverse effects of new and reconstructed transport infrastructure, including loss of visual amenity and the adverse effects of stormwater discharges on the quality of receiving waters.
11. To ensure that any transportation of hazardous materials within the city is carried out in a manner that avoids risk of adverse effects on individuals and the community and to the built and natural environment.
12. To support measures to avoid or mitigate the adverse effects of vehicle noise and exhaust emissions, including investigations into the establishment of environmental standards.
13. To consider the transport needs of people with special requirements, including the young, those with disabilities and the elderly.

Methods

- By promoting a closer physical relationship between residential, employment, shopping and other activities
- By ensuring that activities which are high generators of pedestrian or vehicle traffic are not established or expanded along heavily trafficked roads, unless pedestrian and vehicle movements to and from the site can be accommodated without disrupting the safe and efficient operation of the road
- By providing infrastructure to support passenger transport services including passenger ferries and other high occupancy modes, especially by the provision of bus priority measures
- By promoting road safety measures in projects to upgrade existing roads and construct new roads
- By supporting safety awareness programmes for motorists, cyclists and pedestrians
- By considering the potential adverse effects of new and reconstructed transport infrastructure and incorporating the means to avoid, remedy or mitigate those effects in new roading projects and by retrofitting existing roads where appropriate
- By incorporating landscaping, noise reduction measures and alternative provisions for cyclists and pedestrians as an integral part of the design of roading projects wherever practicable
- By implementing these policies through the use of Rules, Council works and Council initiatives as appropriate.
- By requiring an integrated transport assessment to be prepared in accordance with Appendix J of the ARPS for any proposal to extend the metropolitan urban limits, any proposed structure planning process or any major trip generating proposals.

Explanation and Reasons

1. Management of Travel Demand

While the transportation system is a resource of considerable value to the city and should be accessible, convenient, efficient and safe, it is also the source of a variety of adverse impacts on the life supporting capacity of the environment. The non-renewable fossil fuels used by motor vehicles release large amounts of carbon monoxide, carbon dioxide and other pollutants into the atmosphere. Motor vehicles are also a major source of water pollution through deposition of oil, rubber and other contaminants onto road surfaces. These are carried by stormwater runoff through the drainage system into waterways. However, transport does provide a vital means of exchange and should enable people to make the trips necessary to provide for their social and economic well-being, in a manner that minimises delay and accidents and makes best use of the substantial investment in transport infrastructure, while avoiding or mitigating the generation of adverse effects.

The production of these adverse effects is in direct proportion to the rate of vehicle use. Urban growth and intensification, combined with growth in vehicle ownership and vehicle trip rates, is adding considerably to the volume of traffic on the roading network. For example, the average daily traffic on the Harbour Bridge increased from 60,000 vehicles in 1973 to 132,000 vehicles in 1995 and similar rates of increase have been recorded on the major arterial roads in the city. Recent surveys indicate that the level of traffic congestion is a major concern of residents in the city.

Traffic demand is expected to continue to increase and the roading network is now at the point where main corridors are congested during peak periods. There is no realistic prospect of relief through significantly increasing vehicle capacity on the Northern Motorway corridor and only limited opportunities on other corridors. The effect of motorway congestion is to extend traffic queues back onto the approach roads, thereby decreasing the ability of city streets to handle internal peak period traffic. This congestion places main city roads under considerable stress, which in turn creates secondary problems on other routes. Major works involving large capital expenditure would be required to achieve the necessary improvements in the capacity of the main roading network and, while the traffic delays in the peak flow

direction cause significant inefficiencies, that part of the network catering for traffic flows in the off-peak direction is under-utilised.

The underlying theme of the above policies is to place greater emphasis on the management of demand for travel on congested corridors, rather than necessarily catering for that demand by the provision of additional vehicle capacity. While improvements to some roading connections will be required, combination of supporting measures is necessary to achieve an outcome consistent with the objectives of effectiveness and safety for the overall transportation system. This approach is especially necessary if travel demand across the harbour is to be handled in a manner that is to avoid or delay the need for a costly and environmentally damaging second harbour crossing, which in any event would be likely to reverse the present trend towards job self-sufficiency on the North Shore.

The main elements of this management approach to accommodating travel demand are:

a) Promote focal points for business activity

By fostering focal points for business activity, often associated with opportunities for higher density residential development, the city looks to grow towards a pattern of development less dependent on the private motorcar for transportation and less reliant on long commuting trips to employment. Development throughout the city will allow for some commuting against the prevailing flows, using spare capacity to greater effect.

These developments should avoid or mitigate much of the growth of the adverse effects of motor vehicle use, including noise, degradation of air quality and loss of amenity in areas adjacent to busy roads.

b) Increase the person carrying capacity of congested corridors.

The provision of a priority lane operating either in its own right-of-way or as a shoulder lane along the congested Northern Motorway corridor is another example of a demand management approach. The priority lane would increase the person carrying capacity of the corridor, rather than its vehicle carrying capacity, providing faster travel times for high capacity vehicles during peak periods. When constructed as a segregated right-of-way, the lane can also be used by high occupancy vehicles. The Council is working with Transit New Zealand, and the Auckland Regional Council to determine the final design, project staging, ownership and financial responsibility for the busway.

Introducing bus priority measures is also likely to be necessary on congested city streets, both to allow un-congested access to the priority lane and for other services within the city. Priority measures allow buses and other high occupancy vehicles to bypass traffic congestion and achieve faster travel times than private cars. At the time of preparation of the Plan, Onewa Road and the Northcote Motorway Interchange had the only bus priority measures in the city.

c) Provide opportunities for fuel efficient modes of travel.

The existing pattern of urban development could be argued to take choice away from residents. Zoned segregation of activities lengthens journeys within the city, making the car the necessary mode for most trips. Newly developing areas afford opportunities for making cycling and walking more attractive through the provision of convenient and safe cycleways and walkways closely integrated with the layout of these areas and separated from heavy traffic flows. In addition, roading patterns in newly developing areas need to be designed so that these areas can be effectively and conveniently served by passenger transport connections to major destinations.

d) Promote a safe and efficient roading network

The system of classifying roads into a hierarchy provides the means by which road function can be defined and controls introduced which seek to minimise the disruption caused by through traffic flows mixing with local traffic movements. By identifying those parts of the roading network which are essential for moving people, goods and services between major origins and

destinations within or outside the city, these roads can be developed and managed as an attractive network of main roads for the safe and efficient movement of heavy traffic flows. It will be necessary to undertake road widening and intersection improvements, and to control the adverse effects of frontage activities along parts of this network, when its carrying capacity needs upgrading. The application of sound traffic management measures is essential to this approach.

The classification of roads also provides the basis for protecting local environments (notably residential areas) from the intrusive effects of through traffic flows. Only traffic which has reason to enter local environments should be encouraged and, as well as the provision of an attractive network of main roads, traffic management measures can be used to discourage through traffic. However, protection of local environments must be balanced against the needs of the wider roading network to accommodate through traffic flows.

e) *Support the investigation of economic instruments.*

A number of pricing mechanisms have been suggested as a means for managing demand on the Northern Motorway corridor during peak periods and discouraging inefficient modes of travel. Possible mechanisms include electronic road charging, cordon tolls, supplementary licensing and parking taxes. The feasibility and likely effects of these pricing mechanisms need to be studied before being adopted. Given the dispersed nature of business activity, it is possible that the imposition of additional charges or other measures could result in the relocation of some activities away from the areas to which they are directed and result in increased travel to areas not as conveniently served by passenger transport.

2. The Transport Disadvantaged

The Plan's policy of grouping retail, business and other activities in commercial centres and enabling intensive housing to develop in close proximity to such centres, assists in providing convenient access by passenger transport for all residents, including the transport disadvantaged. Reliance on the personal mobility provided by the private motor vehicle has disadvantaged a substantial number of people with limited or no access to a motor car, including the young and elderly. The benefits of the preferred urban form for the transport disadvantaged are worth noting.

3. Road Safety

The Council has a strong interest in road safety and, through policies in the Plan and traffic engineering measures, continues to improve the safety of the roading network.

Expected Environmental Results

- A reduction in the rate of growth of demand for private vehicle travel to work, as measured by a 5-yearly assessment of Statistics New Zealand data on City residents place of work and City workers place of residence
- Achieving a more effective overall use of the arterial roading network in terms of both under and over-utilised capacity, as measured by a 5-yearly assessment of changing patterns of traffic flows, 5-yearly land use surveys and 5-yearly resident surveys
- Achieving a more effective overall use of the passenger transport system (by land and water), as measured by a 5-yearly assessment of Statistics New Zealand journey to work data
- An increase in cycling and walking to work, as measured by a 5-yearly assessment of Statistics New Zealand journey to work data
- Achieving an improved safety record on the city's roads, as measured by 5-yearly review of Land Transport Safety Authority accident statistics
- A reduction in noise levels for new and reconstructed arterial roads where noise protection measures have been provided, as measured by a biennial noise survey.

12.3.2 Passenger Transport

Objective

To mitigate the adverse effects of transport activity (including noise, emission of atmospheric pollutants, contamination of receiving waters from roadway stormwater run-off) and promote more efficient use of transport fuels by supporting a satisfactory alternative to the use of the private motorcar through fostering an effective passenger transport system.

Policies

1. To provide on-street passenger transport facilities which are attractive and convenient for users, including:
 - bus stops, seats and shelters
 - facilities for bus users, buses and taxis at commercial centres; and
 - measures to enable priority use of roadways by buses and other priority vehicles to bypass traffic congestion in peak and off-peak periods, including reserved lanes, priority and exclusive turning movements and traffic signal pre-emption, where appropriate.
2. To provide infrastructure to support passenger ferry services as appropriate.
3. To liaise with and support the Auckland Regional Council and passenger transport operators to ensure the provision of effective and appropriate passenger transport services within North Shore City and to neighbouring centres to meet the needs of existing and potential users, including those dependent on passenger transport.
4. To assist and support the Auckland Regional Council to improve cross-harbour passenger transport services and facilities, through the implementation of a Priority Lane along the Northern Motorway corridor (with Transit New Zealand) and improved passenger ferry services.
5. To consider land use issues and to evolve an urban form more supportive of the provision of effective passenger transport services.

Methods

- Policies 1 to 4 will be implemented partly by Council works and Council initiatives
- Policy 5 will be implemented partly by Council initiatives and by rules.

Explanation and Reasons

Effective passenger transport services provide a prime example of providing for the social, economic, and cultural well-being of individuals and the community, while promoting sustainable resource management by meeting transportation needs whilst avoiding some of the adverse environmental effects associated with the use of private motor vehicles.

Motorised transportation activity has an adverse impact on the life supporting capacity of ecosystems in a number of different ways. The non-renewable fossil fuels used by vehicles release large amounts of carbon monoxide, carbon dioxide and other pollutants into the atmosphere. Motor vehicles are also a major source of water pollution through deposition of oil, rubber and other contaminants onto road surfaces, which get carried by stormwater runoff through the drainage system into waterways. There is a direct correlation between the generation of these adverse effects and the amount of vehicle use. Vehicle travel in the Auckland region is growing at roughly twice the rate of population growth, consistent with the general trend in western societies. Traffic congestion exacerbates matters, consuming more fuel and producing more emissions per unit of vehicle travel than in free flowing traffic conditions. Reducing the need for travel and providing an efficient alternative to the car can mitigate some of these adverse effects.

Effective passenger transport services also consume finite resources and produce atmospheric emissions. A bus is worse in this respect than a single car, but the same bus with a full load is significantly better than the combined effects of 50 cars. However,

passenger transport services need to be made significantly more attractive for car users to find them a reasonable alternative to the private motorcar.

The primary responsibility for the provision of passenger transport services within the city lies with the Auckland Regional Council and passenger transport operators. Where a transport operator regards a route as profitable for a given part of the day, the operator may notify the Auckland Regional Council and the service is entered on the Council's register of commercial services. Services which cannot operate without a subsidy from the Auckland Regional Council are put out to competitive tender and the successful operator is awarded a contract to provide the service for a period of one to five years.

The City has a dual role in passenger transport of providing passenger transport supportive infrastructure and of advocating improvements to existing services to the Auckland Regional Council and transport operators. The Council monitors changes in the pattern of residential and business growth and can identify the implications of these changes for present and potential markets for passenger transport. The need to strengthen the suitability of passenger transport for internal trips within North Shore City, as distinct from the requirements of commuter travel to downtown Auckland, is an issue which needs further attention. The preferred urban form provides for concentrations of employment which assists the effectiveness of passenger transport services. The Council will assist the Auckland Regional Council in providing services which better meet the needs of present and potential users when they are reviewed prior to re-tendering.

The Council provides street facilities such as bus stops and shelters and bus stations in commercial centres. The Council can advantage buses and other priority vehicles such as high occupancy vehicles, by promoting traffic management and other measures that allow buses to bypass congestion on city streets.

While for the foreseeable future passenger transport is likely to remain a minority mode of travel, a Priority Lane along the Northern Motorway is a key element of the city's transportation strategy, since it is the only realistic option to increase the person carrying capacity of this corridor. Peak period bus priority measures to support the Priority Lane and increase the person carrying capacity of congested streets within and around the city are also likely to become an increasing feature of the city's roading network.

Expected Environmental Results

- A slower growth rate of the adverse effects resulting from motor vehicle use, as indicated by greater use of the passenger transport system, as measured by a 5-yearly assessment of Statistics New Zealand journey to work data.

12.3.3 Cycleways and Walkways

Objective

To provide for cyclists and pedestrians within the city in a safe and convenient manner which, by establishing these as viable alternatives to the car, avoids, remedies or mitigates the adverse effects of motor vehicle use, including exhaust emissions, noise, and contamination of receiving waters by stormwater.

Policies

1. To provide for cycling and walking in a safe and convenient manner through the comprehensive provision of cycleways and walkways in structure, neighbourhood unit and subdivision plan areas and by providing cycleways in established areas.

Methods

- By providing cycleways and walkways separated from traffic flows, penetrating through and linking residential areas to community focal points such as shops, schools and reserves
- By linking reserves to provide the necessary continuity for cycleways and walkways
- By widening main roads to include provision for cycleways or cycle lanes and walkways separated from traffic flows, linking residential areas to business areas
- By identifying quiet streets and reserves as preferred cycle routes
- By including provision for cycleways along busy roads where sufficient berm space is available

- By establishing cycleways on existing footpaths where safe and practical
- By including provision for cycleways in major road widening and reserve improvement plans
- By encouraging business activities to provide facilities for staff wishing to cycle or walk to work; and
- By implementing these methods through Rules, Council works, Council initiatives and education.

Explanation and Reasons

Cycling and walking are environmentally sustainable and healthy forms of travel. The above policies aim to promote both activities for work, school and leisure trips, by providing more opportunities for such trips and making them safer. These “slow modes” of travel do not mix well with motor vehicles, as evidenced by the many cycling and pedestrian accidents that occur, especially involving children travelling to and from school.

The Council’s draft discussion document, the Pedestrian and Cyclist Strategy (1993), and the Proposed Cycle Facility Plan shown in Appendix 4 of the District Plan Maps address the matters raised above in more detail.

Expected Environmental Results

- An increase in the provision of cycleways and walkways in the city, as measured by a five-yearly review of both opportunities provided in subdivisions and facilities completed.

12.3.4 Car parking

Objective

To ensure that adequate and efficient provision is made for on-site car parking for all activities.

Policies

General

1. By ensuring that parking requirements for each activity is related to the number of occupants and visitors expected to bring a motor vehicle to the site and that occupants have priority of on-site parking.
2. By recognising the need to protect features of the natural and built environment in the provision of parking spaces.
3. By allowing shared use of parking spaces between two adjacent activities when the peak parking demand of these activities does not coincide.
4. By allowing a reduction in parking requirements where a particular activity occurs infrequently and at times outside the peak generation of motor vehicles, or where a particular activity serves the immediate neighbourhood to which patrons are likely to walk.
5. By ensuring that exclusive parking spaces for Operation Mobility Cardholders are made available and conveniently accessible to the destination point.
6. By permitting stacked parking of vehicles being serviced at vehicle repair premises and similar activities.
7. By ensuring that car parks are screened from adjacent sites and larger car parks are landscaped.
8. By ensuring that specifications for parking facilities are based on the length and turning circle of the 90th percentile motor car, and that these specifications be applied so that all vehicle manoeuvring can be carried out within the site, and without limiting full use of parking facilities, except where otherwise specified.
9. By requiring parking areas to be properly located, designed, formed, screened and landscaped.
10. By ensuring that no parking facilities are permitted in areas set aside for landscaping, outdoor storage or other specified purposes.

Commercial Centres

11. By ensuring that parking facilities for shoppers and business visitors are provided at locations more convenient to the retail core than employee parking.
12. By ensuring that parking facilities are provided at a location and scale which enables the efficient use of parking spaces and handling of vehicle generation by the adjacent streets.
13. By ensuring in the Takapuna sub-regional centre that:
 - The options are kept open for the provision of multi-deck car parks on the Central car park, the Gasometer site and The Promenade land, as required
 - Where the Central car park, the Gasometer site and The Promenade land is developed for commercial or other uses, the additional parking required for each site is provided together with the parking required for the new development
 - The land at present in use as tennis courts in Byron Avenue is identified for possible long term use for parking.
14. By ensuring in the Albany sub-regional centre, and other planned commercial developments, that parking facilities are provided as an integral part of the relevant design and development provisions of [Section 15](#) of the Plan.
15. By taking into account the influence of public transport and mixed use development on the level of parking required in the Business 11 zone.
16. By the Council working towards reducing the use of residential streets for on-street parking associated with commercial centres.

General Business Areas

17. By ensuring that developments in these areas provide sufficient parking for a range of activities which may locate within buildings.

Methods

- Policies 1 to 10 and 14 to 17 will be implemented by rules and Council initiatives
- Policies 11 and 12 will be implemented by rules and Council works.

Explanation and Reasons

On-street parking and manoeuvring disrupts the safety, efficiency and amenity of roads in providing for the traffic movement and access to individual properties. Consequently activities are required to accommodate their vehicle parking needs on-site. The only exception to this position is in commercial centres, where a comprehensive approach is required to both off-street and on-street parking and vehicle and pedestrian circulation, as a means of achieving a more convenient, safe and efficient use of road, parking and pedestrian facilities.

Commercial centres progress through various stages in the provision of car parking facilities, each stage of which is represented in Takapuna as business activities continue to intensify. There is the progressive conversion of on-street parking from unrestricted spaces to restricted metered spaces in the retail core, as well as the progressive conversion of off-street parking to a fee system which deters long term parking. There is also the progressive move to consolidating parking facilities in a centralised manner and in due course, there will be the construction of multi-deck car parks, notably on the Central car park, the Gasometer site and The Promenade land.

These progressions are driven primarily by the need to ensure that there is adequate demand for shoppers and business visitors to park in close proximity to the retail core and has led to the present situation of employee parking locating on surrounding residential streets. However, this detracts from the amenity of these streets and the Council will either have to acquire additional land or develop some of its existing parking land more intensively.

Expected Environmental Results

- Achieving an effective provision for car parking, as measured by a five-yearly assessment of the adequacy of parking provision at the main commercial centres, business parks and general business areas.

12.3.5 Loading and Access

Objective

To ensure that adequate and efficient provision is made for loading and access for activities.

Policies

1. By ensuring that loading spaces are provided for business uses, to assist with the pick-up and delivery of goods.
2. By ensuring that provision is made for passenger loading facilities at or near entrances to educational activities.
3. By ensuring that where a business activity has access onto a service lane, access and, where required, loading bays are provided from the service lane.
4. By enabling service lanes to be developed in a manner which provides a pleasant pedestrian environment, where this approach encourages desirable in depth development and contributes to the distinctive character of the locality.
5. By ensuring that the specifications for loading spaces and access is based on the length and turning circle of the 90th percentile single unit two axle truck, and that these specifications be applied so that all vehicle manoeuvring can be carried out within the site, and without limiting full use of loading spaces, except where otherwise specified.
6. By requiring loading spaces and access to be properly located, displayed, formed, screened and landscaped.
7. By ensuring that no loading spaces or access is permitted in areas set aside for landscaping, outdoor storage or other specified purposes.
8. By ensuring that the number, size and placement of vehicle crossing is regulated to assist traffic safety and control.

Methods

- Policies 1 to 3 and 5 to 8 will be implemented by rules
- Policy 4 will be implemented by Council works and Council initiatives.

Explanation and Reasons

On-street loading and access also disrupts the safety, efficiency and amenity of roads in providing for traffic movement and access to individual properties.

Expected Environmental Results

- Achieving an effective provision for loading facilities, as measured by a five-yearly assessment of the adequacy of loading at commercial centres and schools.

12.3.6 Objective: Private Helipads/Helicopter Landing Areas

To provide for private helipads in a manner which avoids conflict with other activities and avoids, remedies or mitigates adverse effects of noise and loss of privacy.

Policies

1. By making provision for the establishment of private helipads as a Discretionary activity within a limited range of zones and within limited areas in these zones, where the amenity values of the surrounding areas will not be adversely affected by the activity.
2. By individually assessing private helipads either by way of a Discretionary activity application, as not all sites within the appropriate zones will be suitable for this use, or as a Non-Complying activity application.
3. By requiring any necessary consent from the Air Transportation Division of the Ministry of Transport, or from such other agency which may at the relevant time have responsibility for regulating and controlling the use of helicopters, prior to

consideration of an application to establish a private helipad.

4. By applying noise performance standards to protect the amenities of the zone in general and, in particular, the amenities of any site containing a residential dwelling, school or hospital.
5. By reducing any adverse effect on the amenity values of the city and monitoring the overall effects of helicopter operations through noise abatement flight techniques and the logging of flights.
6. By seeking to ensure an equitable distribution of flights when imposing conditions on their frequency, in order to avoid a first in first served distribution of rights.
7. By recognising that, where it can be demonstrated that a site adjoining the coastal marine area can be used as a private helipad without adverse effects on the amenities of the locality, an application for a Non-Complying activity consent could be approved. In considering the application, the Council shall have regard to the potential disruption to the amenities of adjacent residential sites and coastal recreation areas in terms of such factors as noise emissions, public safety, air turbulence and community expectations for maintaining the recreational values of the coastal environment.
8. By avoiding or mitigating adverse effects of helicopter operation on National Routes and Primary (regional) Arterials and providing for road safety by locating and arranging private helipads to avoid distraction to motorists.

Methods

- Policies 1 to 8 will be implemented by rules.

Explanation and Reasons

The use of helicopters for personal transport is increasing within the Auckland region. It is considered that helicopter landings and take-offs from private helipads should be managed as an activity in its own right, notwithstanding that the activity may also be ancillary to another Permitted activity. This is due to the potential of helicopter operations to adversely affect the amenity values of the city. Through the Plan, the Council seeks to provide for the establishment of private helipads only in those areas, or on those sites, where the adverse effects of noise, or effects on public safety and privacy can be adequately limited. The establishment of a private helipad is permitted as a Discretionary activity in those areas defined in [Appendix 12F](#), [Appendix 12G](#) and [Appendix 12H](#), but on other sites a Non-Complying activity application will be required. This status will enable the potentially adverse effects of the activity on the surrounding area to be fully assessed.

Expected Environmental Results

- Minimum disruption to the amenities of nearby residential and other sensitive activities, as measured by an annual assessment of the Council's complaints register and five-yearly resident surveys.

12.4 Transportation Rules

12.4.1 Rules: Activity Status

12.4.1.1 Rules: Controlled Activities

The following shall be controlled activities in all zones:

- Any activity having access to more than one road frontage where one or both frontages face arterial or collector roads.

12.4.1.2 Rules: Limited Discretionary Activities

The following shall be Limited Discretionary activities in all zones:

- Any Permitted or Controlled activity which generates a turnover of vehicles which exceeds 100 vehicles per day

- Road construction or reconstruction of any arterial or principal road which extends beyond the boundary of any road reserve designation included in this Plan.
- Any Limited Discretionary Activity in the Business 11 zone which generates a turnover of vehicles which exceeds 100 vehicles per day.
- Any Limited Discretionary activity in the Residential 8 zone which has a frontage to Anzac St between the intersections of Auburn St and Pupuke Road, or a frontage to the western side of Auburn St between the intersections of Anzac St and Huron St.

Except for activities within the Business Park 7A zone at Smales Farm (excluding Automotive Fuel Retailing - SIC 5321) with a combined gross floor area of 105,000m² or less.

Note:

For the purpose of [Section 12.4.1.2](#) the term 'turnover of vehicles' means the generation of a two way vehicular movement made by a vehicle from one point to another.

12.4.2 Rules: Controls

All Permitted and Controlled activities in all zones shall comply with the controls listed below:

12.4.2.1 Parking Standards

a) The following parking standards specified in [Table 12.1](#) shall apply where:

- i) An activity is established on a site; or
- ii) There is a change of activity; or
- iii) A building(s) is constructed, substantially reconstructed, altered or added to; and
- iv) The activity or building is not located within the Business 11 zone or the Residential 8 zone.

The specified parking space standards shall be the minimum number of parking spaces to be provided at all times in respect of any activity, except that, where a Centre Plan or Comprehensive Development Plan exists which contains different parking standards for sites within its boundaries, then those standards shall apply.

Activities for which parking ratios are determined are categorised using the *Australian and New Zealand Industrial Classification 1993* (ANZSIC): refer to Annexes to the Plan, Business Activity Definitions.

b) Where a proposed activity is not specifically listed with a parking ratio then the closest definition to the activity shall be used, otherwise parking requirements may be determined by way of a traffic report, as specified by Council roading engineers.

Note (i):

For the purpose of [Table 12.1](#), the word 'accommodate' means the maximum number of people at its most intensive use that a building is designed for.

Note (ii):

For the purpose of [Table 12.1](#), the term 'comprehensively designed and integrated shopping centre' refers to activities having all of the following features:

- Comprising of two or more retail units within an overall planned layout
- Common provision of parking
- Pedestrian areas providing circulation, access and public amenities within a site, or sites.

c) Parking for Operation Mobility Cardholders

Where it is proposed to establish an activity on any land or erect any building and that use of building is listed in Section 25 of the Disabled Persons Community Welfare Act 1975, car parking spaces for the exclusive use of vehicles displaying a current Operation Mobility Card, shall be provided as follows:

- i) One space shall be provided for each group of less than 20 spaces required by the plan in respect of the activity or building.

- ii) Two spaces shall be provided for each group of 20-100 spaces required by the Plan in respect of the activity or building, and one additional space shall be provided for every 50 spaces over 100 spaces.
 - iii) Such space or spaces shall be provided in addition to the normal car parking spaces required by this Plan.
 - iv) Each such space shall be designed in accordance with the requirements of *New Zealand Standard 4121 (1985)*. Access from this space to the building shall also be designed in accordance with these Standards.
- d) The parking standards provided in **Table 12.1** include allowances for the parking generated by people working on a site and those people must at all times be given priority use of the on-site parking provided.

Control Flexibility: General

Reductions in the number of parking spaces required under **Table 12.1**, including reductions in exchange for providing cycle facilities, are available by means of a Limited Discretionary activity application. A reduction in parking space standards in exchange for cyclist facilities shall only be available where the minimum parking required is otherwise able to be fully met.

If an applicant proposes to remove any cyclist facilities for which a reduction in parking spaces has been consented to, the number of parking spaces shall be restored to the minimum requirement of **Table 12.1**

Table 12.1 Parking Standards	
Activity	Parking Spaces Required
Amusement Galleries	One for every 35m ² gross floor area
Art Galleries	One for every 40m ² gross floor area
Auction Rooms and Second Hand Marts	One for every 35m ² gross floor area
Banks	One for every 30m ² gross floor area
Boarding Houses and Guest Houses	One space for every 3 persons the building is designed to accommodate, plus one for every non-residential employee
Breeding and Boarding establishments for animals	Two for every 20 animals the establishment is designed to accommodate
Camping Ground	One for every unit, camp site or caravan site, plus one for every two employees
Childcare Centres	One for every 10 children the facility is designed to accommodate, plus one for every employee
Churches	One for every 4 people that the main auditorium or hall is designed to accommodate, provided that, where a church and hall are erected on the same site, the maximum requirements applicable to that site shall be that applying to either the Church or hall, whichever is designed to accommodate the greatest number of people.

Table 12.1 Parking Standards	
Activity	Parking Spaces Required
Cinemas and Theatres	One for every four persons the facility is designed to accommodate, plus one for every two employees
Clubs and Clubrooms (non residential)	One for every four persons the facility is designed to accommodate
Commercial Services	One for every 35m ² gross floor area
Community Building and Facility	One for every five people the facility is designed to accommodate
Community Welfare Centres	One for every 40m ² gross floor area
Comprehensively designed shopping centres, supermarkets and retail sales (shops) in Business 4, 5 and 6 zones.	<p>One for every 16m² GLA for the first 6,000m² of gross leasable area</p> <p>One for every 20m² GLA for the next 4,000m² of gross leasable area</p> <p>One for every 22m² GLA for the next 10,000m² of gross leasable area</p> <p>One for every 25m² GLA for over 20,000m² of gross leasable area</p>
Conference Centre	One for every four people the facility is designed to accommodate
Craft Activities	One for every 35m ² gross floor area
Dairies	One for every 35m ² gross floor area
Drive Through Facility	Five queuing spaces per facility (parking requirements for these types of activities will need to be provided by the applicant within a traffic study)
Education Facility	<p>Primary - one space for every classroom, plus one for every employee</p> <p>Secondary - one space for every 10 pupils aged 16 or over, plus one for every employee</p> <p>Tertiary and other facilities (to be provided by the applicant within a traffic study)</p>
Equipment Hire and Servicing Premises	One for every 40m ² gross floor area, plus one for every 100m ² outdoor/storage display
Factory Shops attached to Factories	One for every 35m ² gross floor area
Funeral Directors	One for every four persons the facility is designed to accommodate, plus one per employee

Table 12.1 Parking Standards	
Activity	Parking Spaces Required
Furniture Showrooms (including Carpet/Flooring)	One for every 40m ² of gross floor area
Garden Centres and Nurseries	One for every 20m ² gross floor area One for every 100m ² outdoor/display area
Health and Fitness Centre	Aerobic - one for every 20m ² gross floor area Other - one for every 40m ² gross floor area
Home Improvement Centres (home, building etc)	One for every 40m ² of gross floor area
Home Occupations	One park for every non-resident employee, plus a minimum of one where customers are permitted on the site
Hospital	One for every three patient bed spaces, plus one for every two employees
Housing for the Elderly and Disabled	One for every three units
Industrial Depots and Yards	One for every 100m ² of gross floor area, and one for every 100m ² of open space used for that purpose
Laboratories, Research and Computer Services	One for every 40m ² gross floor area
Laundries	One for every 30m ² gross floor area
Liquor Outlets	One for every 30m ² gross floor area
Manufacturing Industries	One for every 40m ² gross floor area
Marae	One for every four persons accommodated
Marina	To be provided by the applicant in the form of a traffic study
Media Studios	One for every 30m ² gross floor area
Medical Laboratories	One for every 50m ² gross floor area
Medical Service Premises and Health Care Centres	One for every 20m ² gross floor area
Motor Vehicle Dealerships	One for every 20 displayed, plus one for every employee, plus four spaces for every repair and lubrication bay

Table 12.1 Parking Standards

Activity	Parking Spaces Required
Motor Vehicle Wrecking, Machinery and Equipment Builders Suppliers	One for every 50m ² gross floor area, plus one for every 200m ² of outdoor storage space
Offices	<ul style="list-style-type: none"> Public service counters and related areas - 1:20m² gross floor area All other areas - 1:35m² gross floor area
Offices in the Business 12 - Mixed Use zone	<ul style="list-style-type: none"> 1:35m² gross floor area
Outdoor Recreation based on the natural resources of the area	One for every four persons the facility is designed to accommodate
Residential Care Centres	Two spaces, plus one for six persons (excluding the caregivers/caregivers family) the building is designed to accommodate
Residential Units, Apartment Buildings, Intensive Housing and Minor Residential Units	<p>One for each residential unit with a gross floor area of 50m² or less</p> <p>Two for each residential unit with a gross floor area in excess of 50m²</p> <p>In the Milford Intensive Residential Development Overlay Area the total number of car parking spaces shall be calculated by using the following standards and shall be dedicated for the residential use only:</p> <p>Studio/1 bedroom residential unit - 1 space 2 bedroom residential unit - 1.5 spaces 3 or more bedroom residential unit - 2 spaces</p> <p>Maximum Car Parking Requirement - an average of 2 spaces per residential unit</p> <p>Minimum Cycle Parking Requirement - one cycle park per unit</p> <p>In the Business 12 - Mixed Use zone Area A (Albany Village) the following parking is required:</p> <p>Studio/1 bedroom residential unit - 1 space 2 or more bedroom residential unit - 2 spaces</p> <p>In the Business 12 - Mixed Use zone Area B (Bute Road) and C (Clyde Road/ Beach Front Lane), the following parking is required:</p> <p>Studio/1 bedroom residential unit - 1 space 2 bedroom residential unit - 1.5 spaces 3 or more bedroom residential unit - 2 spaces</p>

Table 12.1 Parking Standards

Activity	Parking Spaces Required
Residential Units, Apartment buildings, Intensive Housing, Terraced Housing and other similar forms of intensive residential development	<p>Visitor parking spaces on-site at the rate of 0.5 spaces for each unit over 50 m² gross floor area, such spaces to be in addition to those required for private use by unit occupiers (for assessment of applications see Rule 16.7.3.4 in addition to 12.5)</p> <p>In the Milford Intensive Residential Development Overlay Area the requirement for visitor parking spaces to be provided shall be 0.1 spaces for each unit and be dedicated for visitor parking only.</p> <p>In the Business 12 - Mixed Use zone, visitor parking spaces shall be required at the rate of 1 space for every 5 units</p>
Rest Homes	One for every five people the facility is licensed to accommodate, plus one for every two employees
Restaurants, Cafes and Other Eating Establishments	One space for every three seats
Retail Sales (Shops), excluding comprehensively designed shopping centres, supermarkets and Business 4, 5 and 6 zones.	<p>Takapuna (Bus 3 zone) - 1:35m² gross floor area</p> <p>Devonport (Bus 2 zone) - 1:25m² gross floor area</p> <p>All other areas - 1:20m² gross floor area</p> <p>In the Business 12 - Mixed Use A (Albany Village) zone:</p> <p>1:20m² gross floor area</p> <p>In the Business 12 - Mixed Use B (Bute Road) and C (Clyde Road/ Beach Front Lane) zones:</p> <p>1:30m² gross floor area</p>
Retirement Complexes	One per unit, plus one per four units (all other uses to be assessed separately)
Sale of Goods Including Produce (Made or Grown on Property)	Three for each property
Service Stations Service Garages	<p>5 + 1 space for every 50m² gross floor area of retail sales and display, plus 3 queuing spaces per car wash</p> <p>4 per workbay up to 7 work bays, then 3 per workbay</p>
Sports and Recreation Facilities	One for every four people the facility is designed to accommodate
Takeaway Food Bars	One for every 20m ² gross floor area

Table 12.1 Parking Standards	
Activity	Parking Spaces Required
Taverns	Up to 150 persons maximum occupancy: 1 per 10 persons accommodated 151 to 200 persons: 1 per 8 persons accommodated 201 to 250 persons: 1 per 5 persons accommodated More than 251 persons: 1 per 3 persons accommodated
Totaliser Agency Board Premises	One for every 35m ² gross floor area
Towing Services	One for every 200m ² of site area, plus one for every employee
Travellers' Accommodation (including Motels, Holiday Flats and major Tourist Lodges)	One for every accommodation unit, plus one for every two employees, plus one for 10m ² gross floor area of restaurant (bar area, beer garden and conference facilities to be separately addressed)
Veterinary Clinics	One for each practising room, plus one for every employee
Video Hire Outlet	One for every 16m ² gross floor area
Warehouses	Storage - one for every 100m ² gross floor area Trading - one for every 16m ² gross floor area of retail trading space, plus one for every 100m ² gross floor area of storage area (indoor and outdoor)
Wholesale and Showrooms (excluding sales to the general public)	One carpark for every 50m ² gross floor area
Yards for Caravans/Boats	Two spaces plus one for every 20 caravan or boats displayed

Albany Village - sites less than 1 ha:

Activity	Minimum Parking Requirement	Maximum Parking Requirement
Ground Floor	1 space per 30 sqm GFA	1 space per 20 sqm GFA
Office located above ground floor	1 space per 37 sqm GFA	1 space per 35 sqm GFA

Residential	1 space per 1 bedroom unit 1.5 spaces per 2 bedroom unit 2 spaces per 3 or more bedroom unit Plus 1 visitor space per 5 units	1 space per 1 bedroom unit 2 spaces per 2 or more bedroom unit Plus 1 visitor space per 5 units
Albany Village - sites of 1 ha or greater:		
Ground Floor	1 space per 30 sqm GFA	1 space per 20 sqm GFA
Office located above ground floor	1 space per 37 sqm GFA	1 space per 35 sqm GFA
Residential	0.8 space per 1 bedroom unit 1.1 spaces per 2 bedroom unit 1.6 spaces per 3 or more bedroom unit Plus 1 visitor space per 5 units	1 space per 1 bedroom unit 2 spaces per 2 or more bedroom unit Plus 1 visitor space per 5 units

Explanation and Reasons

New developments and new activities in existing buildings are required to provide adequate off-street parking to assist the efficient use of existing roads and reduce the visual impact of cars parked on the road. However, not all activities and developments will be able to, or need to provide the required parking when their particular attributes or location are taken into account. Such activities may use requirements set out in Centre Plans or, where no adverse impact can be shown, may seek through resource consent procedures to have the requirements for off-street parking waived in part or in whole. The parking standards set are based on an Auckland-wide joint Territorial Local Authorities Study which was concluded in March 1994.

Reasons for including parking standards in the Plan are the provision of adequate parking determined by the nature of site activity, which will ensure effects from the activity do not reduce the safety and efficiency of the roading system. Minimum standards also avoid individual activities externalising their parking demand onto public roads in an inequitable fashion.

12.4.2.2 Parking Standards - Business 11 Zone

The following parking standards shall apply where:

- i) An activity is established on a site; or
- ii) There is a change of activity; or
- iii) A building(s) is constructed or substantially reconstructed, altered or added to.

The parking space requirements in a) to d) below shall be rounded to the nearest whole number.

a) Business 11A Zone (Main Street) Parking Requirements

The following standards shall apply to sites that front Main Street or are located within 50 meters of the centre line of Main Street (refer Albany Centre Structure Plan appendix to the Plan maps):

Activity	Standard
Any activity located on the ground floor not listed below	Between 1 space per 20 to 22m ²
Any activity located above the ground floor not listed above	Between 1 space per 37 to 41 m ²
Supermarkets	<p>Between 1 space per every 16 to 18m² for the first 6,000 m² plus</p> <p>Between 1 space per every 20 to 22m² for the next 4,000 m² plus</p> <p>Between 1 space per every 22 to 25m² for the next 10,000 m² plus</p> <p>Between 1 space per every 26 to 28 m² for over 20,000m²</p>
Residential	<p>1 bedroom: 0.8 to 1 space</p> <p>2 bedroom: 1.1 to 1.5 spaces per unit</p> <p>3+ bedroom: 1.6 to 2 spaces per unit</p> <p>plus 1 space per 5 units for visitors</p>

b) Business 11A Zone (Non Main Street) and Business 11B Zone Parking Requirements

The following standards shall apply to sites in the Business 11A zone not covered above and to sites in the Business 11B zone:

Activity	Standard
Any activity located on the ground floor not listed below	Between 1 space per 22m ² and 1 space per 32 m ²
Any activity located above the ground floor not listed below	The minimum parking requirements are 10% lower than that required under Table 12.1 of the District Plan with a cap being 10% greater than that required under Table 12.1 of the District Plan
Office activities located above the ground floor	Between 1 space per 37m ² and 1 space per 41m ²

Medical service premises and health care centres located above the ground floor	Between 1 space per 20m ² and 1 space per 22m ²
Supermarkets	<p>Between 1 space per every 16 to 18 m² for the first 6,000 m² plus</p> <p>Between 1 space per every 20 to 22 m² for the next 4,000 m² plus</p> <p>Between 1 space per every 22 to 25 m² for the next 10,000 m² plus</p> <p>Between 1 space per every 26 to 28 m² for over 20,000m²</p>
Residential	<p>1 bedroom: between 0.8 and 1 space per unit</p> <p>2 bedrooms: between 1.1 and 1.5 spaces per unit</p> <p>3+ bedrooms: between 1.6 and 2 spaces per unit</p> <p>plus 1 space per 5 units for visitors</p>

c) Business 11C Zone Parking Requirements

The following standards shall apply to sites in the Business 11C zone.

Activity	Standard
Any activity located on the ground floor (except residential activities)	Between 1 space per 22m ² and 1 space per 32m ²
Any activity located above the ground floor (except residential activities)	The minimum parking requirements are 10% lower than that required under Table 12.1 of the District Plan with a cap being 10% greater than that required under Table 12.1 of the District Plan.
Residential	<p>Minimum requirement:</p> <p>1 bedroom: 1 space per unit</p> <p>2 bedrooms: 1.5 spaces per unit</p> <p>3+ bedrooms: 2 spaces per unit</p> <p>plus 1 space per 5 units for visitors</p>

d) Business 11D Zone Parking Requirements

For the Business 11D zone, the minimum parking requirements are 10% lower than that required under Section 12 of the District Plan with a cap being 10% greater than that required under Section 12 of the District Plan.

Control Flexibility

Reductions in the number of parking spaces required above are available by means of a Limited Discretionary activity application.

12.4.2.3 Parking Standards - Business Park 7A Zone at Smales Farm

The number of parking spaces provided in the Business Park 7A Zone at Smales Farm shall not exceed the following (excluding parking for Operation Mobility Cardholders):

- i) 1,936 car parks for the first 44,770m² gross floor area;
- ii) An additional 1 space per 31.8m² gross floor area for development between 44,770m² and 105,000m² gross floor area; and
- iii) An additional 1 space per 45.1m² gross floor area for development in excess of 105,000m² gross floor area up to a maximum of 5094 spaces.

Parking for Operation Mobility Cardholders shall be provided in accordance with Rule 12.4.2.1(c). This requirement is separate from and in addition to parking provided in accordance with the provisions set out in Rule 12.4.2.3.

Control Flexibility

An increase to the maximum number of parking spaces of up to 10% of the maximum set out in Rule 12.4.2.3(ii) is available by means of a Limited Discretionary activity application provided that this control flexibility shall not apply once the total number of car parks in the Business 7A Zone at Smales Farm reaches 3,830 (excluding parking for Operation Mobility Cardholders).

12.4.2.3A Parking Standards - Residential 8 Zone

The following parking standards shall apply where:

- i) An activity is established on a site; or
- ii) There is a change of activity; or
- iii) A building(s) is constructed, substantially reconstructed, altered or added to.

Activity	Parking Spaces Required
Commercial parking requirements for ground floor	Between 1:40m ² and 1:20m ²
Commercial parking requirements above ground floor	Between 1:50m ² and 1:35m ²

Residential	<p>Studio/1 bedroom: between 0.8 and 1 space per unit.</p> <p>2 bedrooms: between 1 and 1.5 spaces per unit.</p> <p>3+ bedrooms: between 1.5 and 2 spaces per unit.</p> <p>Visitor parking - 1 space per 5 units.</p> <p>Bicycle parking for residents - 1 stand per unit.</p> <p>The above parking spaces are not required to be allocated to specific units.</p>
-------------	--

12.4.2.4 Loading Space Standards

The loading space standards set out in **Table 12.2** shall apply in all zones and shall be in addition to the parking space requirements of **Table 12.1** and Sections 12.4.2.2 and 12.4.2.3.

Except that:

The number of loading spaces required for residential activities within business zones shall be such as the Council considers to be reasonable and practicable in the circumstances.

Where large bins or skips are used for refuse disposal, sufficient space shall be available to ensure that any truck operations while loading or unloading refuse shall take place entirely on site.

When assessing schools' requirements, the number and design specifications of loading spaces for all public transport vehicles including school buses shall be determined by way of a traffic report. The Council reserves the right to accept or reject the traffic report's findings.

Service stations shall be excluded from the loading space requirements of **Table 12.2**, but instead shall indicate on the site plan the unloading position(s) of any fuel tankers. Any unloading position shown shall be of adequate dimensions to fully accommodate a fuel tanker within the site, shall not restrict the safe and efficient ingress and egress of all other vehicles, and shall be positioned so as to allow for the tanker to enter and leave the site in a forward direction and manoeuvre on site in accordance with all controls under the Plan

Table 12.2 Loading Space Standards	
Gross Floor Area of Use	Number of Loading Spaces Required
i) Retail, Wholesale, Manufacturing, Servicing and Other Goods Handling Activities	
0 - 5,000m ²	1
5,001 - 10,000m ²	2
Over 10,000m ²	3, plus one space for each 7,500m ² in excess of 10,000m ²

Table 12.2 Loading Space Standards	
ii) Offices and Other Non-Goods Handling Activities	
0 - 20,000m ²	1
20,001 - 50,000m ²	2
Over 50,000m ²	3, plus one space for each 40,000m ² in excess of 50,000m ²
Number of Pupils	Number of Car Loading Spaces Required
iii) Intermediate, Primary and Pre-Schools	
Under 20 pupils	1
21 - 50 pupils	2
Over 50 pupils	3

Control Flexibility

An alternative arrangement to the requirements of Table 12.2 may be permitted, by means of a Limited Discretionary activity application.

Explanation and Reasons

Loading space controls reduce the occurrence of loading activity on public roads, service lanes or accessways. Reasons for including loading space controls are that such activity can pose safety risks and interfere with the flow of traffic. Experience has shown that without such controls there is high probability of cumulative problems due to insufficient provision of loading spaces.

12.4.2.5 Compliance with Parking or Loading Space Standards

The compliance of any activity in any zone with parking space standards shall be on the following basis:

a) Fractional Spaces

When the calculation to assess parking space requirements results in a fraction, if the fraction is less than one half it shall be disregarded, if half or more then one whole additional parking space shall be required.

b) Multiple Activities to be Assessed Separately

Where a site or building contains more than one use, then the required parking shall be determined on the following basis:

- i) The parking requirement for each activity shall be determined separately where the gross floor area used by a single activity exceeds 10% of the total gross floor area. In order for different parking standards to be applied, it must be demonstrated that the different activities are separated by permanent partitions.
- ii) Where the gross floor area of any ancillary activity occupies less than 10% of the total gross floor area, the ancillary activity shall be assessed as part of the main use.

Control Flexibility

Reductions in the number of parking spaces required under Rule 12.4.2.5(b) in conjunction with Table 12.1 may be applied for by way of a Limited Discretionary activity application. Refer to the Assessment Criteria in Section 12.5.1.2(a).

c) **Parking Inside Buildings**

The area of any permanent parking spaces, associated access and cycle storage facilities within a building shall be excluded from the gross floor area of that building for the purpose of assessing the total number of spaces required. Spaces shall be clearly defined and shall be used only for parking at all times. The dimensions and area of any pillars and other structures that may restrict parking space, or inhibit access and manoeuvring (see [Section 12.4.2.6](#), c) iii) and d), iii) will be taken into account when assessing parking and loading space areas, access and dimensions.

Explanation and Reasons

Rules on assessment of spaces ensure that adequate parking is provided on sites when the particular site characteristics are taken into account. The reason for including this rule is to avoid substandard or insufficient parking provision. Control flexibility is provided for the parking requirements for a site or building containing multiple activities because the various activities may generate peak levels of traffic at different times of the day, there may be different occupancy rates, there may be variations in the duration of stay and so on. The applicant will have the opportunity to demonstrate that some degree of shared parking provision between the various activities is appropriate. If shared parking is considered acceptable, then the number of parking spaces required may be considerably lower than the number that would be required if each of the individual activities were assessed separately and then added together.

12.4.2.6 Design of Parking and Loading Spaces

Specification and design of parking and loading spaces, except as specified below in Council standards and elsewhere in this Plan, is to be based on the Austroads Guide to Traffic Engineering Practice, Volume 11, Parking.

a) Location and Access

All off-street parking shall be located on the same site as the activity to which it relates, unless an alternative parking arrangement is consented to. Associated parking shall be available at all times and shall have adequate useable access to that activity or building. Each loading space shall adjoin an adequate area for goods handling and shall be convenient to any service area or service lift.

b) Access

- i) Every parking or loading space shall be provided with such access driveways and aisles as are necessary for movement of vehicles to and from the road and for the manoeuvring of vehicles within the site except as provided for under [Rule 12.4.2.7](#), a).
- ii) Any motor vehicle occupying a parking or loading space must have ready access to a street at all times without requiring the movement of any vehicle occupying another parking or loading space.

c) Parking Space Dimensions

- i) Every car parking space, access, and manoeuvring area shall have dimensions that comply with the table contained in [Appendix 12A](#) and shall accommodate the 90 percentile car tracking curve contained in [Appendix 12B](#).
- ii) Except where otherwise specified in [Appendix 12A](#) to this Section, every parking space shall have a minimum width of 2.5 metres and a length of not less than 5.2 metres exclusive of access drives, manoeuvring areas and aisles.
- iii) Parking plans accompanying applications must show the locations and dimensions of any pillars and/or other structures that may restrict parking space, or inhibit access and manoeuvring and show clearances from parking spaces and vehicle tracking curves to those pillars and/or other structures.

d) Loading Space Dimensions

- i) Every loading space shall be in a useable location on the site.
- ii) Every loading space shall have a width of not less than 4 metres, a height of not less than 4.25 metres and a minimum depth as follows:

- Depots and warehouses, not less than 9 metres
 - All other uses, not less than 8 metres
 - Provided that in all cases where articulated vehicles are used or are intended to be used in conjunction with the site, loading spaces shall be not less than 11 metres.
- iii) Loading space plans accompanying applications must show locations and dimensions of any pillars and other structures that may restrict manoeuvring or inhibit access to the loading space.
- e) Forming and Sealing of Access and Parking**
- i) Except in respect of parking spaces in (ii) below, parking spaces for all other uses and all loading spaces shall be formed, finished with an all-weather dust-free surface, and drained to the satisfaction of the Council.
- ii) In any Recreation, Urban Expansion zone or Rural zone, groups of four or more parking spaces shall be formed, finished with an all-weather, dust-free surface and drained to the satisfaction of the Council.
- iii) Where any group of six or more spaces is required to be so formed and surfaced, the spaces shall be permanently marked out.
- iv) Any carriageway serving a Business zone, or Special Purpose zone or serving any group of four or more parking spaces within an urban residential zone, shall be formed, finished with an all-weather dust-free surface, and drained to the satisfaction of the Council.

f) Screening of Parking Spaces

Where a site falls within the Business zone buffer strip, parking facilities shall be screened from adjacent sites and landscaped in accordance with the Business [Rule 15.6.2.8](#).

g) Kerbing

All parking and manoeuvring areas located outside buildings that are to be used by the public and which are located closer than 1.2 metres to any boundary shall be provided with wheel stops or similar barriers not less than 0.15 metres in height. The purpose of such barriers being to ensure that vehicles using such areas do not cross or overhang any boundary lines or cause damage to any boundary walls, fences and planting. No such kerb or barrier shall be located closer than 0.6 metres to the boundary.

Control Flexibility

An alternative arrangement to the requirement of [Rule 12.4.2.6 a\)](#) to e) and g) may be permitted, by means of a Limited Discretionary activity application.

Explanation and Reasons

Controls on design of parking and loading spaces ensure that development is practical, useable and takes account of potential impacts on adjacent sites.

The main reasons for including rules is that without them there is a high probability that insufficient attention will be given to design of site parking and loading.

12.4.2.7 Access to Parking and Loading Spaces

Specification and design of access to parking and loading areas, except as specified below and elsewhere in this Plan, is to be based on the Austroads Guide to Traffic Engineering Practice, Volume 11, Parking.

a) General Controls

- i) All carriageways, parking spaces and manoeuvring areas shall be kept clear at all times for the use of vehicles and shall not be used for the storage or off-loading of goods, articles or materials, or for any other purposes.
- ii) Stacked Parking:

- Stacked parking may be Permitted for vehicles being serviced at vehicle repair premises and similar uses subject to a non-notified application
 - Stacked parking may be allowed for the two parking spaces required for each unit in any residential development, provided that one of the car parks has access to a road at all times without having to move any other vehicle from a parking space.
- b) Design of Access
- i) In determining the extent of area required for manoeuvring space, the 90 percentile car and truck tracking curves shall be used as shown in [Appendix 12B](#) to [Appendix 12E](#). In the case of a site containing only one residential unit, the entrance strip shall have a minimum width of 3 metres.
 - ii) Any loading space shall be provided with a carriageway designed to accommodate vehicle tracking curves as follows:
 - For schools; the 90 percentile car tracking curve
 - For shops, offices, manufacturing premises, warehouses; the 90 percentile truck tracking curve
 - For yards and depots; the truck and trailer tracking curve
 - For service stations; the articulated truck tracking curve.
 - iii) The tracking curves shall be as specified in [Appendix 12B](#) to [Appendix 12E](#).
- c) Gradients
- i) The surface of a carriageway to any required parking space for residential use shall not exceed a gradient of 1:5 in any part.
 - ii) The surface of any required car parking spaces for residential use shall not exceed a gradient of 1:15 in any part.
 - iii) The surface of any required car parking spaces for public use shall not exceed a gradient of 1:20 in any part.
 - iv) The surface of any access drives and aisles necessary for movement of vehicles to and from the road and for the manoeuvring of vehicles within any non-residential site shall not exceed a gradient of 1:8 in any part.
- d) Manoeuvring
- i) In the Business 6, 7, 8, 9 and 10 zones, parking and loading spaces shall be arranged so that no reverse manoeuvring onto the road or footpath is required. No reverse manoeuvre in excess of 30 metres shall be permitted.
 - ii) In all other zones, manoeuvring areas for parking spaces shall be provided so that no reverse manoeuvring on a road or footpath is required, provided that this shall not apply to land zoned Rural, Urban Expansion or Residential zones in the following situation:
 - The site is a front or corner site; and
 - The site does not have access to an arterial road shown on Appendix 1 to the District Plan Maps; and
 - There are not more than four parking spaces on the site; and
 - The site does not gain access from any road at a point where visibility at the road is considered by the Council to be limited; and
 - A reverse manoeuvre of not more than 50 metres is required.

Control Flexibility

An alternative arrangement to the requirements of [Rule 12.4.2.7](#) may be permitted, by means of a Limited Discretionary activity application.

Explanation and Reasons

Rules on access to parking and loading spaces are applied to ensure that any activity occurring on a site can be accommodated by the site layout and will not adversely affect the safety or efficiency of the public road system.

Reasons for inclusion of rules on access is that without them there is a probability that adequate access provisions are unlikely to be made.

12.4.2.8 Vehicle Crossings

Vehicle crossings shall meet the following requirements:

a) Numbers of Crossings

In all zones vehicle crossings, including those over footpaths and/or channels, shall comply with the following requirements:

The maximum number of crossings and the maximum width of each crossing at the boundary of the site shall be determined as follows:

Table 12.3 Vehicle Crossing Standards				
i) For sites in all zones except Business zones and infill subdivision and development in Residential zones				
Street Frontage	No. of Residential Units	Maximum No. of Crossings	Maximum Width of Each Crossing at Site Boundary	Minimum Width
Less than 18 metres	Less than 6	1	3.5 metres	2.75 metres
	More than 6	1	5.5 metres	2.75 metres
18 metres or more		2	A total of 5.5 metres and if 2 crossings are established they must be located at least 9.5 metres apart	2.75 metres
For sites created by infill subdivision and or development in Residential zones, any new vehicle crossing(s), in addition to those that currently exist, shall be limited discretionary activity. Discretion shall be limited to the number, width and location of crossings. The assessment criteria in 12.5.1.2(d) shall apply. Except that this rule shall not apply where a front site is subdivided into two front sites or a through site is subdivided to create two front sites.				
ii) For sites in Business zones				
Street Frontage	Maximum No. of Crossings		Maximum Width of Each Crossing at Site Boundary	Minimum Width
Less than 20 metres	1		7.5 metres	2.75 metres
20 metres or more	either 2		6 metres	2.75 metres

Table 12.3 Vehicle Crossing Standards			
	or 1 combined crossing	9 metres	2.75 metres
iii) Except that no vehicle access will be allowed to any street frontage specified as a no vehicle access frontage in Appendix 7 of the planning maps.			
Table 12.4 Vehicle Crossing Standards Mixed Use Overlay Area			
iv) For each contiguous area of Mixed Use Zone:			
Street Frontage	Maximum No of Crossings	Maximum Width of Each Crossing at Site Boundary	Minimum Width
Key Route	1	5.5 metres	2.75 metres
Intersecting Street	2	5.5 metres	2.75 metres

Control Flexibility

An alternative arrangement to any of the requirements of [Rule 12.4.2.8\(a\)](#) may be permitted, by means of a Limited Discretionary activity application.

b) Required Distance from Intersection Corners

Where a site is located on an intersection corner, any vehicle crossing shall be located adjacent to the side boundary furthest from the intersection, so that no part of the crossing is more than 6 metres from the boundary. Provided that where a vehicle crossing complies with the requirements below, the vehicle crossing may be placed further than 6 metres from the boundary:

- i) The minimum separation distance of crossings from intersections shall be:
 - For a crossing providing for left turns only:
 - 25 metres on any arterial frontage
 - 15 metres on any collector or local road frontage.
 - For a driveway providing for any right turns:
 - 30 metres on any arterial frontage
 - 25 metres on any collector or local road frontage.

Control Flexibility

An alternative arrangement for the positioning of a vehicle crossing near an intersection or corner may be permitted by means of a Limited Discretionary activity application.

c) Removal of Redundant Crossing

Where the location of a site's vehicle crossing is altered at the request of the owner or occupier, any vehicle crossing no longer required shall be removed and the land reinstated either as footpath or grass berm. The altered crossing(s) shall comply with the above provisions on location, size and number of crossings. This restoration work shall be done at the expense of the owner or occupier.

Explanation and Reasons

The purpose of vehicle crossing rules is to protect the safety of road users and pedestrians and to promote the efficient functioning of the road network.

The reason for the inclusion of rules on vehicle crossings is that without them there is a high probability that inadequate and unsafe crossing provision will be made.

12.4.2.9 Access Requirements for Drive Through Activities

Any drive-through activity shall comply with the following:

a) Minimum sight distances for any access points shall be:

85 Percentile Speed (kph)	MINIMUM SIGHT DISTANCE (metres)	
	Frontage Road Classification	
	Local	Collector/Arterial
40	30	70
50	40	90
60	55	115
70	85	140
80	105	175
90	130	210
100	160	250
110	190	290
120	230	330

For crossings providing for right turns, visibility along the road shall be measured from a point 1.15 metres above the roadway in the middle of each approach lane opposite each proposed entrance, in both directions, to points 1.15 metres above the roadway at the centre of the appropriate lane. Visibility for exiting traffic shall be measured from a point 1.15 metres above each proposed exit, 5 metres from the centre of the lane nearest the driveway, to points 1.15 metres above the roadway in the middle of each approach lane.

Crossing widths and operation requirements for service stations shall be:

	Minimum (metres)	Maximum (metres)
One way crossings (with no tanker movements)	3.5	6.0
One way crossings (with tanker movements)	4.5	9.0
Two way crossings	6.0	9.0

b) Manoeuvring Space for Tankers

In the case of activities serviced by tankers or similar heavy vehicles, tanker paths through the site shall comply with the articulated truck tracking curve as specified in [Appendix 12E](#).

Explanation and Reasons

Drive-through activities such as service stations and fast-food premises create significant traffic movements to and from the site. This can affect the safety and efficiency of the adjacent traffic network.

Reasons for rules on such activities are to achieve traffic safety and efficient road network functioning through appropriate setbacks from intersections, adequate sight distances, crossing widths and heavy vehicle manoeuvring provision.

12.4.2.10 Building Line Restrictions

Any site affected by a building line will be subject to the following restrictions:

- a) No building or part of a building will be permitted to be erected or substantially reconstructed if the building or any part of it is to be located between the front site boundary and the building line specified.
- b) Any car parking permitted to be located between the front site boundary and the building line specified shall be supplementary to the site's minimum car parking requirements.
- c) All yards shall be measured from the building line as if it were a front boundary.

Explanation and Reasons

Building line restrictions allow Council to protect land required for future road improvements including bus priority lanes and other facilities for priority vehicles to bypass traffic congestion.

12.4.2.11 Cyclist, Pedestrian and Passenger Transport Facilities

The design of all facilities for cyclists, pedestrians and passenger transport shall comply with this Rule and the more detailed specification in Austroads Guide to Traffic Engineering Practice, Volumes 13, Pedestrians and 14, Bicycles.

a) Provision of Cycle and Pedestrian Lane Facilities

- i) Any Plan of Subdivision required by [Rule 9.4.7.1](#) shall include the following:
 - A design outlining locations of routes of major pedestrian and cycle routes which link destinations
 - Detailed designs of major routes and of minor linkages to existing and proposed roading infrastructure and destinations.

b) Provision of Facilities for Cyclists

- i) Where lockup areas are provided for bicycles, every bicycle park shall:
 - Enable both wheels and the frame to be secured to the parking stand
 - Be placed in a visible location on the site
 - Not be a hazard to pedestrians
 - Where more than one stand is to be erected, the stands shall be arranged so that a bicycle may be parked and removed without damaging any other bicycles.

c) Passenger Transport Facilities

- i) Any Plan of Subdivision shall include the following:
 - A design structured so that viable passenger transport routes are included in the layout of roadways and of pedestrian access to those routes from adjacent streets and cul-de-sacs
 - Potential locations of passenger transport infrastructure items such as bus stops and shelters shall be specified on subdivision plans to avoid later conflicts with property owners who may not want such items located adjacent to their property.

d) Provision for Ferry Services

When any development within the Coastal Area is undertaken, consideration shall be given to the potential for the supply of passenger commuter ferry services from the development. If there is a potential catchment for such a service (the Council retains the right to finally determine such potential), the facility shall be designed to allow for the future berthing of and pedestrian access to such ferries.

Explanation and Reasons

Reasons for including provisions for cyclists, pedestrians and passenger transport users is in order to encourage the use of these environmentally friendly transport modes.

In existing urban areas it can be difficult and costly to redevelop the roads and footpaths to make better provisions for cyclists and pedestrians. Consequently, it has been necessary to identify priority areas for upgrading which reflects available funding. The North Shore City Council pedestrian and cyclist strategy outlined areas where facilities were most required. Provisions for these modes at the subdivision design stage is the most efficient and cost effective means of achieving them.

12.4.2.12 Transport of Hazardous Materials

Any movement or carriage of hazardous goods, materials or waste shall at all times be carried out with strict adherence to all appropriate legislation, regulations, rules or any other guidelines as required by the Land Transport Safety Authority or any other such body or controlling authority responsible for public welfare or safety. Any best practice guidelines or recommendations published or promulgated by industry groups must also be adhered to.

Explanation and Reasons

The carriage of hazardous materials within the city at any time or in any place carries with it the same risk of accident that is accepted by any other road user. However, the potential consequences of an incident involving a vehicle carrying hazardous materials for the health and safety and economic well-being of the people and community of North Shore City and the natural environment are significant. By requiring that such activity take place under the control of the relevant legislative controls and adherence to best practice, the potential adverse effects of such an event can be avoided, remedied or mitigated as appropriate.

12.4.3 Roding Hierarchy

12.4.3.1 General

- a) The Roding Hierarchy shall consist of the roads identified and classified in Appendix 1 of the District Plan maps.

Explanation and Reasons

The integrated resource management of the city requires that decision making on the capacity and safety of the various parts of the roding network be co-ordinated with the nature and intensity of activities having access to it.

The roding hierarchy has been developed to assist in determining the suitability of land use activities in various localities and standards of vehicle access for sites, and to ensure appropriate environmental outcomes.

The characteristics of the roding hierarchy are as follows:

a) National Routes (Motorways and State Highways)

National routes form part of a network of strategic importance, significant in the national economy. As their purpose is to carry large volumes of through traffic, a continuous high level of user service must be maintained.

Motorways are fully access controlled by grade- separations and ramp connections. No direct vehicle access to adjacent property is permitted. The Northern Motorway functions as the central spine for the North Shore to Auckland via the Auckland Harbour Bridge, and also to the Hibiscus Coast and Northland.

State highways serve a similar function to motorways but allow greater access from adjoining properties. State highways typically have intersections at-grade, with some major intersections controlled by traffic signals to reduce the adverse effects of peripheral developments. "Limited Access Roads" (LAR) have been declared over some sections of State Highways under direction from Transit New Zealand.

Examples of this category of road in North Shore City are: that section of State Highway 1 from north of the Greville Road intersection to the Albany township and beyond to the northern City limits; Upper Harbour Drive (now State Highway 18) connecting North Shore City with West Auckland and a short section of the Albany Highway.

Transit New Zealand has designated and purchased land for a re-alignment and extension of the Northern Motorway between the intersection of State Highway 1 and Greville Road and the vicinity of Hatfields Beach.

b) Primary (Regional) Arterials

Primary arterials serve an arterial function of strategic importance between regions or within districts. These roads generally provide access to significant areas of population and provide significant inter-urban links. Access to and from properties is allowed but may be restricted. Additionally:

- i) Residential development intensities are controlled on properties with frontage to primary arterials through the zoning framework and associated rules.
- ii) Activities which are high generators of traffic and which propose to establish or to expand along arterial roads will have their effects managed under this Plan.
- iii) Any development on Primary roads will be assessed to ensure satisfactory vehicle access and/or road widening requirements to accommodate vehicle turning movements at or near major intersections.
- iv) On-street parking may be prohibited during peak traffic flows along arterial routes.

Examples of this category of road in North Shore City are: Glenfield Road, Onewa Road, East Coast Road, Wairau Road, Taharoto Road and Lake Road in the existing urban areas; and Constellation Drive and Albany Highway in the developing areas.

c) Secondary (District) Arterials

These are roads catering primarily for traffic movement between major areas of the city and are of strategic importance, a function partly shared with primary arterials. Secondary arterials are an essential element to sustain general travel in the city and an appropriate level of user service needs to be provided. Roads assigned to this category would include important links between residential, business, or recreational land use activities, therefore:

- i) Certain land use activities with high traffic generation characteristics are restricted by means of the zoning framework and associated rules in the Plan on the secondary arterial network in locations where capacity constraints and level of user service may be compromised.
- ii) On-street parking may be prohibited during peak flows along secondary arterial routes.

Kitchener Road, Hurstmere Road, Chivalry Road, Archers Road and Sunnybrae Road in the existing urban areas and William Pickering Drive and Rosedale Road in the developing areas are examples of secondary arterials on the North Shore.

d) Collector Routes

- i) Collector Routes are locally preferred routes between or within areas of population or activities, and they complement arterial routes. Their primary purposes are to provide for local traffic movement, for access to abutting property and movement between local roads and roads of higher classification. Two types of collector roads are currently found on the North Shore: these are residential and industrial

- ii) *Residential roads - examples include Sycamore Drive, Williamson Avenue and Nile Road*
- iii) *Industrial roads - examples include Porana Road, Hillside Road and Tawa Drive.*

e) Local Roads

The category of local roads has been, or will be, assigned to all other roads not included in the categories above. Local roads are developed to standards appropriate for the traffic use and for servicing the land use activities. These roads generally provide access to local streets and individual properties and have limited through traffic function. In sympathy with the prevailing land uses it is desirable to keep through or extraneous traffic flows on local roads to a minimum. In some situations this can be achieved by the use of measures such as Local Area Traffic Management (LATM) or traffic calming. LATM measures will only be undertaken where the following apply: the works are co-ordinated with the Council's overall work priorities; there is an identified problem; there has been full consultation with affected parties; and there is no conflict with passenger transport needs.

When regarding facility specification and design for new and existing roads, except where specified in Council policies for LATM, the Austroads guide to Traffic Engineering Practice, Volume 10, Local Area Traffic Management, will be adhered to.

The reasons for including a roading hierarchy are that the main impacts on safety and efficiency arise from the conflict between access to land and the movement of traffic. Because of this conflict, access on to corridors such as primary arterials by high vehicle generating activities need to be limited, and through traffic needs to be deterred from using local roads, the primary purpose of which is to provide access to land uses.

12.4.3.2 Specific Rules for Classified Roads

a) National Routes

- i) No activity shall have access onto any motorway.
- ii) Any activity gaining access from a limited access road shall comply with *Transit New Zealand Guidelines* for access requirements. Where a proposed activity requires access to a limited access road, the applicant is advised to seek a crossing licence in written form from Transit New Zealand prior to any consent application to the Council.

Explanation and Reasons

It is important to minimise the conflict between access and movement along roads which have a through travel function. Rules based on the roading hierarchy classification safeguard the safety of road users and the efficiency of the network.

Rules on access and development for each classification of roads are needed to ensure adequate provisions may be made for accessing the roading network safely.

12.4.3.3 Minimum Road and Service Lane Widths

- a) Where any new road is proposed, except where specified in the Council's Corporate Design Manual (which is available on request), the minimum width and construction of the road shall comply with the *New Zealand Standard 4404:1981*.
- b) The minimum width of any service lane shall be 3.7 metres.
- c) Road berms shall be wide enough to allow for the future planting of trees and vegetation as well as the provision of services.

Control Flexibility

A reduction in the width of a road or service lane may be consented to subject to an application for a Limited Discretionary activity application and provided that adequate provision for the installation, maintenance and repair of network utilities can be made, where required, in the narrower service lane.

Explanation and Reasons

It is important to ensure that road and service lane widths are adequate to fulfil their functions. Minimum widths for roads and service lanes are identified. However, where a road or service lane is to provide for a less intense use a lesser width may, be allowed. An example of this is the Clarence Street to Fleet Street service lane which has been developed to provide a pedestrian rather than vehicular scale in order to enhance the amenity of the area. Rules are included to ensure that the functions of a road or service lane are not limited by the width provided. It should also be noted that notwithstanding any consent gained for a reduced width of service lane, the Council may exercise the powers given to it by Section 325 of the Local Government Act 1974 to require land for service lane purposes on the redevelopment of any property.

12.5 Assessment Criteria

12.5.1 Assessment Criteria for Limited Discretionary Applications

12.5.1.1 General Assessment Criteria for Control Flexibility

Where any Permitted or Controlled activity fails to comply with any control specified in [Section 12.4](#), the Council may consent to the activity as a Limited Discretionary activity, where it is satisfied that all the following criteria are met:

- a) The Rule provides for Control Flexibility, and the activity falls within the limits specified under the heading Control Flexibility, or where no limits are specified, the effects will be minor, having regard to the stated Explanation of the control; and
- b) Any adverse effects of the activity can be avoided, remedied or mitigated through the imposition of conditions; and
- c) Either

The proposal meets the intent of the control as contained in its associated Explanation;

Or

It is unreasonable or impractical to enforce the control, and one or more of the site characteristics specified in [Section 3.10.6](#) and the criteria listed in [Section 12.5.1.2](#) shall apply.

12.5.1.2 Additional Assessment Criteria for Control Flexibility

a) Reduction in Parking Spaces: General

Where the proposal fails to comply with the parking and loading space standards in [Rule 12.4.2.1](#) to [Rule 12.4.2.2](#), an application for consent to provide fewer or no spaces will be considered. This will be assessed against the following:

- Whether the site is located within the Business 11 zone and a traffic report prepared by a suitably qualified person demonstrates that the specific proposal for retail activity with a floor area greater than 500 m² will generate a lower parking demand than the District Plan standard.
- Whether the required parking on the site can be practicably provided with regard to the existing location of buildings, availability of access to the road and other similar matters
- Whether there is an alternative adequate supply of parking in the vicinity. Possible alternatives include public car parks and formed angle parking on adjacent roads. On street parallel parking, particularly in residential roads, is not normally considered a viable alternative, and such parking cannot be reserved specifically for any one activity
- Where two adjacent sites, or activities on the same site (e.g. in a shopping centre), have uses at different, non-conflicting times of the day or week, or

where there is another site or activity in the immediate vicinity that has parking spaces which are not required at the same time as the proposed activity, or the cumulative parking demand can be shown to be less than the sum of the individual parking requirements, the minimum parking requirement can be shared or assessed together. For example, the proposed activity operates outside of normal business hours and the other activity only operates during normal business hours. In such situations where activities are on different sites, the Council will require a legal agreement between the applicant and owner of the site confirming such an arrangement

- Whether a demonstrably lower than normal incidence of parking will be generated by the proposal, e.g. due to specific business practice, operating method or type of customer
 - Whether the applicant can demonstrate that a significant number of the customers or users of the proposed activity are transported to the site by bus or van. The substitution of sheltered bus stops or bus parking spaces for a number of car parking spaces may be accepted where this travel occurs. Such bus parking spaces are to be of a standard acceptable to the Council
 - Whether the site is located in a Residential zone (including the Long Bay 1-4 zones), Coastal Conservation Area, Business Policy Overlay B1, or on a Heritage site and the provision of full car parking would detrimentally affect the specific character and features of the area or site
 - Whether the site is located within a Business zone (including the Long Bay 5 zones) or centre where there is a separate rating area for parking purposes and a specific site has been identified for a public car park
 - Whether the site is located within a Business zone (including the Long Bay 5 zones) or centre where a site has been designated for purchase and development as a public car park area
 - Whether a significant adverse effect on the character and amenity of the surrounding area will occur as a result of providing the required parking spaces
 - Where a parking provision has already been made in respect of the site, whether by on-site parking areas, previous cash-in-lieu payments or a special rating mechanism, such provision may be taken into account in assessing the parking requirement
 - Whether any Council-adopted Centre Plan, affecting the site, varies the car parking requirement.
- b) Increase in Parking Spaces in the Business Park 7A zone at Smales Farm as set out in Rule 12.4.2.3(ii)

When additional parking is sought under control flexibility as provided for in Rule 12.4.2.3(ii) the proposal for additional parking will be assessed against the following criteria:

- Whether additional parking is required as a short term measure associated with construction activity or with the establishment of a new tenant (with a travel plan to be developed and implemented so that the parking demand generated by that tenant is reduced over time);
- Whether the frequency of, and areas served by, public transport services at the Smales Farm Bus Station are at a level that satisfactorily addresses demand from those working in buildings within the Business Park 7A zone at Smales Farm;
- Whether the average floorspace occupied per office employee within the Business Park 7A zone at Smales Farm is less than the average for office activity in similar centres in North Shore City; and
- Whether a Travel Demand Management Plan that encourages employees to use travel modes other than private motor vehicle is being actively managed on an ongoing basis by the manager of the Smales Farm Technology Office Park.

c) Reduction in Parking Spaces for Cyclist Facilities

The Council may approve a reduction in the number of required parking spaces where an applicant can show that cycle facilities are needed and will be utilised, and an application complies with the following:

- For a reduction of 1 parking space for every 20 spaces required the applicant should supply fully enclosed, secure, storage facilities for at least 10 bicycles.

d) Reduction of Parking Spaces for Pedestrian Facilities

In respect of Part Allotment 21 Section 2 DP 20347, the Council shall approve a reduction of 12 parking spaces from the number of parking spaces required where the applicant can show on redevelopment of the land that a pedestrian accessway has been approved which satisfies the following standards:

- i) The minimum width of the accessway shall be 2.4 metres;
- ii) The accessway shall have a minimum height of 2.7 metres;
- iii) The total length of the accessway must not exceed 70 metres;
- iv) The accessway must be well lit; and
- v) The accessway must be open at all times to allow the public pedestrian access through the site.

e) Number and Widths of Crossings and Proximity of Crossings to Intersections

An application to provide an alternative arrangement for a vehicle crossing will be assessed against the following:

- The need for an increase in the width of any crossing or the number of crossings to be provided, based on the configuration of the site, and the access requirements of the activity concerned
- The safe ingress and egress of vehicles to the site and the safe movement of vehicles on the adjoining road network
- The cumulative effect of additional vehicle crossing(s) on traffic, cyclist and pedestrian safety
- The extent to which other users of the road reserve, including pedestrians, will be adversely affected
- The practicalities of sharing the use of an existing vehicle crossing(s)
- The number of on-street parking spaces that are lost as a result of the additional vehicle crossing.
- The loss of grass berm space and opportunity for street trees and the effects on stormwater management and the amenity of the street

f) Reductions in Road and Service Lane Widths

The Council may approve a reduction in the required width of a road or service lane where an application complies with the following requirements:

- The design of any road and the elements within it shall reflect the intended function of the road in the road hierarchy and be designed to promote safe and efficient functioning; in particular:
 - i) The width of the legal road must be sufficient to cater for all its functions including the safe and efficient movement of vehicles and people, provision for parked vehicles, provision of utility services, landscaping and the provision of footpaths.
 - ii) The carriageway shall be designed to allow unobstructed access to individual sites, safe passing of cyclists, and safe manoeuvring and movement of vehicles.
- The width of a service lane may be reduced to a minimum of 2.8 metres where an applicant can show that the reduction in width will not limit the functioning and safety of any service access.

g) Design of Parking and Loading Spaces

An application to provide an alternative design of parking and loading spaces or a lesser number of loading spaces will be assessed against the following:

- The general assessment criteria listed in [Section 12.5.1](#). The extent to which users of the site will be adversely affected
- The ability of vehicles to manoeuvre on-site without undue difficulty
- The ability of the parking and loading spaces provided should be adequate to serve existing and future users of the site
- The safe and easy movement of vehicles on the site.

h) Reduction in the Standard of Gradients

An application to provide a lesser standard of gradients for carriageways, parking spaces and manoeuvring areas will be assessed against the following:

- Compliance with NZS4121 for any required operations mobility car spaces, and associated access
- The ability of vehicles to manoeuvre safely on-site without undue difficulty in any weather
- The ability of the carriageways, parking spaces and manoeuvring areas to serve existing and future users of the site
- That portion of residential carriageway which will be in excess of 1:5 is short in length, within a straight section of carriageway, and will not in any way preclude the safe passage of vehicles in any weather
- The extent to which vehicles entering or exiting the site are able to see pedestrians, cyclists and other vehicles on the carriageway and roadway
- The ability to cater for pedestrians and cyclists on the carriageway
- The ability of the surface treatment to provide adequate traction at all times.

12.5.1.3 Assessment Criteria for Limited Discretionary Activities

Where any Permitted or Controlled activity is specified as a Limited Discretionary activity in [Section 12.4.1.2](#), the Council may give consent to the activity as a Limited Discretionary activity, where it is satisfied that all the following criteria are met.

a) Traffic Considerations

- The accessibility of the site, including ingress to and egress from the site, and the ability to gain access to buildings, activities and parking areas within the site for both pedestrians and vehicles. Specific criteria, for vehicles and pedestrians, are:

a) Vehicle access

- The design of the access and circulation provisions for a development should allow for the safe and efficient movement of vehicles and pedestrians onto, within and off the site. Design aspects include, gradients of all paved areas, building location, internal intersection design, pedestrian facilities and parking adequacy.
- Vehicle access design should ensure that:
 - Vehicles waiting to enter the site from the street do not unduly impede through traffic
 - Conflict between vehicle access and existing or potential major pedestrian movements is minimised. Where necessary adequate control mechanisms should be developed to ensure pedestrian safety
 - Access points are sufficiently remote from intersections and corners to ensure adequate sight distances and to minimise congestion caused by the ingress and egress of vehicles to and from the site.

b) Pedestrian access

- Connections to existing pedestrian areas should be maintained and enhanced if possible
- Safe pedestrian movements into, within, and from the site should be provided
- The extent to which the establishment of the use or development will avoid, remedy or mitigate adverse effects upon the following measures, at peak and off-peak times and in close proximity to the site:
 - Intersection performance
 - Accident rates
 - Link capacity.

In relation to congestion and intersection performance, effects on streets and intersections within the area for a distance of one kilometre should be avoided, remedied or mitigated, given both present day conditions, and future traffic volume projections. Possible mitigation measures include feasible network improvements.

b) Parking Areas

- Parking areas should be properly graded, formed to prevent dust nuisance and drained to prevent concentrated runoff of water from the site to the satisfaction of the Council
- Parking areas are to be located remote from Residential zone boundaries. Where this is impracticable, adequate screening should be provided in the form of fencing or landscaping, in order to prevent adverse noise, lighting or visual impacts on residential zoned properties
- The site's internal vehicle circulation must be designed for safety and efficiency within the particular requirements of the individual proposal and for the prevention of adverse effects on the roading network, to the satisfaction of the Council.

c) Road Construction/Reconstruction

In the case of the construction or reconstruction of any arterial or principal road which is proposed to extend beyond the boundary of any existing road reserve, the following assessment criteria shall apply:

- The proposal should demonstrate appropriate measures to avoid and mitigate any adverse effects of traffic noise on any adjacent residential properties, in general accordance with *Transit New Zealand's Draft Guidelines* for the management of Road Traffic Noise, June 1994 and any subsequent updates.

12.5.2 Additional Assessment Criteria for Limited Discretionary Activities

12.5.2.1 Access Requirements for High Vehicle Generating Activities

For the purpose of these criteria a high vehicle generating activity shall be any activity that generates more than 200 vehicle manoeuvres per day.

Any high vehicle generating activity shall be assessed against the following criteria:

- a) **The extent to which the minimum separation distance of crossings from intersections complies with the following:**
- i) For a crossing providing for left turns only:
 - 25 metres on any arterial frontage
 - 15 metres on any collector or local road frontage.
 - ii) For a driveway providing for any right turns:

Section 12:

- 30 metres on any arterial frontage
- 25 metres on any collector or local road frontage.

- b) The extent to which the minimum sight distances for any access points complies with the following:

85 Percentile Speed (kph)	MINIMUM SIGHT DISTANCE (metres)	
	Frontage Road Classification	
	Local	Collector/Arterial
40	30	70
50	40	90
60	55	115
70	85	140
80	105	175
90	130	210
100	160	250
110	190	290
120	230	330

For crossings providing for right turns, visibility along the road shall be measured from a point 1.15 metres above the roadway in the middle of each approach lane opposite each proposed entrance, in both directions, to points 1.15 metres above the roadway at the centre of the appropriate lane. Visibility for exiting traffic shall be measured from a point 1.15 metres above each proposed exit, 5 metres from the centre of the lane nearest the driveway, to points 1.15 metres above the roadway in the middle of each approach lane.

- c) The extent to which crossing widths and operation requirements for service stations comply with the following:

	Minimum (metres)	Maximum (metres)
One way crossings (with no tanker movements)	3.5	6.0
One way crossings (with tanker movements)	4.5	9.0
Two way crossings	6.0	9.0

- d) The extent to which the manoeuvring space for tankers complies with the following:

In the case of activities serviced by tankers or similar heavy vehicles, tanker paths through the site shall comply with the articulated truck tracking curve as specified in [Appendix 12E](#).

Explanation and Reasons

Activities which generate high vehicle rates such as service stations and fast-food premises create significant traffic movements to and from the site. This can affect the safety and efficiency of the adjacent traffic network.

Reasons for criteria for such activities are to achieve traffic safety and efficient road network functioning through appropriate setbacks from intersections, adequate sight distances, crossing widths and heavy vehicle manoeuvring provision.

12.5.3 Assessment Criteria for Discretionary Activities

Without restricting the exercise of its discretion to grant or refuse consent for discretionary applications or impose conditions, the Council will have regard to the assessment criteria set out in [Section 12.5.1.3](#) when considering an application under Sections 104 and 105 of the RMA.

12.5.4 Additional Assessment Criteria for Specified Discretionary Activities

12.5.4.1 Private Helipads/Helicopter Landing Areas

Prior to lodging any application for a private helipad/helicopter landing area with the Council, the applicant shall first obtain any necessary consents from the Air Transport Division of the Ministry of Transport (or from such other agency which may have responsibility for regulating and controlling the use of helicopters at the time). The requirements of that agency shall be made known to the Council when the application is lodged.

The use of a private helipad/helicopter landing area must meet the following criteria:

- All flights must be flown in accordance with recognised noise abatement procedures
- Noise emitted from the site must not exceed the following:
 - i) A day and night average sound level (Ldn) of 50 dBA, measured at or within the boundary of any site zoned Residential, or at or within the notional boundary of any rural dwelling.
 - ii) A Ldn of 65 dBA, measured at or within the boundary of any site zoned Business 1, 2, 3, 4, 5, 6 or 11.
 - iii) A Ldn of 75 dBA, measured at or within the boundary of any site zoned Business 7, 8, 9 or 10.

In each case excluding the site of the proposed private helipad/helicopter landing area.

- Individual helicopter movements must not exceed an Lmax of 90 dBA, measured at or within the boundary of any site zoned residential or at or within the notional boundary of any rural dwelling, in both cases excluding the site of the proposed private helipad/helicopter landing area as shown in [Appendix 12F](#) to [Appendix 12H](#)
- Helicopter movements must not occur outside the hours of 0700 to 1900 Monday to Friday, and 0900 to 1900 Saturday, Sunday and public holidays
- No helicopter flight training or major maintenance is permitted on the site
- The need to ensure that flight paths to and from any private helipad/helicopter landing area are not unduly near or over a noise sensitive area or dwelling house located in any part of the city
- The activities and zonings of the locality, and in particular, the presence of uses of facilities for public recreation and the presence of major national or regional arterial roads, where the proximity of the private helipad/helicopter landing area would unreasonably detract from the amenities of these uses
- The proposed frequency of use and the hours of operation of the private helipad/helicopter landing area
- The relevant operational characteristics of the helicopter, particularly noise, that will be licensed to use the private helipad/helicopter landing area
- The effect on the amenities that the proposal will have when considered together with existing consents for helicopter use
- The length of time for which the Discretionary activity consent is to be operable. In

particular, in undeveloped areas on the urban fringe, it may be appropriate to limit the duration of the consent to ensure that helicopter operations do not conflict with the amenities of the area when urbanisation occurs

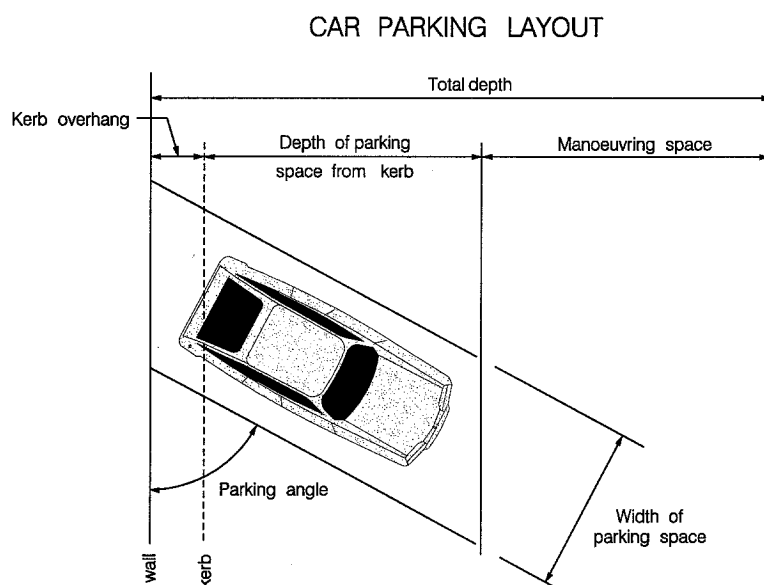
- The operator should be required to maintain a log of all helicopter movements, including the date and time of each flight and the approach and departure path used. This log should be made available to Council officers on written request.

12.5.4.2 Road Construction/Reconstruction

In the case of the construction or reconstruction of any arterial or principal road which is proposed to extend beyond the boundary of any existing road reserve, the following assessment criteria shall apply:

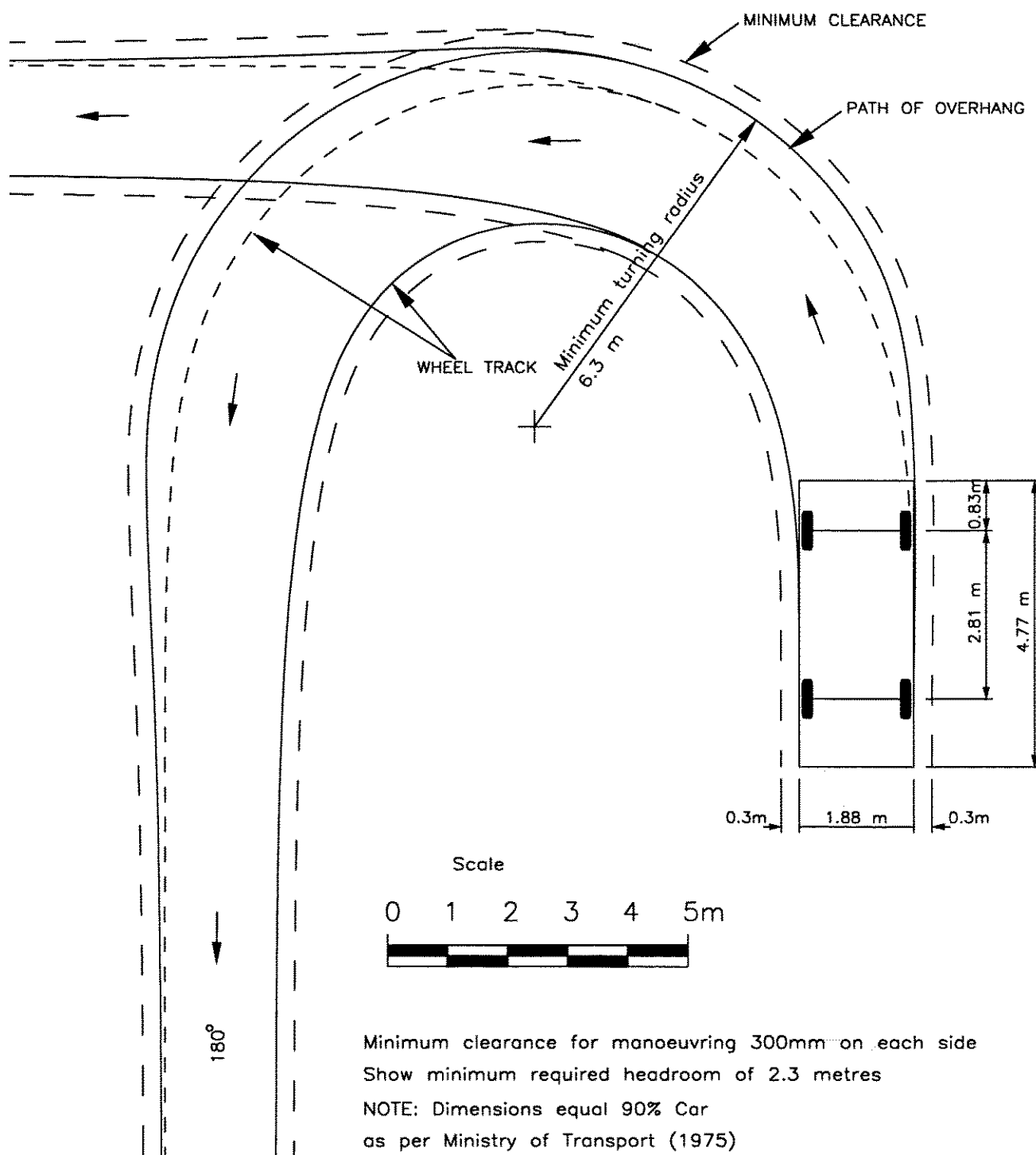
- a) The proposal should demonstrate appropriate measures to avoid and mitigate any adverse effects of traffic noise on any land zoned residential or used for residential purposes, in general accordance with *Transit New Zealand's Draft Guidelines for the Management of Road Traffic Noise June 1994* and any subsequent updates and any New Zealand Standard on the management of road traffic noise published at the date of the proposal.

Appendix 12A: Car Manoeuvring and Parking Space Dimensions

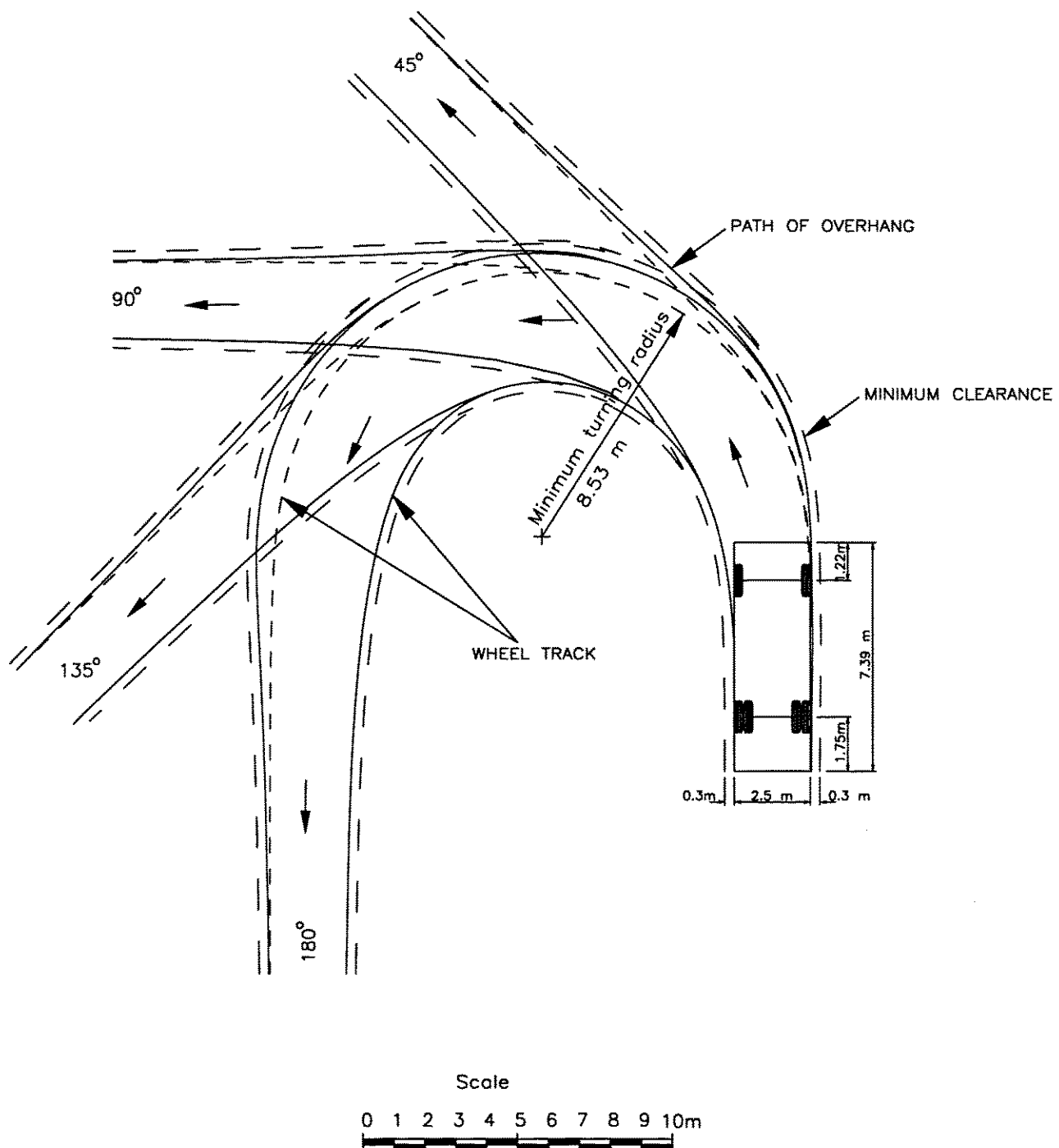


Type of Parking		Width of Parking Space	Depth of Parking Space		Manoeuvring Space	Total Depth
Parking Angle	Type		from wall	from kerb		
			ALL MEASUREMENTS ARE IN METRES			
90°	Nose in	2.3	4.9	3.9	8.3	13.2
		2.5			7.9	12.8
		2.6			7.0	11.9
		2.8			6.7	11.6
75°	Nose in	2.3	5.2	4.2	7.0	12.2
		2.5			6.3	11.3
		2.6			5.2	10.4
		2.8			4.1	9.3
60°	Nose in	2.3	5.2	4.2	5.0	10.2
		2.5			4.1	9.3
		2.6			3.5	8.7
		2.8			3.2	8.4
45°	Nose in	2.3	4.9	4.1	3.3	8.2
		2.5			2.6	7.5
		2.6			2.4	7.3
		2.8			2.3	7.2
30°	Nose in	2.3	4.0	3.4	2.5	6.5
		2.5			2.4	6.4
		2.6			2.4	6.4
		2.8			2.3	6.3
0°	Parallel	2.5	Stall length 6.1m		3.7	–

Appendix 12B: Car Tracking Curve

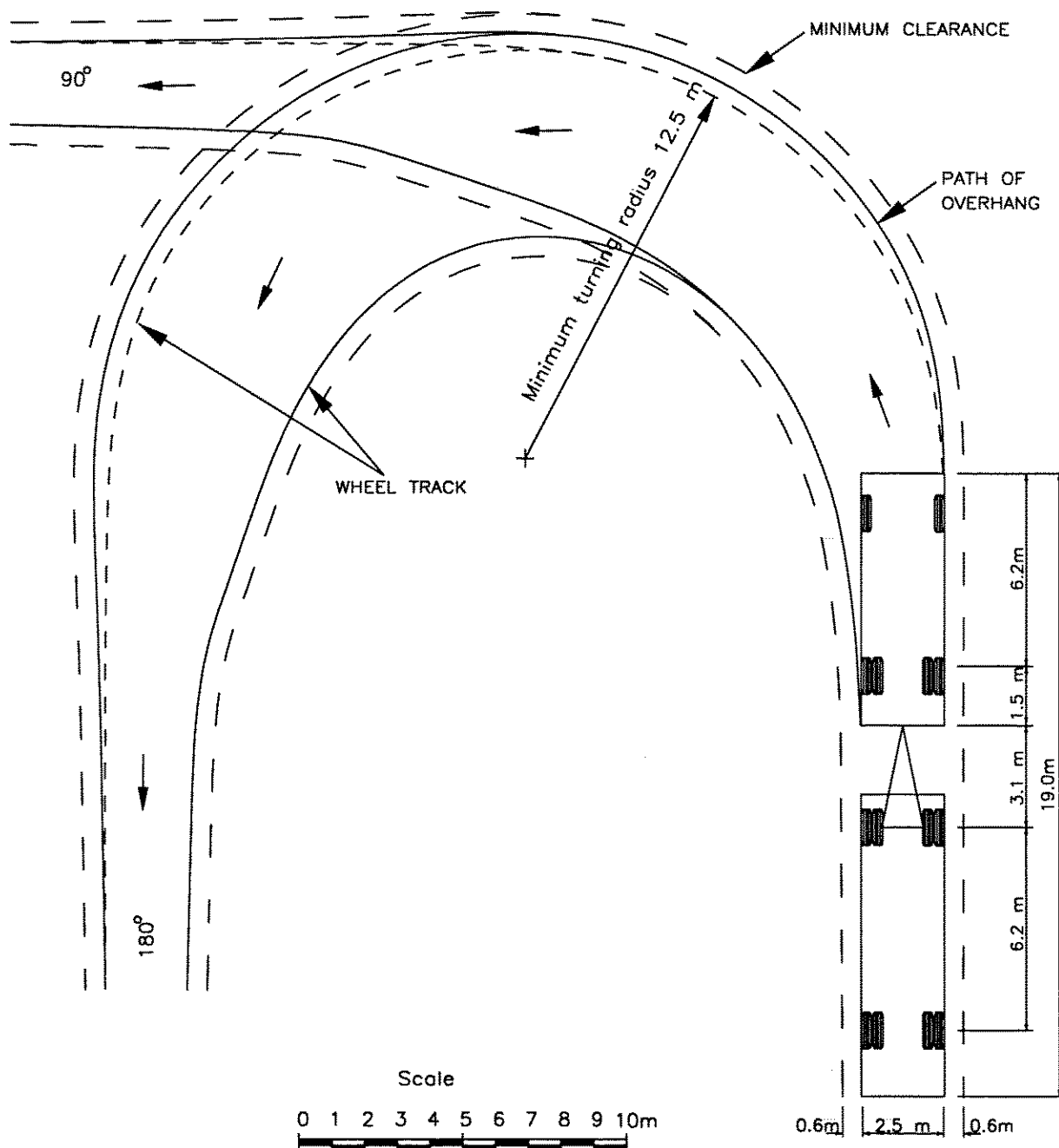


Appendix 12C: Truck Tracking Curve



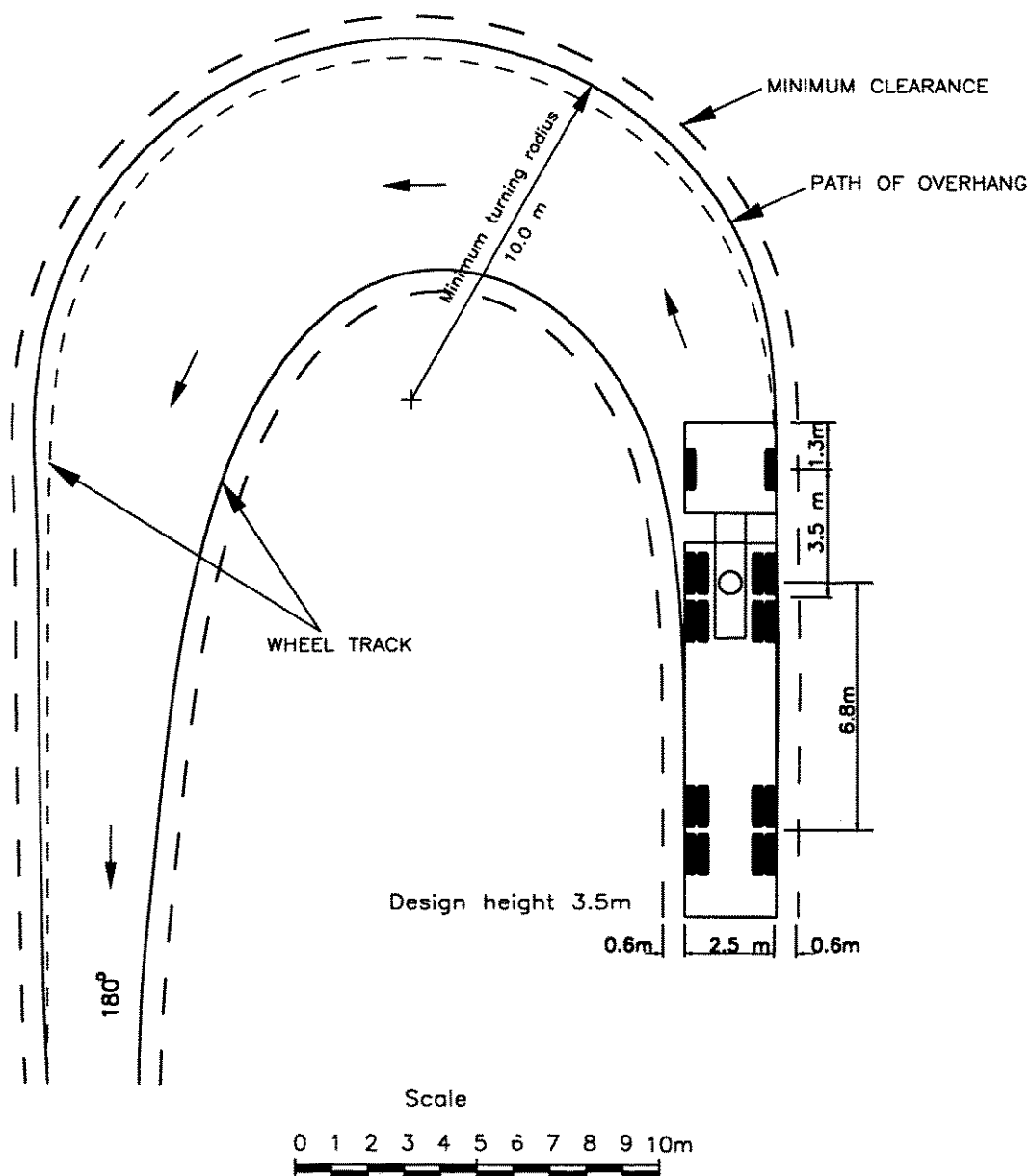
Minimum clearance for manoeuvring 300mm on each side
Vehicle heights up to 4.25 metres are possible

Appendix 12D: Truck and Trailer Tracking Curve



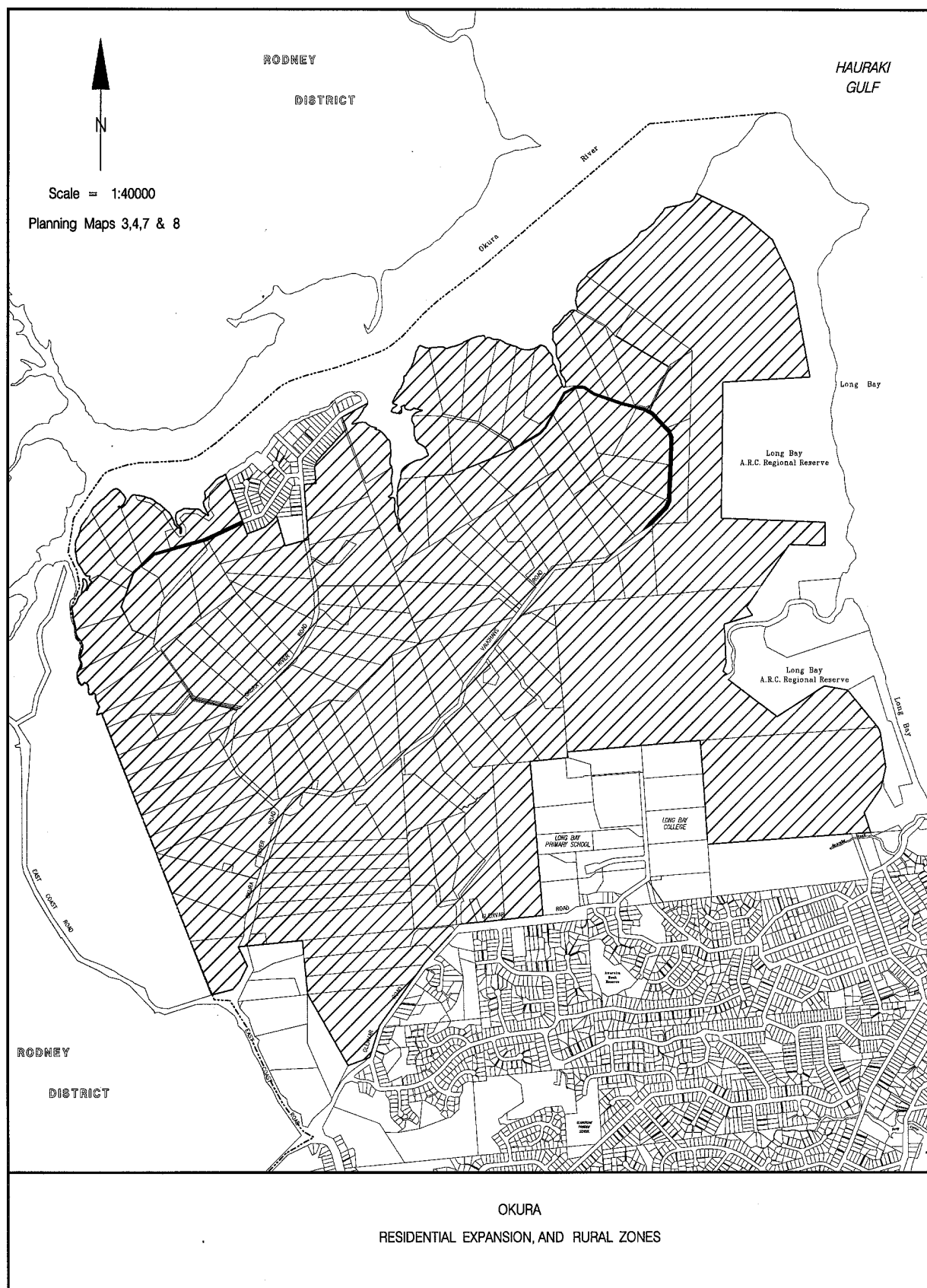
Minimum clearance for manoeuvring 600mm on each side
Vehicle height 4.25 metres

Appendix 12E: Articulated Truck Tracking Curve

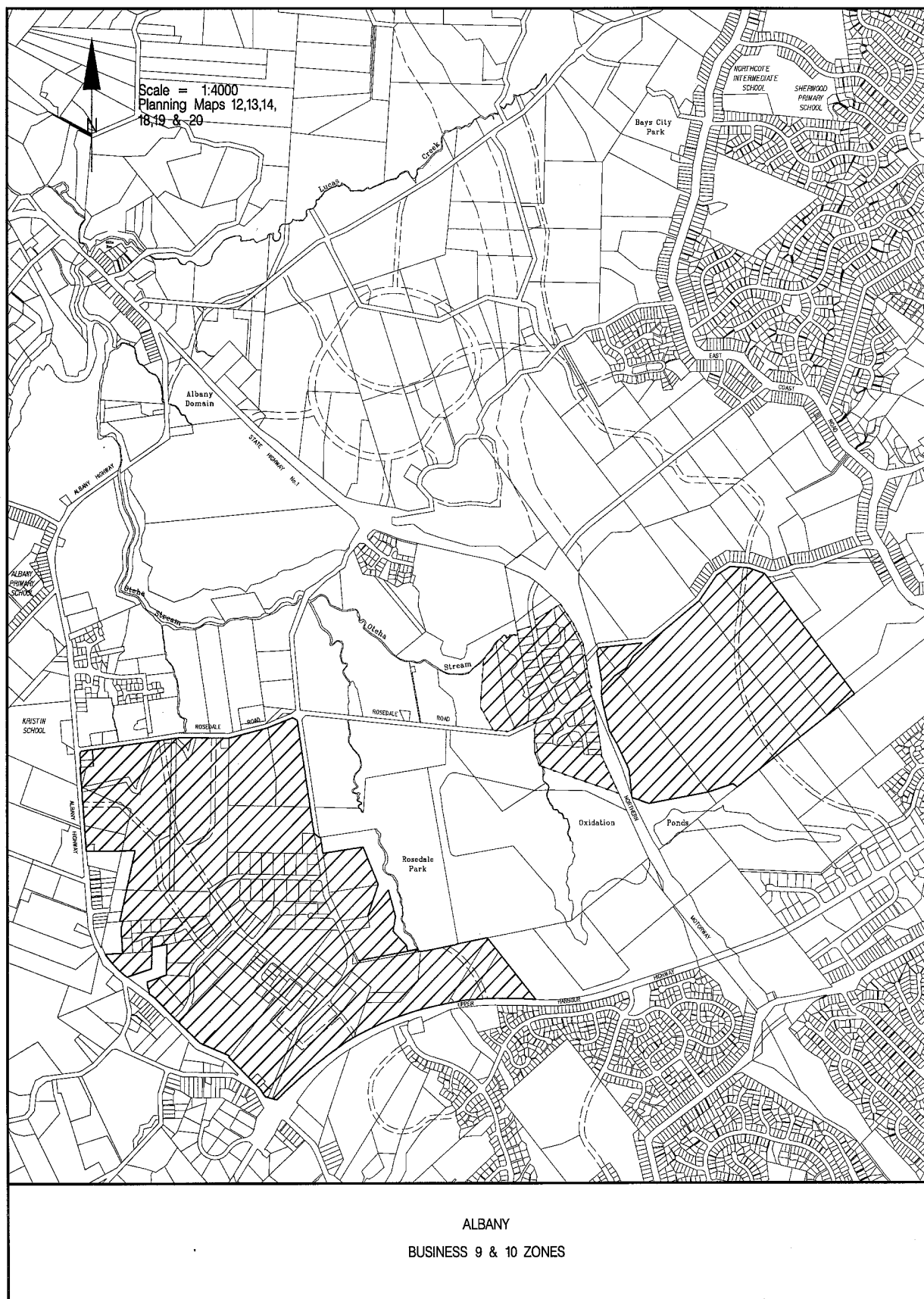


Minimum clearance for manoeuvring 600mm on each side
Vehicle height 4.25 metres

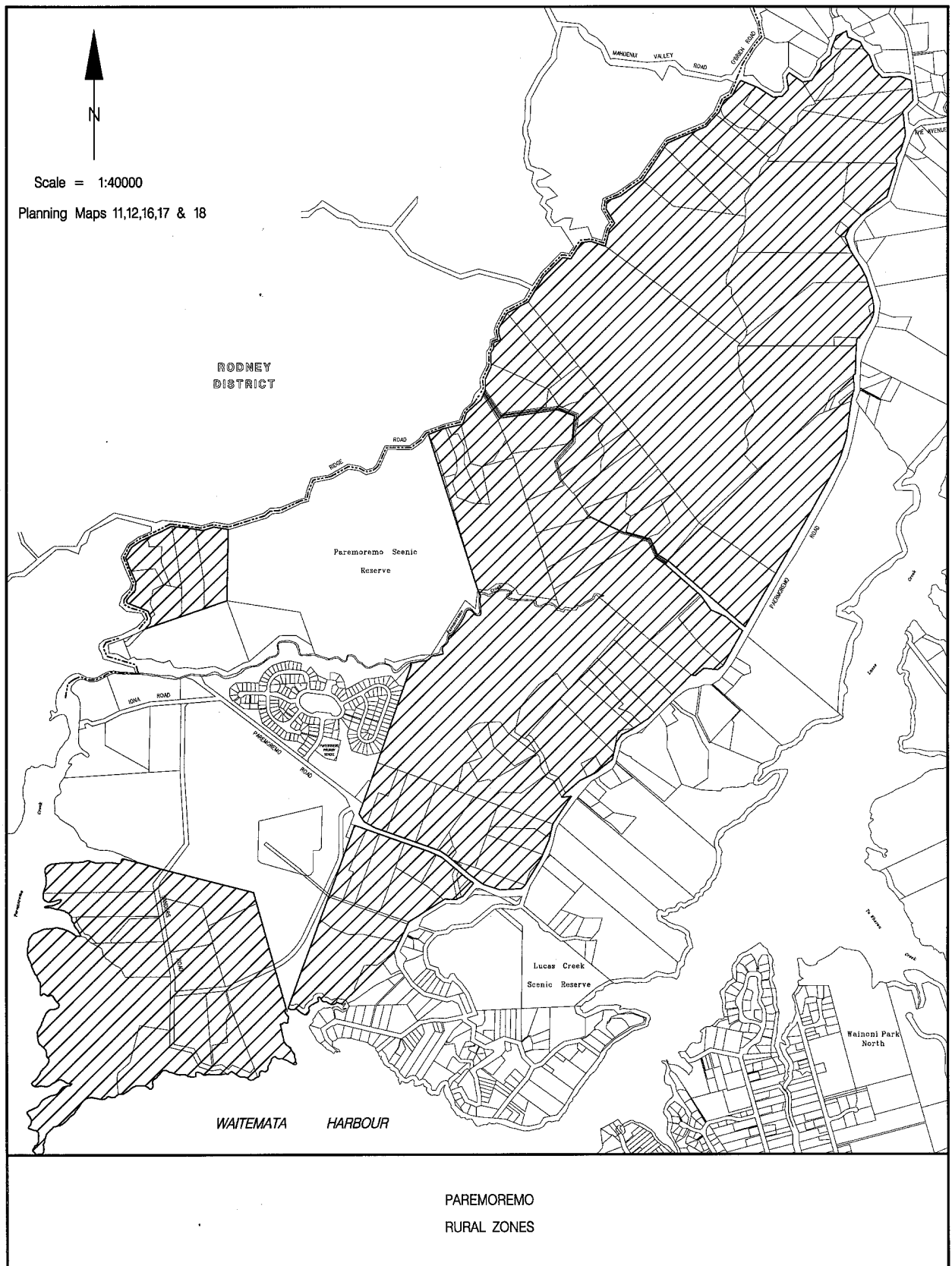
Appendix 12F: Defined Private Helicopter Landing Area



Appendix 12G: Defined Private Helicopter Landing Areas



Appendix 12H: Defined Private Helicopter Landing Areas



Appendix 12I: Roading Design in the Albany and Greenhithe Structure Plans Zone: Technical Supplement

12I.1 Introduction

All roads in the Albany and Greenhithe Structure Plan areas should be designed in accordance with this Technical Supplement, in conjunction with NZS 4404 and Austroads Design Codes.

The distinction between **residential streets** (low volume) and **traffic routes** (higher volume) is one of function. The major function of a residential street is to provide access to residential lots for vehicular and non-vehicular modes, with the traffic function subservient. The major function of traffic routes is to provide for through traffic. The Structure Plans identify all traffic routes.

12I.2 Traffic Speed

i) Design Speed

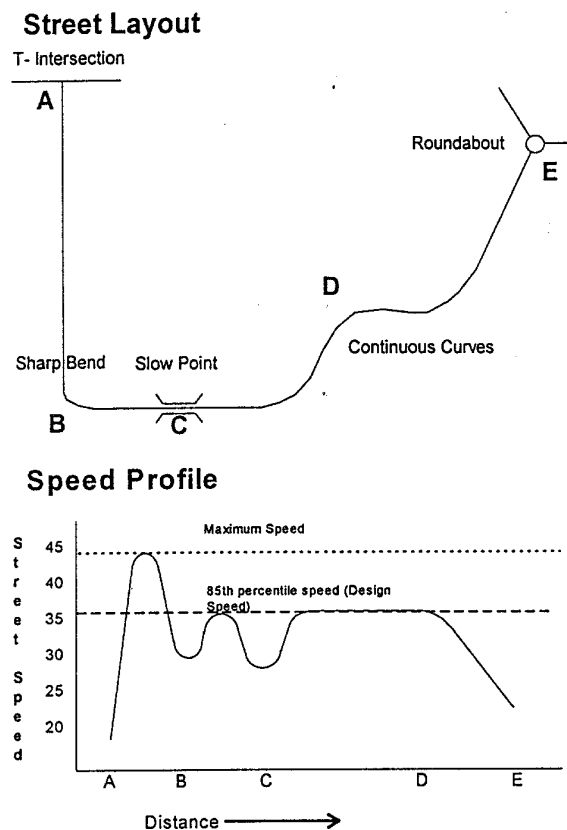
All traffic routes and residential streets should be designed to encourage traffic speed to an appropriate level, consistent with the function of the road. For cul-de-sacs and access places the design speed should not exceed 35 km/hr. For residential streets (up to 3000 vehicles per day) the design speed should not exceed 45 km/hr. For traffic routes the design speed should not exceed 60 km/hr. Arterial routes and associated intersections require specific design.

The minimum standard for horizontal and vertical sight distances in residential street alignments should be calculated on the basis of vehicle speeds 15 km/hr in excess of the design speed, unless other factors apply. Visibility at driveways is to be not less than the minimum standards set out in the Land Transport Guidelines RTS 6, with grade corrections where required.

ii) Speed Profile

In the absence of other environmental factors, typical speed along a street will vary with the street geometry, slow at entry intersection, accelerating to a maximum, then decelerating to the end of the street, intersection, or slow point.

Only on a long straight or through a long curve or series of curves will the maximum speed be sustained. [Figure 121.1](#) illustrates the relationship of the speed profile to street geometry.

Figure121.1 Design Speed**iii) Carriageway Width and Vertical Alignment**

Carriageway width should be the minimum necessary for satisfactory traffic operation.

Carriageway width in itself should not be relied on to restrict traffic speed, but considered as one factor in creating a low speed environment.

Sight distances related to vertical alignment are not readily judged by drivers. Sight distance is therefore not to be relied on to limit traffic speed. Reduced sight distances reduce safety.

iv) Speed Restrictive Design

Limiting speed by means of street design geometry is essentially a matter of restricting the maximum length of uncontrolled straight (or virtually straight) street to the length in which the selected maximum speed may be reached.

This may be achieved by:

- Limiting Total Street Length - in the case of short cul-de-sac or connecting street
- Limiting Length of Straight - by introducing sharp bends in the street layout
- Slow Points - in an otherwise straight alignment
- Curved Alignment - either a single curve or a series of curves.

In selecting techniques for restricting speed, preference must be given to techniques other than curved alignment. The reason for this is that other objectives in this code are aimed to achieve a high degree of inter-connectedness and to minimise travel distances. Frequent use of curves to

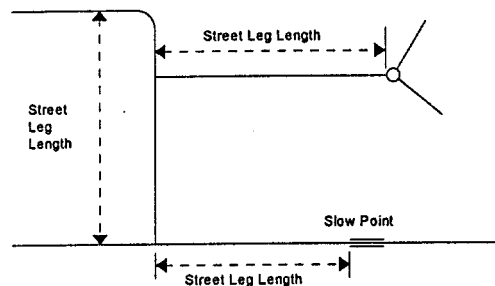
control speed would counteract these objectives. Curves should, therefore, be present only when dictated by topography and in such circumstances may be used as a speed control device.

v) Street Length

Street Leg length limits the maximum speed. For straight (or virtually straight) street alignment, with end conditions which reduce vehicle speed to 20km/h or less, a relationship between Street Leg Length and Street Speed is tabulated in Figure .

Figure121.2 Street Length

Street leg length is measured between speed control features e.g. intersections, slowpoints, bends.



Maximum Speed (Km/hr)	Street leg length (m)
25	45
30	85
35	110
40	130
45	150
50	170
55	185
60	200

vi) Bends or Curves

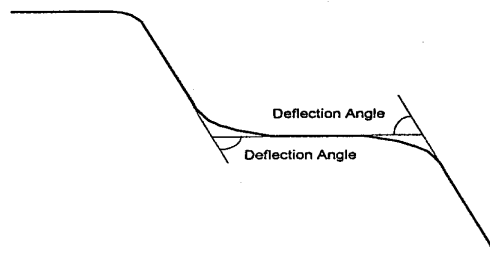
Where speed restriction is provided by sharp bends or curves in the street alignment the required relationship between the radius of the bend and the Street Speed is given in Figure 121.3.

However, it should be noted that bends or curves are only effective for speed restrictions if the deflection angle is relatively large - perhaps 60 degrees or more.

vii) Combination Alignment

Where a bend, or other form of speed restricting device, can be negotiated at a speed higher than 20 km/h, the length of following straight within which a vehicle can attain the Design Speed will be less than that given in Figure .

Figure121.3 Bends or Curves
Series of Bends



Isolated Bend

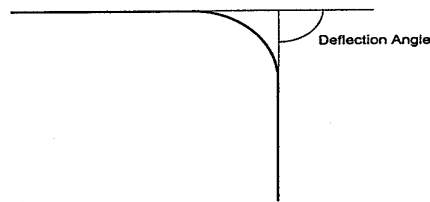
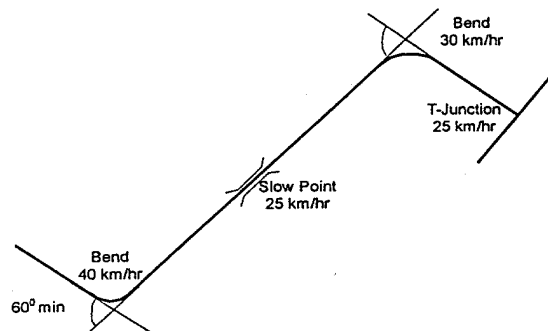


Figure121.4 Combination Alignment

Figure 121.4 gives the relationship between the Negotiation Speed of the bend or slow point, and the maximum length of following straight between restrictions, to limit traffic to a particular Design Speed.



Bend or control point speed (km/hr)	Street leg length (m) to limit speed to (km/hr)						
	25	30	35	40	45	60	55
20 or less	40	75	100	120	140	155	170
25		45	75	100	120	140	155
30			45	80	100	120	135
35				50	80	100	120
40					55	80	100
45						60	85

Note:

Where adjacent speed control devices have different speed values, use the mean of two speed values.

viii) Practical Limitations

From Figure 12I.2, it is apparent that a Street Length of 85m will allow maximum speed of 30km/h

In all but the shorter cul-de-sacs, a Street Leg Length of 110m is considered to be the least practically attainable, and **35 km/h** is therefore the Design Speed to be achieved for the majority of low volume residential streets.

ix) Driver Convenience

There is a reasonable limit to the time for which drivers may be expected to tolerate the low speed conditions sought in residential streets. This time is generally considered up to 90 seconds. For larger traffic catchments, a higher design speed for those streets outside the 90-second catchment is therefore appropriate. In the interests of residential amenity, and pedestrian and cyclist safety, **45 km/h** is set as the **highest** Design Speed desirable for residential streets with direct frontage access.

Theoretical spot speeds up to 60 km/h are acceptable where speed restricting devices can not be practically sited to achieve a lower maximum speed.

The speeds and lengths tabulated in Figure 12I.2 should not be regarded as absolutes. Variations of 10-15%, whilst not accepted as the norm, may be acceptable in some circumstances.

Notes:

End Condition - 20 km/h or less

For grades of 5 to 10% - Add 5 km/h

For grades of over 10% - Add 10 km/h

"End Conditions" reducing vehicle speed to 20km/h or less may include:

- T-intersections
- Roundabouts
- Speed Control Devices (e.g. Speed Humps or Slow Points) of appropriate design
- Sharp bends with centreline radius 12m or less.

Example

- What is the maximum street leg length between bends of 30m radius, to limit speed to 50km/h.

From Figure 12I.3 the vehicle speed for isolated 30m radius bends is 35 km/h.

From Figure 12I.4, for a bend speed of 35 km/h, the maximum length of associated straight for a maximum speed of 50 km/hr is 100m.

12I.3 Traffic Volume

i) Effect of Traffic Volume

Because a high traffic volume is perceived as detrimental in residential streets, it is desirable to design a residential street system to its Environmental capacity, as opposed to its traffic capacity. Environmental capacity is set at the following levels:

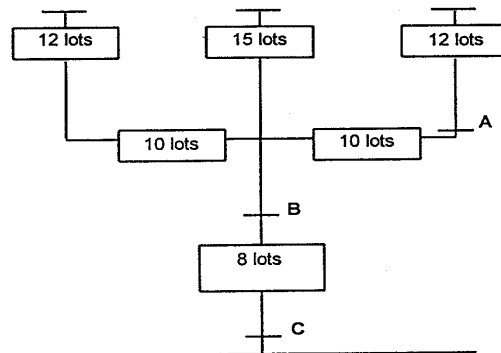
- Residential streets - less than 3000 vehicles per day. For design

purposes, the target volume is 2500 vehicles per day

- Traffic routes - less than 10,000 vehicles per day.

For practical reasons, this target may be exceeded near collector and arterial road intersections. Other traffic management measures may be appropriate in these situations e.g. flush median treatments.

Figure121.5 Traffic Catchment



Catchment A = 12 lots

Catchment B = 59 lots

Catchment C = 67 lots

Measures required to achieve a target traffic volume include:

- **Limitation of the Catchment** which contributes traffic to the street.
- **Exclusion of Through Traffic** to ensure that only traffic actually generated by that catchment uses the street.

In the case of a cul-de-sac, or a small neighbourhood with only one street connection, the exclusion of through traffic is automatically achieved. However, for all areas with more than one street connection, the possibility of through traffic must be carefully examined, and the layout amended if necessary **to positively discourage through traffic.**

Since this code required that cul-de-sacs should, as far as possible, be avoided, traffic volume limitation should not be achieved by the use of cul-de-sacs.

Practical application of the Environmental Capacity limit requires the means to calculate the traffic volume which will be generated in a street network.

In a Residential street, with through traffic excluded, this will be the product of the **“Catchment”** expressed in ‘dwellings’, and the **Traffic Generation Rate**, expressed in vehicle trips per day per dwelling.

ii) Traffic Generation Rate

- Single Dwellings

Traffic generation from residential areas can vary widely, dependent on a number of factors.

The generally accepted design Generation Rate for catchment sizes applicable for a residential street is **10 trips per dwelling per day**.

Table 12I.1 Trips per Dwelling per Day

Table 12I.1 Trips per Dwelling per Day		
Home to/from locations within the neighbourhood	shops	2
	school	1

Table 12I.1 Trips per Dwelling per Day		
Home to/from locations external to the neighbourhood		
	work	4
	retail	2
	other	1
		10

- Uses Other Than Single Dwellings

While the prominent land use in average residential streets is single detached dwellings, some catchments may contain other dwelling types or land uses.

For traffic generation calculations it is convenient to reduce these uses to Equivalent Dwellings, using the representative figures given in **Table 12I.1**.

Table 12I.2 Equivalent Dwellings	
Separate dwellings or Duplexes	1.0
Flats, Units, Townhouses (Average quality generally single family)	0.6
Luxury units, or likely multi-family occupancy units	1.0
Retirement Villages - per unit	0.4
Local shops - Per 100m ² of gross floor area	6.0
Primary School	50.0
Small local sporting and similar facilities	10.0

Example:

Retirement Village of 20 units

"Equivalent Dwellings" - $20 \times 0.4 = 8$

- Equivalent Dwellings Catchment

For the great majority of streets, where there is no direction split of traffic, the maximum acceptable Environmental Capacity of **2000 to 3000 vehicles per day**, combine to give the following standards for the "Maximum Traffic Catchment" for a residential street.

Design Target Catchment - 250 Equivalent Dwellings

Maximum Catchment - 300 Equivalent Dwellings

iii) Catchment

For a single cul-de-sac, or a large area having only a single street connection, the number of dwellings in the catchment may be counted directly as the number of single dwelling allotments, on the basis that ultimately all lots will be built on. Allowance must be made for any future additional subdivision of larger lots, or likely extension of the street system.

However, for "loop streets", or other areas with two or more connections, a judgement must be made as to the likely split of catchment to each connection, based on consideration of the locations of likely traffic attractions, e.g. employment centres, shopping centres, schools etc. See Figure 12I.6 and Figure 12I.7.

Where all traffic attractions are in the same general direction, this is relatively simple, requiring selection of a split point from which both alternative routes offer equal convenience for drivers. This will usually be the point of equal distance, but not necessarily so if there are factors such as intersections or slow points. The desire to avoid vehicle delays will most likely determine the split points.

Where traffic attractions are in different directions, a separate assessment of the catchment generating traffic for each attraction is required and the individual volumes added to obtain the total traffic volume at any point in the street network. An example of such a calculation is given in Figure 121.8.

Figure121.6 Catchment Split Points A

A = assumed split point school, shops, employment

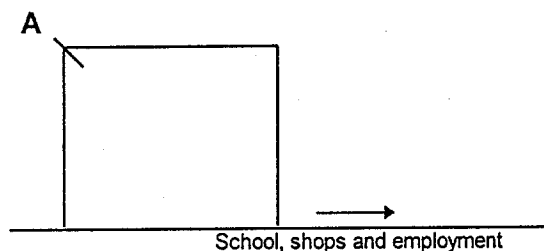


Figure121.7 Catchment Split Points B, C

B = assumed split point town centre, employment

C = assumed split point school, shops

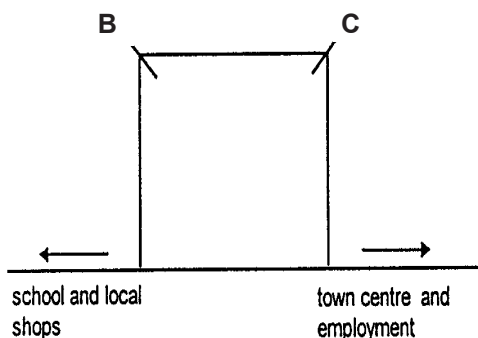
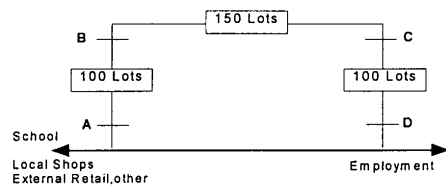


Figure 12.1.8 Example

Attraction	Westward Trips	Eastward Trips
School	1	
Neighbourhood Shops	2	
External Retail	2	
Other	1	
Employment		4
TOTAL	6 trips/day	4 trips/day

Split Point - C			Split Point - B		
Node	Catchment Trips	Volume	Node	catchment Trips	Volume
B	150 x 6 =	900	C	150 x 4 =	600
A	250 x 6 =	1500	D	250 x 4 =	1000
D	100 x 6 =	600	A	100 x 4 =	400

Total Volumes (v.p.d)				
A	1500	+	400	= 1900
B	900	+	-	= 900
C	-	+	600	= 600
D	600	+	1000	= 1600

This procedure requires a judgement of the distribution of the total traffic generation between the individual travel attractions.

As discussed previously, the total traffic generation per allotment varies with a number of factors, and the actual distribution of the traffic generated will also vary with these factors, and in particular with:

- The extent and location of facilities within the neighbourhood (shop and schools)
- The extent of employment centres external to the neighbourhood
- Location of major retail centres and other attractions external to the neighbourhood.

In some cases previous traffic studies may provide area-specific data to use as a basis for assessment.

Table 12.1.3 Summary of Residential Street Design Criteria.

The following are required standards. Designers are encouraged to apply sound design criteria to each project where minimum, maximum or average standards are specified.

Table 12.1.3 Street Classification: Design Elements			
Elements	Access Street	Local Street	Traffic Route
Traffic Catchment	up to 600 v.p.d. (1)	Up to 3000 v.p.d. (1)	up to 10,000 v.p.d.(1)
Design Speed	up to 35 km/h	up to 45 km/h	up to 60 km/h
Carriageway/ Cycleway - Lanes	1 or 2	2 (shared/ cyclists)	2 (shared/cyclists)

Table 12I.3 Street Classification: Design Elements

Maximum Carriageway Width (2)	6.0m excluding cycleways 8.0m including cycleways	9.0m excluding cycleways 11.0m including cycleways	10.0m excluding cycleways 12.0m including cycleways
Minimum Carriageway Width	3.5m	8.0m	9.0m
Minimum Verge Width	4.5m	4.5m	4.0m
Reserve Width (Minimum Average)	15.0m	20.0m	20.0m
Sight Distance - General min	55m	120m	140m
Kerbing	Raised or drive-over	Raised	Raised
Footpaths (3)	One Side	Both Sides	Both Sides
Parking	Indented Bays to minimum width carriageway	Indented Bays	No provision or indented bays
Grade - Maximum (4)	14%	12.5%	8%
Grade - Minimum	0.30%	0.30%	0.4%
Carriageway	One or Two Way	Two Way	Two Way
Crossfall - Minimum	2.5%	2.5%	3%
Crossfall - Maximum	4.0%	4.0%	

Notes:

1. Residential traffic generation shall be based on 10 v.p.d. per residential unit. Traffic generated by other uses **must** be assessed in accordance with Council Guidelines. The v.p.d. calculations must take account of traffic generated from lots within the catchment of any traffic route or residential street and likely through traffic.
2. Dimensions to be increased on curves/bends.
3. Typical only - varies with pedestrian/cyclist network planning. To be at least 1.5 metres clear of boundary lines.
4. Not to be applied in the vicinity of intersections.