

3.3. TRANSPORTATION

3.3.1. OVERVIEW

In terms of the Resource Management Act 1991 transportation impacts on the management of the District's resources in two ways. Firstly transport infrastructure is considered a part of the "environment" by virtue of the definition of "natural and physical resources" which includes all structures. Secondly, the actual operation of transport systems is defined as a land use activity by virtue of Section 9(4) of the Resource Management Act 1991. The Act also introduces a third aspect that can be addressed in the Plan. Clause 6 of Part 11 of the Second Schedule of the Act provides that Council may identify the scale, sequence, timing and relative priority of public works. One of the difficulties associated with developing such a programme is the 10-year Plan period. Council therefore considers it more appropriate that these matters be dealt with in the Annual and Strategic Plans.

3.3.2. THE ISSUES

The following are considered to be significant resource management issues facing the transportation sector within Clutha District;

- **Clutha District is dependent on an efficient land transport network to utilise and develop its resources, and to provide mobility and access for its people and communities.**

Explanation

The dispersed nature of the District's population, its reliance on primary production, and its often rugged topography has led to a high dependence on an efficient land transport system. This system needs to be maintained and improved if Clutha is to grow and prosper.

- **There is a significant increase in land uses generating heavy traffic in the District.**

Explanation

The increase in dairy conversions, lime application, gravel extraction and forestry activity in the District is having an impact on the roading resources. Heavy vehicles carrying large loads put a greater strain on roading surfaces, and therefore the cost of roading can be increased dramatically. Forestry could also lead to a greater use of rail transport in the District.

- **The increasing number of tourists visiting the district imposes an increasing demand to improve and develop transportation links and facilities.**

Explanation

Tourism in New Zealand is expected to increase three fold by the turn of the century, with Clutha becoming a more popular destination. There is currently pressure to upgrade the Southern Scenic route between Owaka and Invercargill as the Catlins becomes an increasingly popular tourist spot.

- **Most forms of traffic may give rise to adverse effects.**

Explanation

It is estimated that the transport sector contributes 40% of CO² emissions in New Zealand. Transportation can also give rise to problems such as noise, vibration, headlight glare, visual intrusion, and discharge, which can impact on environmental amenities.

- **Land use activities can greatly affect the safe and efficient operation of the transport network.**

Explanation

High traffic generating activities (such as petrol stations), vegetation growing on the side of the road or railway, residential development, to name a few, all have the potential to impact on the safe and efficient operation of the transport system. Land uses that generate unexpected traffic increases on inadequate roading can lead to poor utilisation of funding available.

- **The movement of stock along or across roads, particularly dairy cows and the disposal of effluent from stock trucks onto roads, can have a significant impact on both the road itself and the use of that road.**

Explanation

The movement of stock along and across roads has the potential to be a problem in the District. This is particularly so with regard to dairy cows whereby the effluent can cause damage to the roads surface. Effluent disposal from stock trucks is also a problem, both in terms of damage to road surface, and as a public nuisance.

- **The development of transportation networks can have significant adverse environmental effects, particularly in terms of noise, visual intrusion and the impacts on efficient use of energy.**

Explanation

Inappropriate route selection and construction methods can have significant adverse effects on the district's environment. The effects of traffic noise, permanent visual effects, runoff, impact on energy use etc must be considered when developing the transportation network.

- **Parts of the transportation network are vulnerable to natural hazard events.**

Explanation

Natural hazards such as slips, flooding, coastal erosion and sea level rise can damage and/or close transportation networks. Some transportation structures (eg railway embankments) can also increase the effects of such events by, for example, acting as a barrier to flood water dissipation. This potential risk must be taken into account when decisions are made in relation to the location and design of such routes.

3.3.3. OBJECTIVES

OBJECTIVE TRAN.1

To achieve and maintain appropriate public safety levels in respect of the District transportation network.

(Refer Policy TRAN. 1 to 10)

OBJECTIVE TRAN.2

To maintain an efficient flow of people and goods along the District's transportation

routes. *(Refer Policy TRAN 1 to 11)*

OBJECTIVE TRAN.3

To maintain the amenity values of the District, while enabling the continual development and upgrading of the transportation network.

(Refer Policy TRAN.7 to 10)

OBJECTIVE TRAN.4

To manage the development of the transportation network in a sustainable manner that recognises the link between transportation, energy and climatic changes.

(Refer Policy TRAN.11)

3.3.4. POLICIES

POLICY TRAN.1 EFFECTS OF LAND USE

To ensure that the adverse effects that land use activities can have on the District's transportation network, are avoided, remedied or mitigated.

Explanation

The safe and efficient operation of the District's transportation network can be significantly affected by adjoining land uses. New development must take into consideration any effects it may have on the operation of the District's transportation routes and those who use them.

(Refer Rule TRAN.5 - 7, Rule TRAN.9)

POLICY TRAN.2 LOADING AND MANOEUVRING

To mitigate adverse effects on the safe and efficient operation of the roading network by requiring owners and occupiers, where appropriate, to avoid off-road loading and manoeuvring facilities for the servicing of premises

Explanation

The operation of retail type activities generally involve numerous loading and unloading operations during the normal course of business. Undertaking such activities on the road can greatly impede traffic flows.

However Council recognises that there are circumstances where the provision of off-road loading facilities is neither practical nor necessary and therefore dispensations can be granted.

(Refer Rule TRAN. 5)

POLICY TRAN.3 PARKING

To avoid, remedy or mitigate the adverse effects of land use activities on the safety and efficiency of the roading network by requiring the provision of adequate off-road parking having regard to the following factors:

- (a) the intensity and duration of the activity.**
- (b) the adequacy of parking in the location.**

- (c) the classification and use of the road, and the speed restrictions that apply.
- (d) the nature of the site, in particular its capacity to accommodate parking.
- (e) the characteristics of the previous activity that utilised the site.
- (f) the prevalent amenity values in the location, in particular any residential amenity values.

Explanation

Activities that attract and/or employ large numbers of people have the potential to compromise the safe and efficient operation of the roading network. The provision of adequate parking facilities can mitigate adverse effect on this. There are areas, however, where the provision of parking is not physically practical or necessary. The matters listed in the policy will assist Council in determining the appropriateness of parking requirements where a relaxation is sought.

POLICY TRAN.4 ROADSIDE VEGETATION

To ensure that the adverse effects that vegetation plantings can have on the transportation network, are avoided, remedied or mitigated.

Explanation

Council recognises that trees, hedges and shelter belts, can have significant impact on the safety of the roading system. Vegetation can impede driver visibility, disrupt road drainage systems, or cause shading of the carriageway resulting in icing during the winter months, which can have severe consequences in terms of public safety.

(Refer Rule TRAN.7 and Method TRAN.3)

POLICY TRAN.5 SIGHT LINE PROTECTION

To promote safety at road bends, accesses, intersections and road and rail intersections by mitigating the effects buildings and the planting of vegetation can have in such situations.

Explanation

Council recognises that road bends, road intersections and railway level crossings are particularly dangerous to the safety of motorists and accordingly adequate sight lines are to be preserved.

(Refer Rule TRAN. 7 and 9)

POLICY TRAN.6 AIRPORTS

To ensure that the adverse effects that activities can have on the safe and efficient operation of the District's airports are avoided, remedied or mitigated.

Explanation

Airports are recognised as an important resource to both the District's economy and recreational needs.

It is vitally important that adjoining land uses do not adversely impact on the operation and safety of airports.

(Refer Rule TRAN.10 to 12)

POLICY TRAN.7 THE ADVERSE EFFECTS OF THE TRANSPORTATION NETWORK

To manage the transportation network and its development and maintenance to ensure that adverse effects on the environment are avoided, remedied or mitigated.

Explanation

Transportation routes can have significant effects on the environment, particularly in terms of noise, dust effects and visual intrusion. The most significant effect, however, is the contribution the transport sector makes to CO² emission. The ongoing development of the District's transportation resource needs to recognise these effects and mitigate or avoid them as appropriate.

(Refer Rule 1 to 5, Rule TRAN.8, Rule TRAN. 11 to 12)

POLICY TRAN.8(A) ROADING HIERARCHY

To establish a roading hierarchy, based on the particular importance of the transport route to the District and the volume of traffic utilising those routes.

Explanation

The roading hierarchy will be used to assist in determining:

1. The appropriateness of particular effects of land use activities in various localities.
2. Determine appropriate standards of access for properties and activities.
3. Assist in determining appropriate environmental outcomes.

The roading hierarchy enables Council and the public to quickly determine the status of any particular transport route and assess what effect a new development will have on that route. The hierarchy has been determined upon the basis of the routes importance to the District, its main purpose, and the volumes of traffic it carries. Standards of access in relation to the hierarchy have been determined so as to mitigate the effect that particular activities may have on the route.

After considering several options, Council considers that the roading hierarchy is the most effective method of providing safe roading, and enhancing the general amenity of the District in relation to the effects of road transport.

(Refer Method TRAN.1)

POLICY TRAN.8(B) HEAVY TRANSPORT NETWORK

To establish within the road transport hierarchy a network of heavy transport routes that will be developed to a standard capable of safely and efficiently carrying intensive concentrations of heavy traffic.

Explanation

Forestry and dairying activities have been identified as becoming more active in the District in the future. Concentrated heavy traffic such as logging trucks and milk tankers, can have a major impact on the District's roading resource. In terms of roading maintenance, efficiency and impact on other users, Council has found that it is significantly cheaper to upgrade roads before they are subject to heavy traffic usage rather than it is to repair the subsequent damage. The use of a heavy traffic network reduces the adverse effects that heavy traffic has on the environment and greatly increases the efficiency of resource use in Council's road maintenance programme.

Council will consult with the affected parties as to the most appropriate location for such routes.

(Refer Method TRAN.1 and Rule RRA. 6 (page 204)).

POLICY TRAN.9 CONSTRUCTION STANDARDS

To require that new roads and access points be constructed to a standard appropriate to their intended use, and that the adverse effects of maintenance, upgrading and construction be avoided, remedied, or mitigated.

Explanation

Construction of new roads and access points can have an adverse impact on water quality, vegetation, soil stability, visual amenity and safety. These aspects need to be recognised when new roads are planned and built.

(Refer Rule TRAN.1- Rule TRAN.3)

POLICY TRAN.10 TRANSPORTATION PROJECTS

To make appropriate provision in the District Plan for the development of the transportation network while ensuring the adverse effects of these activities are avoided, remedied or mitigated.

Explanation

Council recognises that the continual development and upgrading of the District's transportation resource is vital to the District's economic wellbeing. However provision for such projects must recognise the adverse effects these projects can have on the environment. Rules have been developed to mitigate those effects.

(Refer Rule TRAN 1 to.4 and Rule TRAN.8, 10-12).

POLICY TRAN.11 TRANSPORT AND ENERGY EFFICIENCY

To ensure that new developments and new transportation routes recognise the link between transportation and climate change, by ensuring that they are designed for optimum effectiveness and energy efficiency.

Explanation

Transportation is one of the biggest fossil fuel uses in New Zealand and contributes approximately 40% of all CO² emissions. To reduce this impact it is important that both the transportation infrastructure and new development in general be designed for optimum efficiency.

(Refer Rule TRAN.1(i)(c) and (iii)(f); Method ENG.1 page 98; Rule SU8.1(d)A page 142, and Rule RRA.4(iii) page 203)

3.3.5. RULES

RULE TRAN.1 ROADING ACTIVITY STATUS

(I) ACCESS AND LEGAL FRONTAGE FOR DEVELOPMENTS

Roads and Access Lots for the purpose of providing access and legal frontage to developments and subdivision are controlled activities provided

1. There is no adverse effect on; any heritage site listed in Table 13.1 to Table 13.8 (page 108), and

2. The location is not or is not likely to be subject to material damage by erosion, subsidence, slippage or inundation (including the possibility of sea level rise) and the proposed development is not likely to accelerate any of these processes, and
3. Roads in Rural Areas are constructed in accordance with the "Guide to Geometric Standards for Rural Roads ", National Roads Board, New Zealand, 1985 and roads in Urban Areas are constructed in accordance with NZS 4404 1981 Urban Land Subdivision.

Council shall exercise control in respect of the following matters:

- a. The effects of noise, vibration, glare, dust and other similar effects on affected property owners.
- b. Visual effects, and the techniques used to mitigate these.
- c. The roads impact on energy consumption in terms of its design and location.
- d. The method of construction, in particular,
 - The extent, timing, and duration of bare ground; and
 - the location, timing of construction design, and density of earthworks, and
 - the re-establishment of an appropriate vegetation cover; and
 - the disposal and stabilisation of waste material or fill; and
 - measures to avoid, remedy, or mitigate:
 - (i) loss of or damage to soil; and
 - (ii) movement of vegetation, soil, or debris, into any water body or coastal water; and
 - (iii) damage to riparian vegetation or soil; and
 - (iv) damage to animal or plant communities in water bodies or coastal water; and
 - (v) effects of the activity on river or stream flows.
 - (vi) Stormwater runoff.
- e. Design, construction and location of intersections with public roads excluding State Highways in which case these matters will be subject to the requirements of Transit New Zealand.

Any applications for resource consent made under this rule shall generally be considered without notification or the written consents of affected parties.

(II) INTERNAL ACCESS ON PRIVATE PROPERTY IN RURAL RESOURCE AREAS

Provided Rule RRA.7 (at page 205) has been complied with, access roads or tracks (including bridges and culverts associated therewith) for the purposes of internal access are permitted activities provided that:

- (a) No site of heritage value listed in Table 13.1 to Table 13.8 (page 108), is adversely affected.
- (b) The location is not or is not likely to be subject to material damage by erosion, subsidence, slippage or inundation and the proposed development is not likely to accelerate any of these processes.
- (c) That where such a road or track is to be visible from a public road, or public place that the permanent visual effects are mitigated against by, where practicable, following the contour, reducing the use of fill batters, or vegetating fill batters.
- (d) Intersections with public roads are to be constructed in accordance with the standards set out in Rule TRAN.4.
- (e) The following design and construction standards are complied with:
 - all formation surfaces with an inwards crossfall shall be drained by a watertable; and
 - cutoffs or culverts shall be constructed or installed so as to prevent scour, gullyng, or other erosion of the formed or constructed surface and to comply with Section VI of the Freshwater Fisheries Regulations 1983 (which requires adequate provision for fish passage); and
 - fill shall not be placed over woody vegetation except where the woody vegetation has been specifically placed for corduroying purposes; and

- all areas of fill including any formation surface overlying fill shall be compacted; and
- fill batters shall be constructed and vegetated, to a standard that is adequate to avoid batter erosion or failure; and
- spoil shall be disposed of by end-hauling where the formation by sidecasting of any road or track crosses any unstable site or crush zone.

(III) PUBLIC ROADS

The construction of public roads, that comply with the standards set out in the “Guide to Geometric Standards for Rural Roads”, National Roads Board, New Zealand, 1985 or NZS 4404 1981 Urban Land Subdivision is a controlled activity where aligned with a legal roadline or a restricted discretionary activity where it is not aligned with a legal roadline. Council shall exercise either its control or restrict its discretion over the following matters;

- a. The effects, including noise, vibration, dust, glare, on affected property owners.
- b. The reasons the road is required and the public benefit of such a road.
- c. The impact on vegetation, habitats, watercourses and sites of heritage value (as listed in Table 13.1 to Table 13.8 (page 108)).
- d. Visual impacts, and the techniques used to mitigate these.
- e. Whether the location is or is likely to be subject to material damage by erosion, subsidence, slippage or inundation (including the possibility of sea level rise) and whether the proposed development is likely to accelerate any of these processes.
- f. The chosen routes impact on energy consumption.
- g. Alternative techniques and/or routes to mitigate any adverse effects.
- h. The construction standards proposed relative to the potential vehicle movements.

Any application for resource consent under this rule shall generally be considered without notification or the written consent of affected parties.

REASON

The construction and performance standards selected are considered appropriate to mitigate the adverse effects of road construction. Standards reflect established Council policy on construction standards for each category of the roading hierarchy.

RULE TRAN.2 ROAD REALIGNMENT

Realignment of any part of any road outside the existing reserve boundary, is a permitted activity provided:

- (a) No sites or objects of heritage value listed in Table 13.1 to Table 13.8 (page 108) of this Plan, are adversely affected.
- (b) All reasonable and practical steps are taken to avoid long term visual impacts from such works including the disposal of spoil, and the use of cut and batter fills.
- (c) The area of land no longer required for road is rehabilitated for productive uses or is appropriately landscaped.

Where these criteria cannot be met such activities shall be considered as restricted discretionary activities, with Council restricting the exercise of its discretion to the criteria that cannot be met.

Any application for resource consent under this rule shall generally be considered without notification or the written consent of affected parties.

REASON

Provided adverse effects are mitigated it is seen as an unnecessary and costly step to require resource consent for realignment work, particularly when realignment is generally carried out for safety and efficiency reasons.

RULE TRAN.3 ROAD MAINTENANCE

Road maintenance works are permitted activities provided adverse effects on the environment are avoided or mitigated

REASON

Road maintenance is considered an important work and does not warrant unnecessary intervention when generally such work occurs within the road reserve.

RULE TRAN.4 ACCESS STANDARDS FROM A PUBLIC ROAD

Access standards for properties and activities shall be determined in accordance with the following standards;

(I) CONSTRUCTION AND MAINTENANCE

All vehicular access from a public road shall be designed, constructed and maintained to ensure that:

- they are able to be used in all weather conditions
- they have no adverse impact upon road drainage systems
- stormwater and detritus (including gravel and silt) do not migrate on to the road
- intersect with the property boundary within 15 degrees of a right angle

(II) SIGHT DISTANCES

Clear visibility along the road in both directions from the vehicular access shall comply with the following Table:

Table 11: Sight Distances (Source "Guidelines for Visibility at Driveways "Land Transport Safety Authority - Publication No. 6"). See also Figure 12 (page 92).

Minimum Sight Distance from Access			
85 percentile	Sight Distance (m) per road classification		
Speed (km/h)	Local	Collector	Arterial S.H.
50	40	45	90
60	55	65	115
70	85	85	140
80	105	105	175
90	130	130	210
100	160	160	250
110	190	190	290
120	230	230	330

Note: The 85th percentile speed is defined as the speed which is not exceeded by 85% of the vehicles travelling over that particular route.

(III) ACCESS TO RURAL STATE HIGHWAYS AND REGIONAL ARTERIALS

Design and construction of access shall comply with the following standards:

- (a) Where the speed limit is 100 kph, spacing between accesses shall be not less than 200 metres (regardless of the side of road on which they are located), and no vehicle access shall be constructed within 100 metres of road intersections.
- (b) Width of vehicular access ways at the property boundary are to be no greater than 6 metres.
- (c) Heavy vehicular accesses shall be designed and constructed to:
 - i) Carry the volume and weight of traffic likely to use the access.
 - ii) To ensure heavy vehicles do not have to cross the road centre line when making a left turn.
 - iii) Ensure the surface is constructed to the same standard as the adjacent road carriageway.
 - iv) Has sufficient width to accommodate the swept path of the largest vehicle anticipated to use it.
- (d) Figures 7 to 9 (pages 88-90) establish the minimum design standards for access determined by activity type.
- (e) Access to State Highways shall be to Transit New Zealand design specification.

(IV) ACCESS TO DISTRICT ARTERIAL AND COLLECTOR ROADS

- (a) Access for residential activities shall conform with the standards set out in Figure 11(a) (page 92).
- (b) Access for non-residential activities shall conform with the standards set out in Figure 11(b) (page 92).
- (c) Distance from any road intersection shall be not less than 40 metres.

(V) ACCESS TO URBAN STATE HIGHWAYS AND URBAN ARTERIALS.

Design and construction of accesses shall comply with the following standards;

- (a) The vehicle crossing shall intersect with the road reserve boundary at an angle between 45 degrees and 90 degrees.
- (b) For activities that attract a low level of vehicles width measured at the edge of carriageways shall not be greater than 3.5 metres.
- (c) For activities that attract a high level of vehicles width measured at the edge of the carriageway shall be as follows:
 - between 3.5 and 6.0 for a one way operation or
 - between 6.0 and 9.0 metres for a two way operation.
- (d) No access shall be constructed within 7.5 metres of the road reserve boundary of a road intersection.
- (e) Access shall be constructed in accordance with the details set out in Figure 10 (page 91).

(VI) ACCESS TO LOCAL ROADS

Access to local roads shall be in accordance with (i) and (ii) above.

(VII) NON-COMPLIANCE

Any proposal that does not conform with these standards shall be considered as a restricted discretionary activity, with discretion restricted to this matter. Unless Council determines otherwise on the basis of safety concerns, written consent of affected parties need not be received and the application may not be notified except where the activity affects a State Highway in which case, Transit New Zealand's comments will be required.

Assessment Criteria (not part of this rule)

In considering any application under this rule, Council will consider the following:

- a. the intensity and duration of the activity;
- b. the classification and use of the road;
- c. any effect on the safety and efficiency of that road.

REASON

Development alongside of the roading network may reduce the safety and efficiency levels of the road. Performance standards have been developed by Transit NZ and the Land Transport Safety Authority to ensure safety and efficiency levels are not compromised. These standards have been used as the basis for control, although in some instances they have been modified to suit local conditions. Refer to "Highway Planning under the Resource Management Act" Transit NZ, 1994.

RULE TRAN.5 LOADING AND MANOEUVRING
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(I) SERVICING ACTIVITIES

Where the loading and unloading of goods is an integral part of an activity, loading facilities are to be provided.

All such loading areas shall be so located that no vehicle or machinery engaged in any loading or unloading operation shall stand on or be required to manoeuvre on any part of the road reserve.

Design shall be appropriate to the type of vehicles that have occasion to visit the site.

(II) SCHEDULED ROADS

Loading facilities together with access and turning space are to be provided and designed so that it is not necessary to reverse vehicles either on to or off the road, on properties fronting the following roads;

- all State Highways, Regional and Urban Arterials;
- James, Elizabeth, John, Gordon, George and Charlotte Streets, Balclutha.

(III) NON-COMPLIANCE

Any proposal that does not comply with these requirements shall be considered as a restricted discretionary activity. Council shall restrict the exercise of its discretion to this matter.

Assessment Criteria (not part of this rule)

In considering any application under this rule, Council will consider the following:

- a) the configuration of the site;
- b) the size and intensity of the activity;
- c) the classification and use of the road;
- d) any effect on the safety and efficiency of the road.

Any application for resource consent under this rule shall generally be considered without notification or the written consent of affected people. Except that where a State Highway is involved the application will be referred to Transit New Zealand for comment.

REASON

The loading and manoeuvring of vehicles can have a major impact on the safety and efficiency of the roading network, and therefore it is imperative loading activities are controlled on certain busy and important roads.

RULE TRAN.6 PARKING

- (i) Every activity shall make sufficient provision for vehicular parking in accordance with Table 12 and the minimum dimensions stated in (ii) below and Figures 5 and 6 (pages 86-87) other than on public roads provided that in those areas with "service retail frontage" as depicted on the planning maps, no on-site parking is required except where the retail, service or assembly area floor space of any building is 300m² or more or in circumstances where buildings have been demolished or removed from a site.
- (ii) Construction of parking areas to accommodate in excess of 3 car spaces including vehicle access and turning spaces, shall be constructed in accordance with the following standards;
 - a. Parking areas shall be formed and sealed or otherwise maintained, so as not to create a dust nuisance or permit vehicles to carry deleterious materials such as mud, stone, chip or gravel onto the road or footpath.
 - b. Stormwater originating from the parking areas shall be adequately disposed of to an approved outfall either within the confines of the site or by a pipe of adequate diameter given the size of the parking area to a road channel or stormwater drain.
 - c. Traffic safety is to be ensured by:
 - Vehicles using the parking area being prevented by means of a kerb-wall from entering or leaving the site except by access ways provided.
 - The parking area and turning spaces shall be laid out with sufficient manoeuvring space so that access can be obtained to the required parking space without the necessity for reversing on to or off the site.

- Any part of the parking area which cannot be used for the parking shall be landscaped.
- d. Privacy of neighbours is to be protected by ensuring that where the parking area adjoins a residential property, a solid fence, no less than 1.5 metres in height, shall be erected and maintained by the developing owner provided that the height of the fence shall be reduced at access points to enable adequate visibility on adjoining roads.
- e. Queuing space being provided within the site for vehicles entering or leaving a private or public carpark on the following basis:
- 6 metres length in both directions for car parks of 50-100 car capacity.
 - 15 metres length in both directions for car parks of greater than 100 car capacity.
- f. Any lighting associated with the parking, area shall have no adverse effect on adjoining properties or roads.
- g. All areas of car parking in excess of 100m² shall provide a strip of not less than 1.5 metres in width adjacent to any boundary adjoining an area of open space (including roads and yards) except where a solid fence has been erected.

This strip shall create the opportunity for landscaping to provide visual enhancement or screening. Landscaping shall not impede traffic visibility and shall be maintained in a healthy and tidy condition at all times.

(iii) Breach of Standard

An activity that does not comply with the standards stated in Rule TRAN.6(i) and (ii) and Table 12 will be considered as a discretionary (restricted) activity. Council shall restrict the exercise of its discretion to the effect on the adjoining roading network, the effect on any heritage values of the site or the area, and the amenity values of the neighbourhood.

In granting any resource consent Council may require a cash contribution in lieu of the provision for vehicular parking which will be determined on the basis of the actual cost of developing the required amount of parking required by Table 12 (including the cost of purchasing the land).

Any application made under this rule will generally not be notified if the written approval of affected parties is received.

REASON

Large scale developments tend to attract a high number of visitors and/or employ a large number of people thereby increasing pressure on parking in the neighbourhood. To reduce the impact on the safety and efficiency of the roading network, off-street parking facilities of an appropriate standard are to be required. The exception is in the Districts commercial centres, which are invariably fully developed and cannot provide on-site parking. These areas are generally well served by existing public parking areas. However, activities that generate large, steady volumes of traffic (eg. Supermarkets) will continue to be required to provide for their own parking needs. Such activities are generally not compatible with the concentrated town centres and prefer to locate on the periphery of these areas.

RULE TRAN.7 VEGETATION

(I) ROAD RESERVE VEGETATION

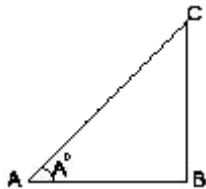
No vegetation shall be planted on a road reserve or property in such a manner that allows it to overhang the legal roadside boundary.

(II) ICE THAW

Production forestry, amenity planting or shelter belt planting more than 2 rows deep shall not be planted within 10 metres of the legal road reserve on the eastern or northern side of any road where the speed limit is 70km/hour or above.

(*Note: See also Method TRAN.3*)

Figure 4: Formula for Calculating Shadow Lengths



AB = shadow length

BC = height of tree

A° = angle sun strikes the earth's surface.

Height of Tree

tan angle sun strikes the earth = Shadow length

Angle created when Sun Strikes Earth on the Shortest Day of the Year

Time	Angle
10.00am	19.0°
12 noon	24.5°

(III) VISIBILITY

No vegetation, which obstructs, impedes or restricts visibility of traffic at intersections, property accesses or road corners is permitted.

REASON

Vegetation, if inappropriately located, can greatly affect public safety on roadways by impeding visibility at corners and intersections, and by impeding the thawing of iced road surfaces.

Consideration was given to imposing the 10 metre restriction on all boundaries, however this was discarded because:

- (i) western and southern boundaries do not prevent the thawing process, and
- (ii) the effects of snow drift was not considered to be frequent enough to warrant buffer zones on these boundaries.

Single trees and shelterbelts have been excluded from this rule to provide flexibility. However, this type of planting is still subject to the Local Government Act 1974 (*see Method TRAN.3*) which gives Council the ability to have problem trees removed.

Applying the 10 metre rule only to production forestry was to give forest owners a degree of certainty although these trees are also subject to the provisions of the Local Government Act.

However with trees being automatically set back 10 metres, the effect of removing offending trees at a later date is minimised. Furthermore, production forestry plantings tend to be on a greater scale than shelter belt plantings.

RULE TRAN.8 RAILWAY CONSTRUCTION AND MAINTENANCE

(I) EXISTING RAILWAY RESERVE

The development of a railway line on an existing railway reserve is a restricted discretionary activity. Council shall restrict the exercise of its discretion to the following;

- intersections with roading network
- mitigation of noise effects

(II) DEVELOPMENT OUTSIDE OF RESERVE OR DESIGNATED AREA

The development of a railway line where there is no existing reserve or designation is a discretionary activity and shall be assessed in accordance with the criteria set out in *Rule TRAN.1 (iii)*.

(III) MAINTENANCE

Railway maintenance works are permitted activities provided adverse effects on the environment are avoided or mitigated.

REASON

As with roading development, railway construction can have significant effects. Where a railway has existed before, Council considers the effects of reinstatement can be controlled by way of conditions, while new railways need greater consideration and are therefore discretionary activities.

RULE TRAN.9 SIGHT LINE PROTECTION: RAILWAY

Any building or vegetation located within an area bounded by lines connecting points of 30 metres along the centreline of the road measured in each direction from the centreline of the nearest railway track to points 140 metres along the nearest railway track measured in each direction from the centreline of the road as more particularly shown in *Figure 13 (page 93)* shall be a non-complying activity.

REASON

Level railway crossings are particularly dangerous, and accordingly adequate sight lines must be preserved.

(Note: The Land Transport Safety Authority has released a discussion document that deals with safety issues at Railway Level Crossings. Council is considering adopting this as a guideline.)

RULE TRAN.10 BALCLUTHA AERODROME

The Balclutha Aerodrome shown on Planning Map 4, is subject to a proposed Management Plan which provides for its control, maintenance and ongoing development. Development consistent with that management plan is a permitted activity, while development not provided for is a non-complying activity.

REASON

The Balclutha Aerodrome is classified as either Local Purpose Reserve (site for an Aerodrome) or Council land held in fee simple for purposes of an Aerodrome. A management plan has been prepared under the Reserves Act 1977 for the site and it is appropriate that the provisions of this plan be recognised by the District Plan. The operation of the Aerodrome will also be subject to Civil Aviation Requirements.

RULE TRAN.11 COMMERCIAL AIRPORTS

Airports providing public and private passenger, freight transport services or that act as a base for a commercial operation, are discretionary activities.

Assessment Criteria (not part of the rule)

In deciding any application, Council will consider the location of the proposal on the following basis:

- (i) The adverse effects of noise on not only the adjacent environment but also those areas affected by flight paths.
- (ii) Visual effects.
- (iii) Alternative sites considered.
- (iv) Any increase in traffic volume and flow and its effect on the transportation network in the locality.

REASON

The development of new airports can have significant environmental effects and the preferred locations often causes a significant amount of controversy. Council therefore considers it necessary that a notified resource, consent be applied for in respect of any new development.

RULE TRAN.12 RURAL AIRPORTS

Airports associated with normal rural land management are permitted activities provided there are no adverse effects on residential buildings in the locality (excluding those located on the subject property).

REASON

In the past Council has not been involved in the regulation of farm airstrips, and circumstances have not altered to justify intervention. As such strips are generally located in isolated areas, there are few adverse effects on the neighbouring environment.

3.3.6. WORKS PROGRAMME

Council is of the view that the District's programme of capital works is more appropriately addressed in the Annual Plan and Strategic Planning processes. Council's Annual Plan addresses the short term capital expenditure programmes, while the Strategic Plan will identify Council's long term goals and aspirations.

3.3.7. OTHER METHODS

METHOD TRAN.1 ROADING HIERARCHY

Council has adopted the following roading hierarchy to assist resource users in determining the effects activities may have on the roading network;

(I) RURAL ROADS

(A) STATE HIGHWAYS

Description: Roads identified by Transit New Zealand as routes of national or regional importance as defined by the Transit New Zealand Act 1989.

Primary Function: Provide part of a network of strategic routes through the country linking districts and regions.

Secondary Function: Provide links between the Clutha District and other Districts.

Maintenance and Use: State Highways are fully funded, maintained and managed by Transit New Zealand.

Heavy Traffic Route.

(B) REGIONAL ARTERIAL ROAD

Description: Strategically important roads between districts in the region and between regions.

Primary Function: Provide links between the Clutha District and other Districts. Heavy Traffic Route.

Secondary Function: Provide links between centres of population or to larger roads.

Maintenance and Use: Council will maintain Regional arterial roads to the standards for which Transit New Zealand funding assistance is available within the constraints of Council's roading programme budget.

(C) DISTRICT ARTERIAL ROAD

Description: Roads that provide direct access through the district between communities.

Primary Function: Provide links between centres of population or to larger roads. Heavy Traffic Route.

Secondary Function: Provide access to dwellings, land and facilities.

Maintenance and Use: Council will maintain District Arterial Roads to the standards for which Transit New Zealand funding assistance is available within the constraints of Council's roading programme budget.

(D) DISTRICT COLLECTOR ROAD

Description: Roads that provide the most direct access from rural districts to District Arterial, Regional Arterial or State Highways.

Primary Function: Provide access from rural areas to service towns or to larger roads. Heavy Traffic Route.

Secondary Function: Provide access to dwelling land and facilities.

Maintenance and Use: Council will maintain District Collector Roads to the standards for which Transit New Zealand funding assistance is available within the constraints of Council's roading programme budget.

(E) DISTRICT LOCAL ROADS

Description: Roads that provide access to permanently occupied dwellings within the District provided that;

- the road is not determined to be serving the function of a private driveway;
- the road is fenced on both sides;
- there are no gates, or provision for gates, or cattle stops across the road;
- the road is not utilised for any other rural or industrial activity; and
- that where a single property contains two or more dwellings beyond which there are no properties with dwellings fronting the road the road ceases to be a District Local Road beyond the first dwelling.

Primary Function: Access to residential homes.

Secondary Function: Access to land and facilities.

Maintenance and Use: Council will maintain District Local Roads to the standard for which Transit New Zealand funding assistance is available within the constraints of Council's roading programme budget.

These roads are not considered Heavy Traffic Routes for the purposes of this Plan.

(F) DISTRICT ACCESS ROAD

Description: Roads that provide access to properties without permanently occupied dwellings.

Primary Function: Access to land

Secondary Function: Used as access to recreational areas e.g. streams, coastal areas sufficient to warrant Council involvement.

Maintenance and Use: Council will provide limited maintenance for District Access Roads:

- up to the first boundary on the last property on the road, where that property has no other road access; and
- to any recreational area where there is no other access and where Council considers it is in the District's interest to maintain the road.

Fences for the purposes of stock control may be erected. Gates are to be provided and shall be in terms of Section 344 of the Local Government Act 1974 and shall not be locked.

These roads are not considered Heavy Traffic Routes for the purposes of this Plan.

(G) NON-MAINTAINED ROADS

Description: Roads formed on legal roadlines but not maintained by Council as part of its roading network.

Primary Function: Secondary access to land or facilities or access internal to a property and not needed for general public use.

Secondary Function: Used as access to recreational areas e.g. streams, coastal areas, but not sufficient to warrant Council's involvement.

Maintenance and Use: The landowner through whose property the road passes may use the road and maintain it but must not destroy the road without Council approval.

Building and structures, other than for the purpose of public utilities shall not be erected on the road, unless prior approval is given by Council.

The landowner occupying the road shall be responsible for the control of noxious plants and pests on the road.

Fences for the purposes of stock control may be erected. Gates are to be provided and shall be in terms of Section 344 of the Local Government Act 1974 and shall not be locked.

Public access is a public right provided the type of transport used is limited by the physical nature of the road and the state of the surface. The type of transport used must not cause damage to the ground or pavement. It shall be the responsibility of the public wishing to access the road to determine the status and location of the road before entering onto it.

These roads are not considered Heavy Traffic Routes for the purposes of this Plan.

(H) UNFORMED ROAD

Description: Roads that are unrecognisable on the ground and exist on the plans and in legal terms only. Also known as 'paper roads'.

Primary Function: Provide legal frontage to sections of land. Access to waterbodies, the coast and other recreation areas.

Secondary Function: Unformed roads adjacent to waterbodies often have the purposes set out in section 229 of the Resource Management Act 1991.

Maintenance and Use: The landowner through whose property the unformed road passes may use it for the same purposes which applies to the landowners property contiguous to the road.

Building and structures, other than for the purpose of public utilities shall not be erected on an Unformed Road unless Council's consent is received. Building location requirements shall apply.

The landowner using an Unformed Road shall be responsible for the control of noxious plants and pests on the road. Fences for the purposes of stock control may be erected. Gates are to be provided and shall be in terms of Section 344 of the Local Government Act 1974 and shall not be locked.

Public access is a public right provided the type of transport used is limited by the physical nature of the road and the state of the surface. Users must not cause damage to the ground or pavement or any riparian margin, particularly those unformed roads that form an esplanade margin as shown on the Planning Maps. It shall be the responsibility of the public wishing to access an Unformed Road to determine the status and location of the road before entering onto it.

Council is to investigate the future levying of rates and rentals for the use of Unformed Roads by landowners. Public legal right of access will not be affected by any such levy imposed.

These roads are not considered Heavy Traffic Routes for the purposes of the Plan.

Note: Stopping Roads

The procedure for stopping roads (whether formed or unformed) is set out in the tenth schedule to the Local Government Act 1974. Those procedures require any such proposal to be publicly notified. Council may consult with interested parties such as the Otago Fish & Game Council and the Department of Conservation where such roads provide physical access to a waterbody, the coast, or other land of conservation or recreation value.

(I) BRIDGES, CULVERTS AND FORDS

Description and Function:

Bridge - structure designed to carry road over an obstacle (river, stream, creek, railway line etc) by spanning it. Includes culverts with a cross-sectional area greater than or equal to 3.4 square metres.

Large Culvert - One or more adjacent pipes or enclosed channels running across and below road formation level having a cross sectional area less than 3.4 square metres and greater diameter than 600 mm.

Ford - a shallow place in a water course where the bed may be crossed by traffic.

Maintenance, Replacement and Use: Council will maintain all existing bridges, large culverts and fords on District Access and higher category roads, provided the structure is on Council's bridge register. (Note: Transit New Zealand is responsible for such structures on State Highways).

Council will contribute up to 50% of the cost of:

- (i) a required bridge, culvert or ford replacement due to loss caused by flood or earthquake, and
- (ii) upgrading or renewing of a bridge, culvert or ford that is no longer suitable for its purpose because of its age and carrying capacity

provided that:

- provision can be made for the cost within Council's roading programme budget
- there is no alternative access to the property
- the upgrade or renewal option is the most economical as determined by the current Transit New Zealand Project Evaluation Manual
- the existing structure is on Council's bridge register.

(II) URBAN STREETS

STATE HIGHWAYS

State Highways that pass through district townships.

URBAN ARTERIAL

Routes that primarily provide for the movement of traffic through the urban areas.

URBAN COLLECTOR

Routes that link arterial streets with residential streets. These streets serve a dual purpose as both access for residential buildings and the movement of traffic.

URBAN INDUSTRIAL

Routes that serve as direct access to predominantly Industrial and/or Commercial property.

URBAN RESIDENTIAL

Routes that provide direct access to residential buildings, including cul-de-sacs etc.

REASON

The roading hierarchy is considered the most effective method for determining the appropriateness of effects alongside the roading network, and for assessing the appropriate access standards to the roading network.

The hierarchy also determines the scale and relative priority of maintenance works on rural roads in terms of Clause 6 of the Second Schedule to the Act.

METHOD TRAN.2 MONITORING

Council shall monitor the effect that these policies and rules have on the transportation network by analysis of complaints received and any accidents occurring within the District.

REASON

Complaints and accident statistics are a ready guide as to how effective Council's policies and rules are at minimising adverse effects on the transportation network.

METHOD TRAN.3

Council will invoke the provisions of section 355 of the Local Government Act 1974 where vegetation is considered to be causing injury to a road, obstruction to traffic (including where the thawing of ice is being prevented) or obstructing visibility.

REASON

As stated in the Reason to *Rule TRAN.7(ii)*, vegetation can greatly affect public safety through reducing visibility and preventing the thawing of ice. Rule *TRAN.7(ii)* only partly addresses the problem of ice thaw but is considered to be a reasonable balance between imposing unnecessary constraints on land owners, and achieving the objectives of the Plan. Consequently, this method has been included in the Plan to draw the general public's attention to the fact that the Local Government Act will be used where a problem is identified.

It is considered prudent to address this issue at the time of planting rather than being forced to remove offending trees at a later date. To avoid this potential problem, trees should not be planted in a position where the road surface would be shaded between the hours of 10:00am and 2:00pm on the shortest day of the year. (See *Figure 4 (page 79)* for guidance on this issue)

3.3.8. ANTICIPATED ENVIRONMENTAL RESULTS

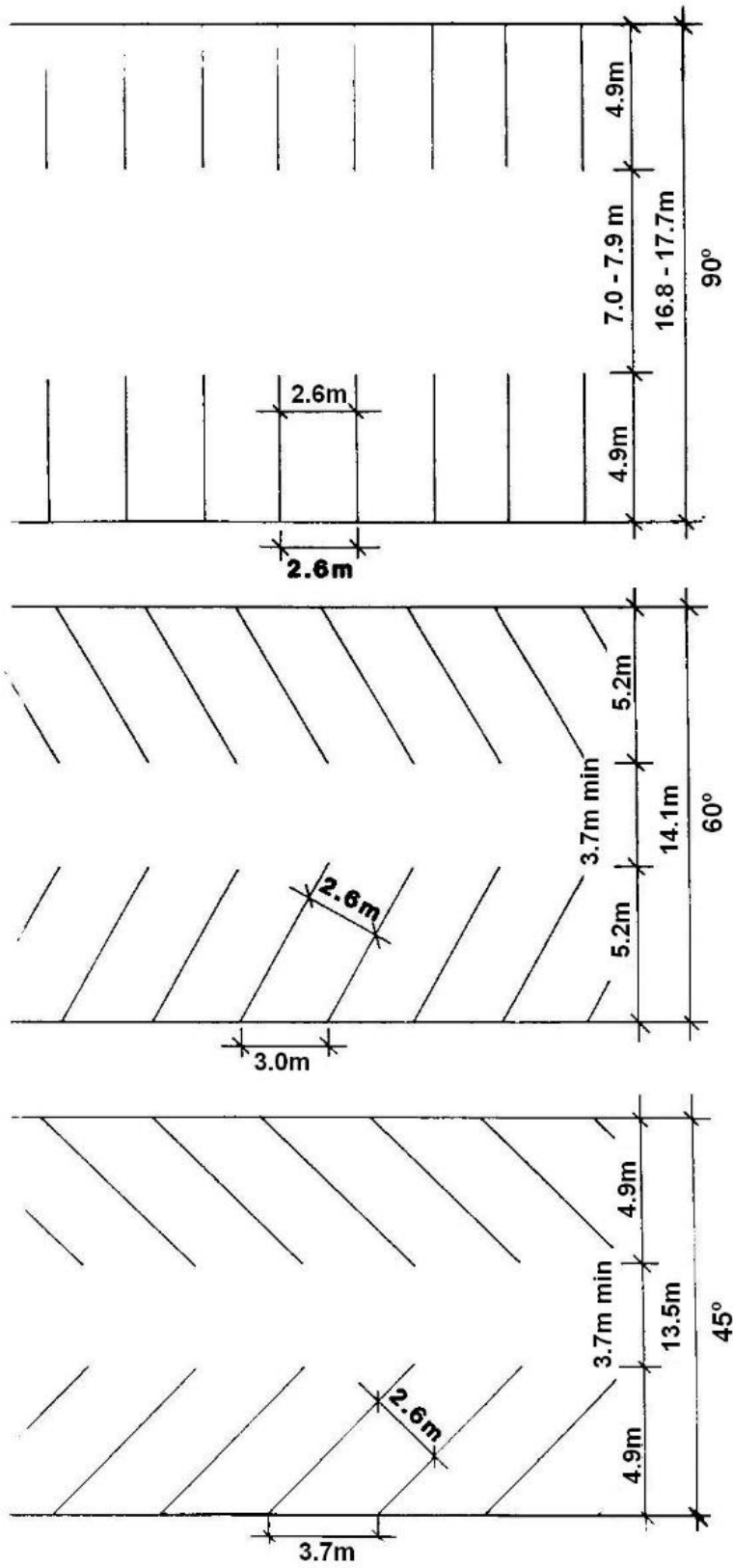
1. A safe and efficient transportation system throughout the District.
2. A reduction in the effects that heavy vehicles have on the Districts roading resource.
3. A reduction in the adverse effects land use effects have on the transportation system.
4. That adverse effects of the transportation system will be reduced.

TABLE 12: VEHICLE PARKING REQUIREMENTS (Rule TRAN.6 page 78)

ACTIVITY OR USE OF LAND OR BUILDING	SPACES REQUIRED
RESIDENTIAL	
Detached Dwelling Unit	1 per unit
Unit or attached unit being part of a Multi-Unit Residential development	1 per unit
Home Occupation	1 for every non-resident employee
Papakaika Housing	2 per unit
Motel	1 per unit
Travellers Accommodation	1 per bedroom or 1 per 4 occupants whichever is the greater
COMMERCIAL - INDUSTRIAL	
Shops	1 per 40m ² gross floor area
Supermarket	1 per 16m ² net floor area or 1 per 25m ² gross floor area (which ever is the greater)
Dairy or Convenience Store	1 per 40m ² gross floor area
Takeaway Food Bar	1 per 40m ² gross floor area
Service Stations	1 per 50m ² gross floor area excluding canopies over petrol pumps
Restaurant	1 per 4 seats plus 1 per staff member
Tavern	1 per 5m ² of net public floor space
Outdoor Display Area	1 per 100m ² gross display area
Vehicle Showrooms	1 per 100m ² gross floor area
Offices	1 per 40m ² gross floor area
Premises for doctors, dentists, veterinary surgeons	1 per 25m ² gross floor area
Industrial Premises and Warehouses	1 per 100m ² gross floor area or 1 per 2 staff members whichever is the greater
Industrial storage, internal or external except warehouses	1 per 100m ² gross floor area
EDUCATIONAL	
Childcare facility, Primary and Intermediate Schools	1 for every staff member
Secondary School	1 for every staff member plus 1 for every 50 students.

HEALTH	
Hospital, Convalescent Homes, Nursing Homes, Homes for the Aged	1 per staff member plus 1 per 20 persons that the building is designed to accommodate.
COMMUNITY/RECREATION	
Places of Assembly	1 per 10m ² gross floor area
OUTDOOR RECREATION INCLUDING WATER SURFACE ACTIVITIES	<p>The space requirements will be determined by Council, taking into account such matters as:</p> <ul style="list-style-type: none"> • the scale of the park or facility • the proposed use and its intensity • the location of the park to the road network and other land uses • the opportunity for 'shared' parking with adjacent developments. • the requirements of any management plan.

Figure 5: Typical Parking Layout (Rule TRAN.6 page 78)



N.B.
A 90 Percentile Car
is 4.77m in length

Figure 6: Standard Design Vehicles

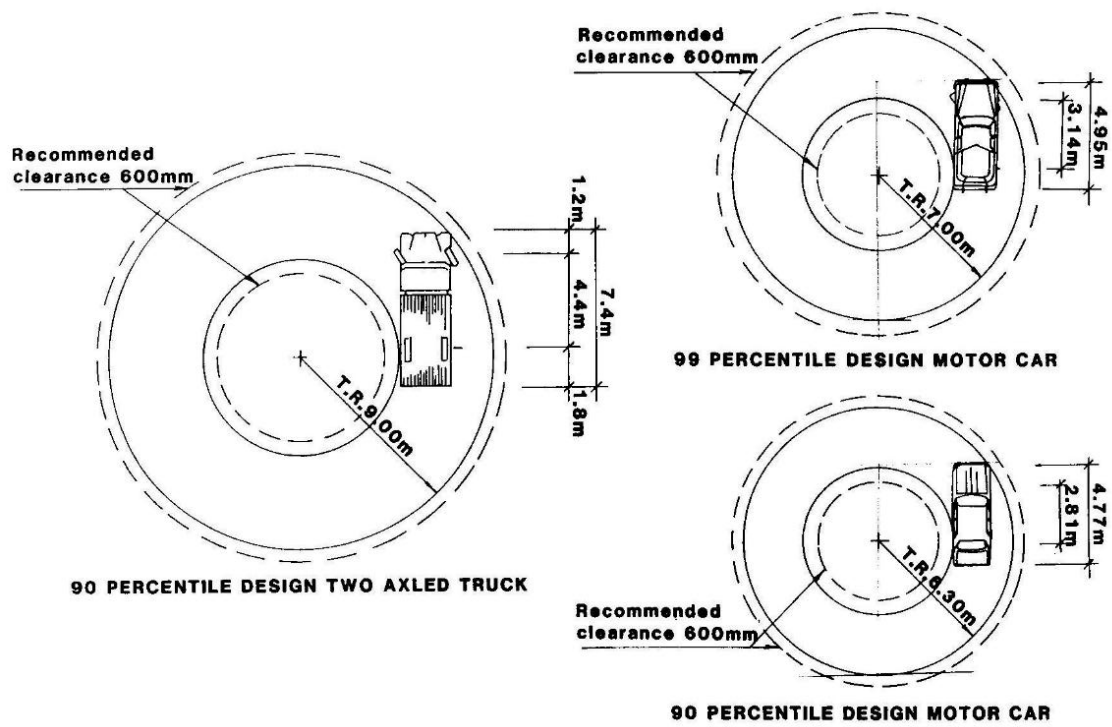


Figure 7: Private Access to Rural State Highway and Regional Arterials

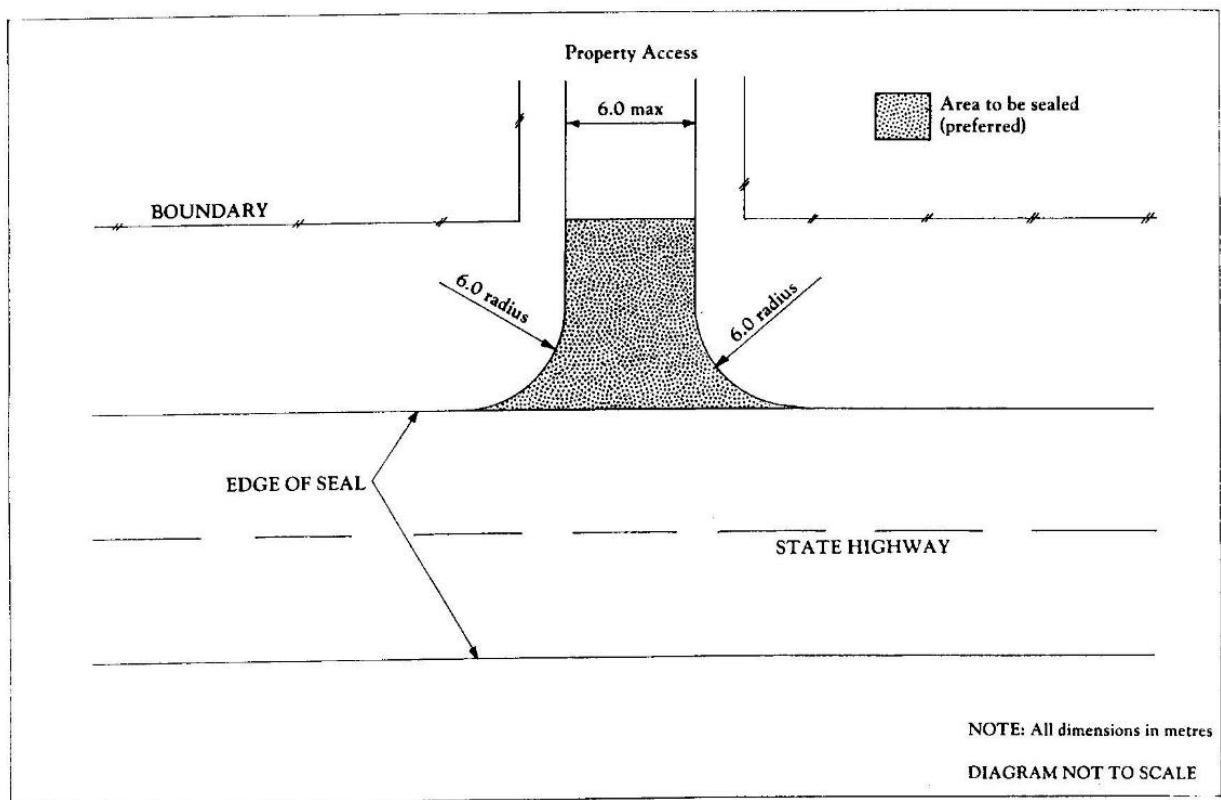


Figure 8: Heavy Vehicle Private Access to Rural State Highway and Regional Arterial

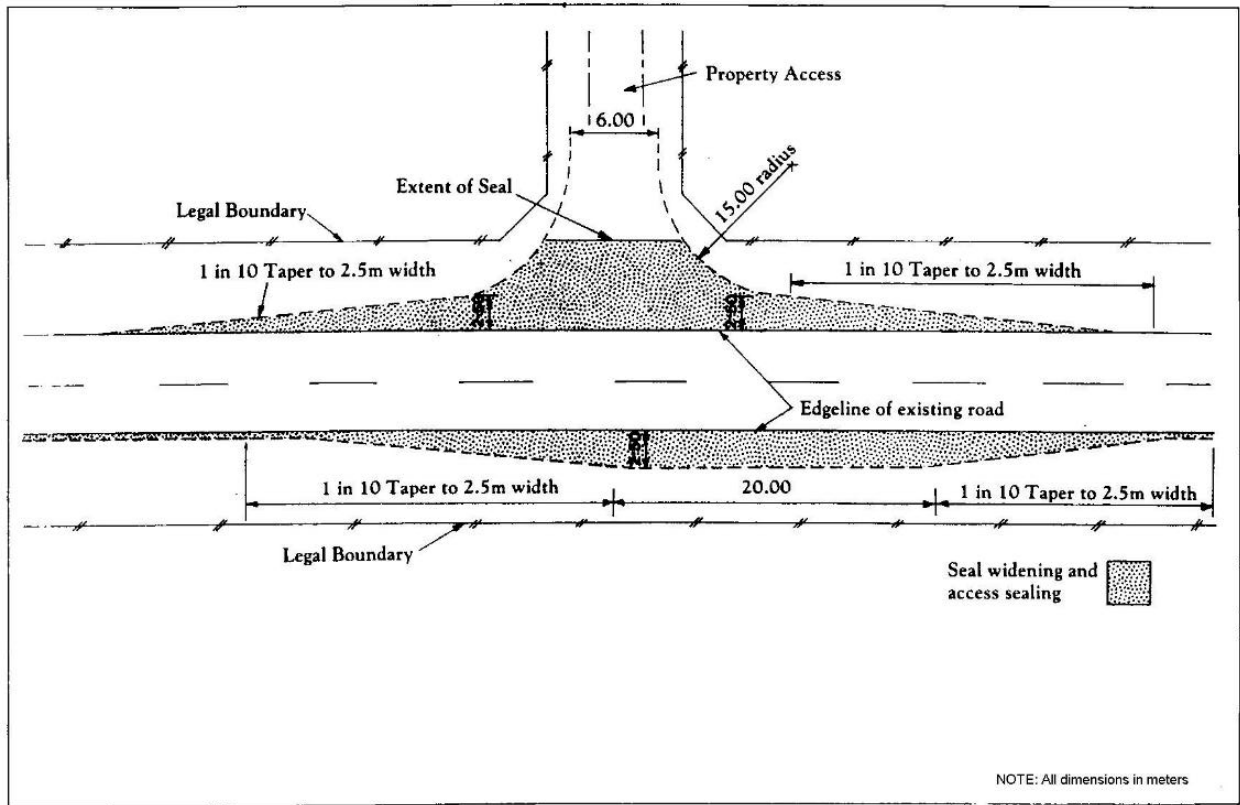


Figure 9 - Commercial Access and Road Widening to Rural State Highways and Regional Arterials

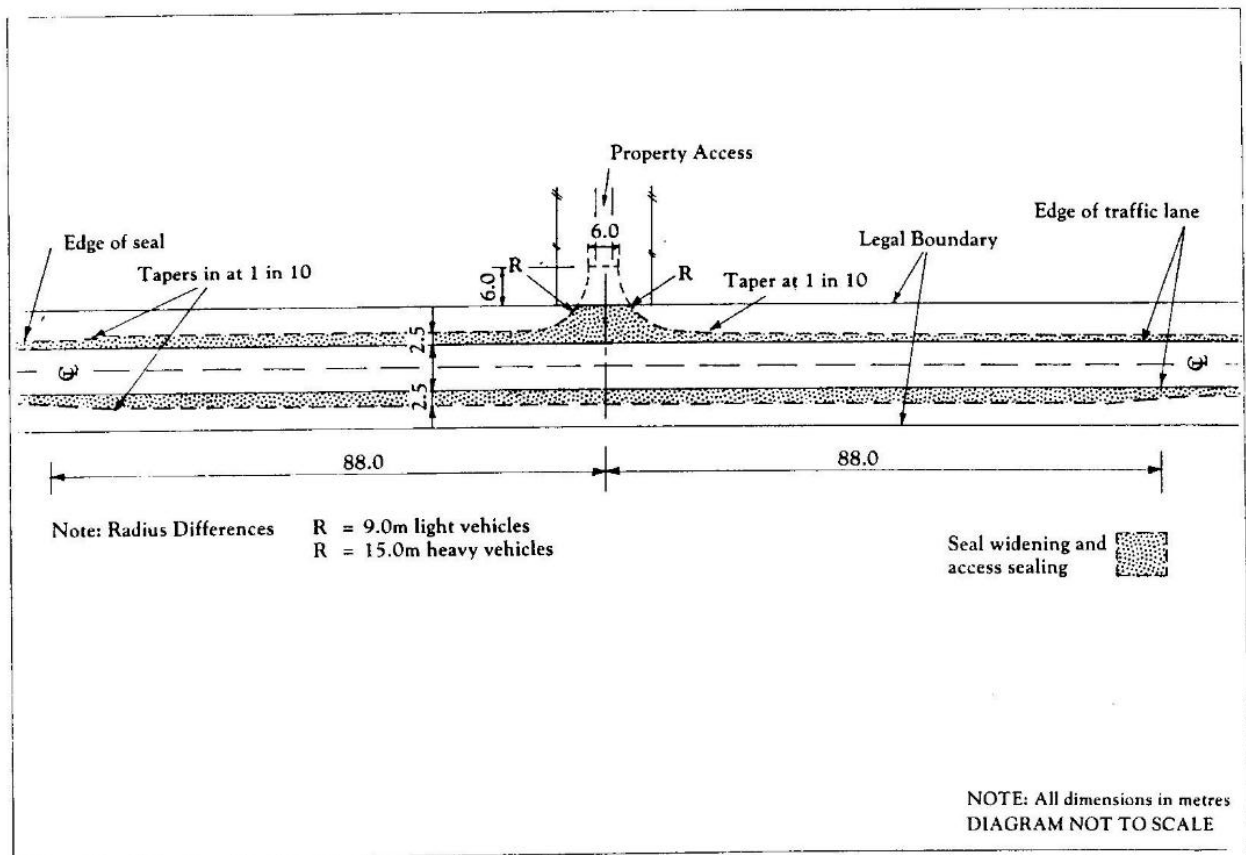


Figure 10: Access to Urban State Highway

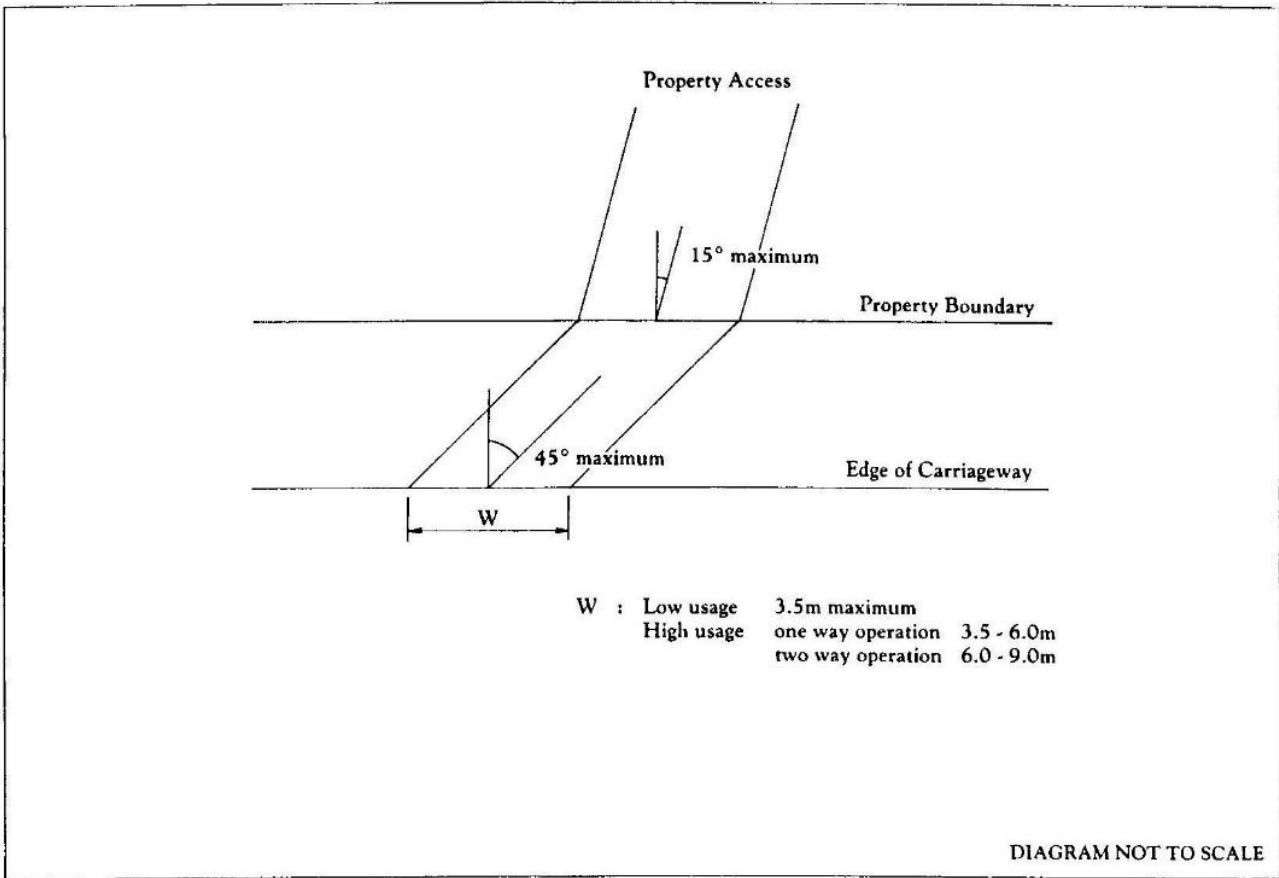
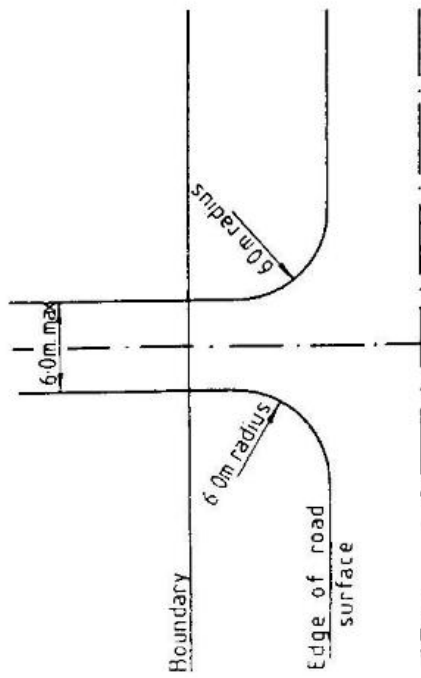


Figure 11 - Access to District Arterial and Collector Roads

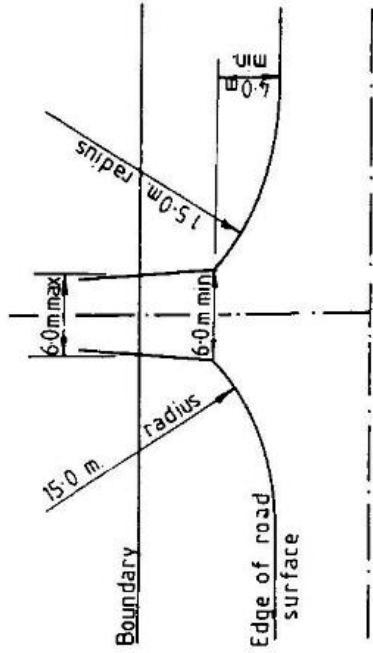
Figure 12 - Measurement of Sight Distance

FIGURE 11(a)



Access layout for Residential activities including DWELLINGS, LIFESTYLE BLOCKS, and RETIREMENT DWELLINGS

FIGURE 11(b)



Access layout for Non-Residential activities including FARMING, FACTORY FARMING, INTENSIVE FARMING and OTHER PERMITTED USES

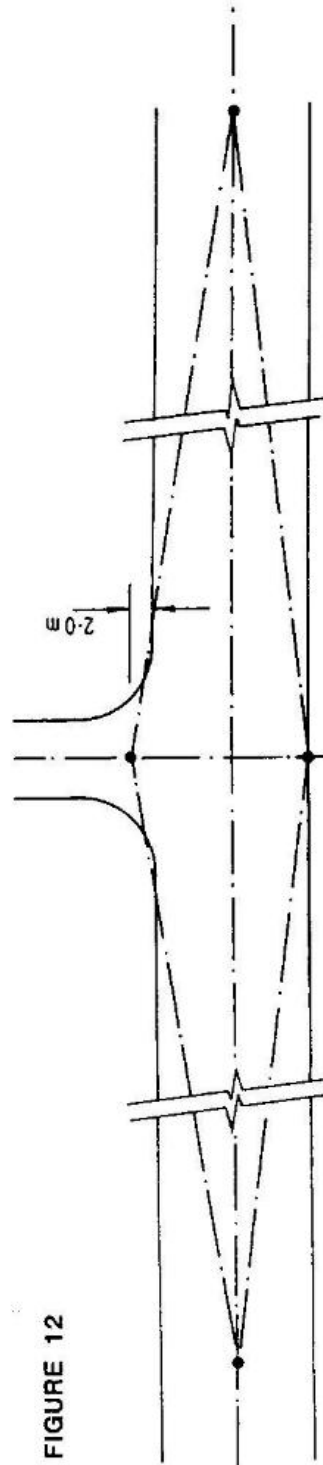
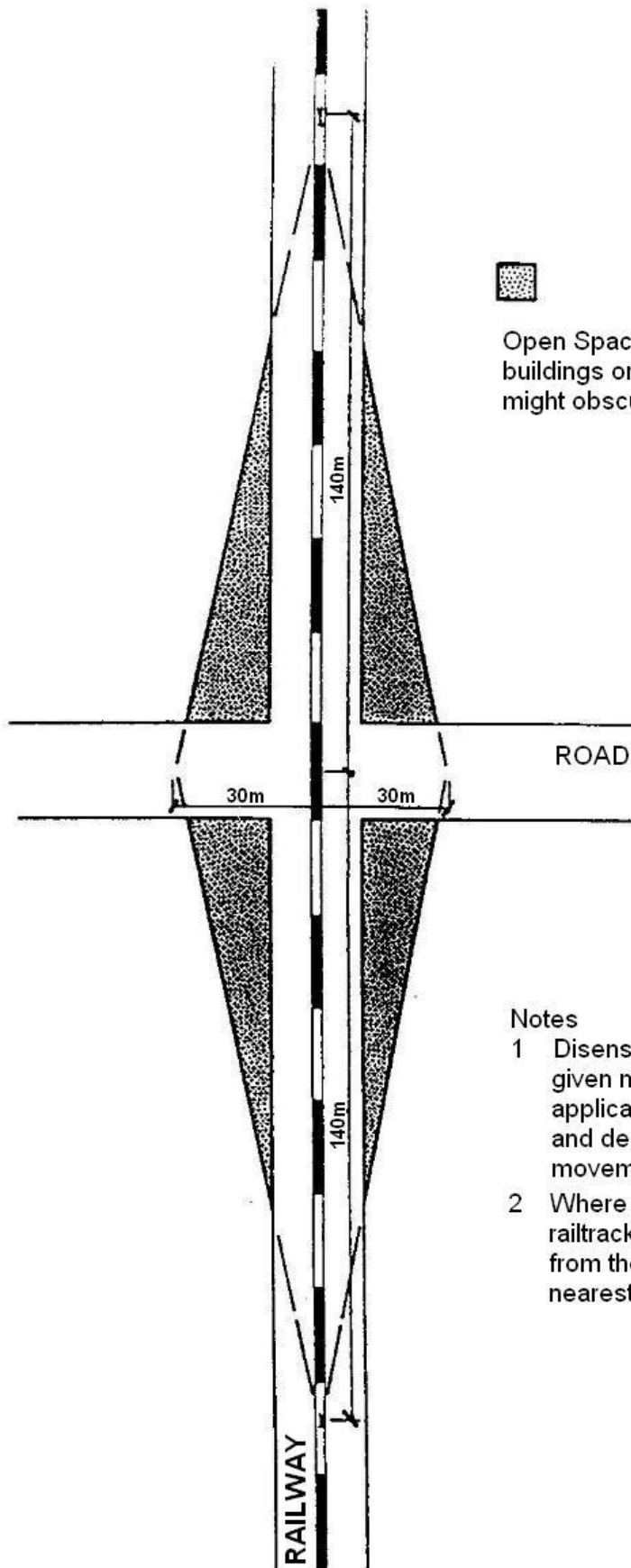


FIGURE 12

Measurement of Sight Distances - refer Table 7

Figure 13 - Railway Sightlines



Open Space Areas to be kept clear of buildings or other obstructions which might obscure sight lines

Notes

- 1 Disensation to dimensions given may be possible through application to NZ Rail Limited and dependant upon train movements or speeds in the area.
- 2 Where there are 2 or more railtracks 30m sight line applies from the centre line of the nearest track