

### 9.3.4 DESIGN OF PARKING AND LOADING SPACES, ACCESS AND TURNING AREAS

#### 9.3.4.1 Discussion, Purpose and Reasons

The design, shape and location of access, turning, parking and loading spaces on a site needs to be such that those areas can be readily used by the type and number of vehicles involved.

It is important that parking, access and turning areas are attractive to use. Otherwise, motorists will not use them and the detrimental effects of vehicles parking on grass verges or on-street will result (eg traffic hazard, and loss of street amenity).

The standards set out below are designed to meet the space requirements of a 90 percentile vehicle. These standards have been updated to reflect the changing nature of vehicles with respect to functions such as powersteering and tighter turning radii.

#### 9.3.4.2 Environmental Results

Parking and loading spaces and access to them represent a significant resource use in terms of space and physical and financial resources to provide and maintain them. This resource use can be compromised if the access, parking and loading design does not allow easy and convenient use. In addition, if these carparking and loading functions are not carried out on site, they have the potential to detrimentally affect the safety and efficiency of the roading network and the amenity of other activities (particularly residential).

#### 9.3.4.3 Standards

The standards set out below apply to those specified activities in every zone:

- Carparking - Any carparking area shall be laid out in accordance with the car turning and parking dimensions of Diagram 3 and the 90 percentile car tracking curve minimum radius of Diagram 4.
- On site turning areas to avoid the reversing of vehicles from:
1. any carparking area containing more than three parking spaces; or
  2. any access onto a Strategic Highway, Regional Arterial or District Arterial road; or
  3. any carpark located a minimum of 20 metres from the street boundary;
- shall be provided in accordance with Diagrams 3 and 4, except for carparking associated with a dwelling.
- Loading - Any loading space(s) shall have minimum dimensions as follows:
- Length 8.0 metres  
Width 4.0 metres  
Height 4.4 metres
- with sufficient turning areas to accommodate a 90 percentile two axle truck as shown in Diagram 5, which would avoid the need to reverse vehicles from the loading space(s) to the road and vice versa.

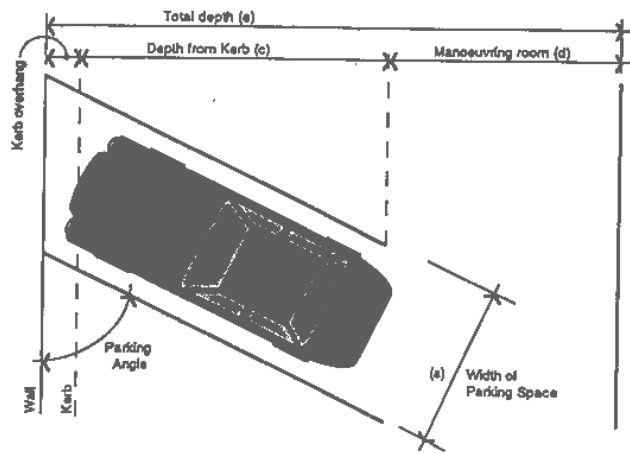
Any vehicle occupying any parking or loading space must have ready access to a street at all times, without the necessity of moving any vehicle occupying any other parking or loading space, with the exception of a single household unit, where only one parking space need be accessible at all times.

Where the internal access width is required to be provided for the two-way operation of vehicles onto and off the site, then the access width shall be at least 6m wide for a distance of 10m within the site from the road boundary.

#### 9.3.4.4 Assessment Criteria

1. Whether the carparking area is used regularly by the same people, making "tighter" carparking dimensions acceptable to those users.
2. Whether there are physical impediments, vegetation worthy of protection or other characteristics of the site that would make it impracticable to provide the turning areas on site.
3. Whether passing bays or other physical methods can be used that would compensate for the length of access to the parking or loading facility.
4. Whether the nature, scale, character or intensity of development or activity carried out on the site is such, that the loading and unloading of goods involves vehicles other than those requiring a 90 percentile two axle truck standard.
5. Although the receiving road may have status in the roading hierarchy, whether there are factors relating to the road (such as volume, type or speed of traffic) which would allow reversing of vehicles onto the road, without significant detriment to the safety and efficiency of that road.

Diagram 3 - Car Manoeuvring and Parking Dimensions



Type of Parking	Stall Width (a)	Stall Depth		Aisle Width (d)	Total Depth (e)		
		from wall (b)	from kerb (c)		one row	two rows	
ALL MEASUREMENTS ARE IN METRES							
0°	Parallel	2.4	See note 1		3.5	5.9	8.3
30°	Nose in	min. 2.4	4.2	4.0	3.5	7.7	11.9
45°	Nose in	min. 2.4	4.9	4.5	3.5	8.4	13.3
60°	Nose in	2.4	5.4	4.9	4.5	9.9	15.3
		2.5			4.1	9.5	14.9
		2.6			3.5	8.9	14.3
		2.7			3.5	8.9	14.3
75°	Nose in	2.4	5.4	4.9	6.6	12.0	17.4
		2.5			6.3	11.7	17.1
		2.6			5.2	10.6	16.0
		2.7			4.6	10.0	15.4
90°	Nose in	2.4	5.1	4.8	8.7	13.8	18.9
		2.5			7.7	12.8	17.9
		2.6			7.0	12.1	17.2
		2.7			6.8	11.9	17.0

1. Parallel parking spaces (Parking angle = 0) shall be 8.0m long, except where one end of the space is not obstructed, in which case the length of a space may be reduced to 5.0m
2. Minimum aisle and accessway widths shall be 3.0m for one way flow, and 5.5m for two way flow. Recommended aisle and accessway widths are 3.5m for one way flow, and 6.0m for two way flow.
3. Maximum kerb height = 150mm
4. Stall depth computed from 90 percentile vehicle dimensions. A 200mm separation from walls has been added
5. Aisle width from MoT Traffic Engineering Section analysis.

Diagram 4 - 90 Percentile Car Tracking Curve Minimum Radius

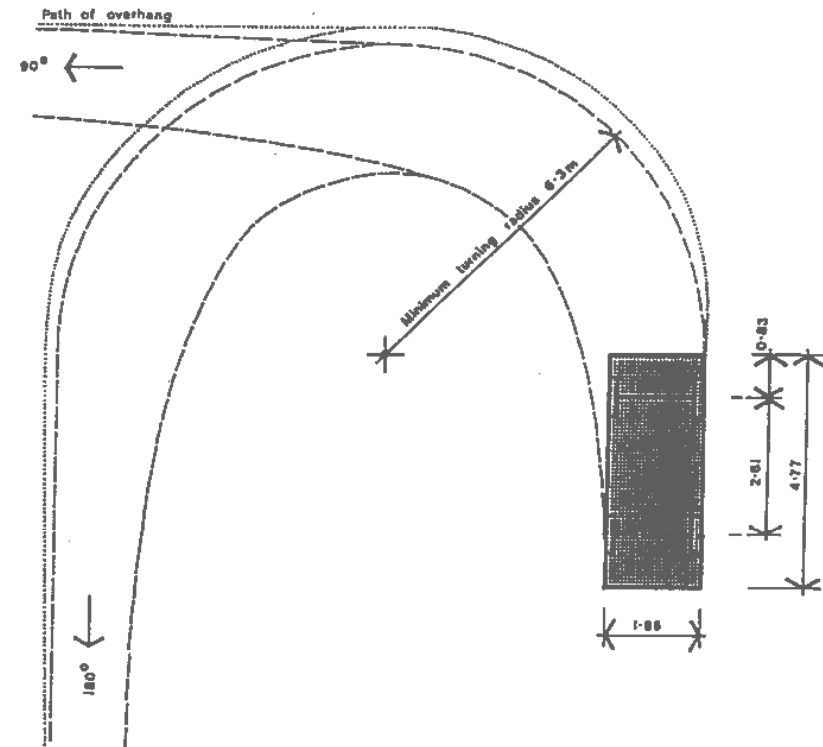
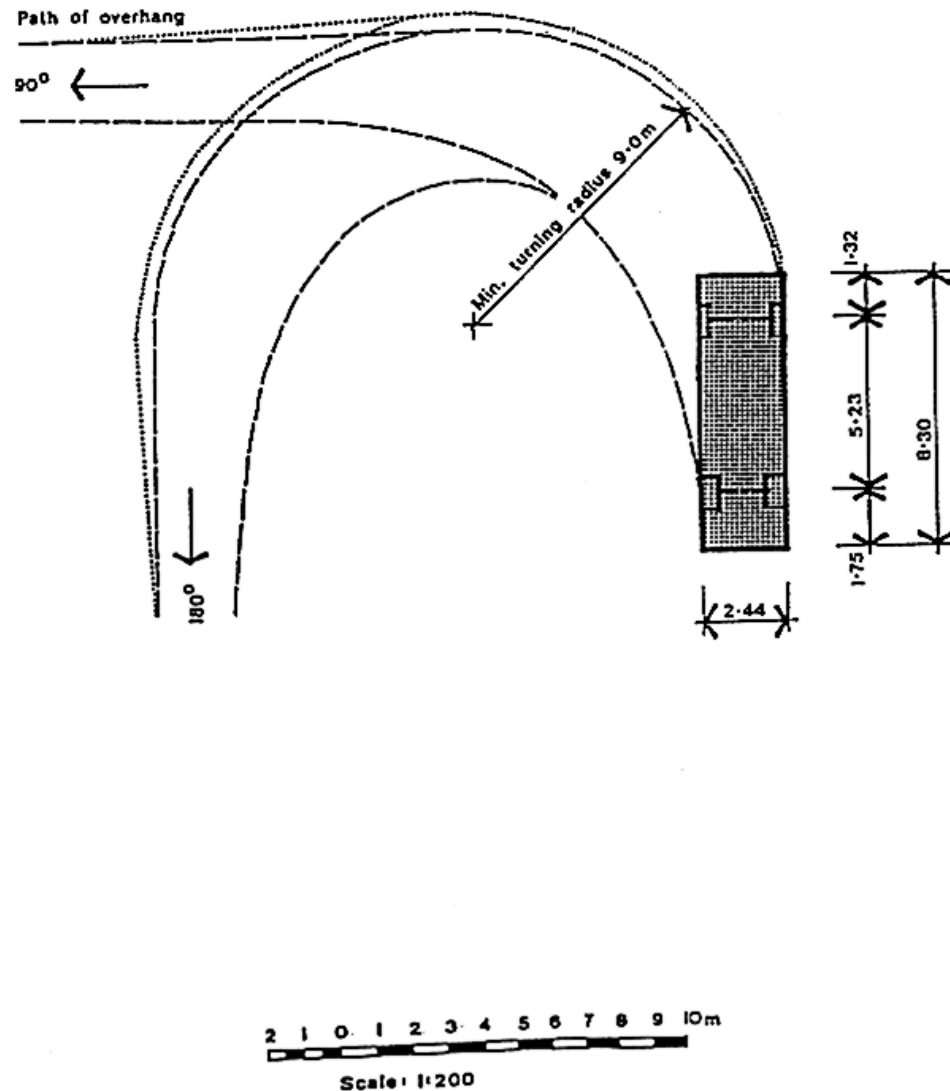


Diagram 5 - 90 Percentile Truck Tracking Curve Minimum Radius.



### 9.3.5 FORMATION, SCREENING AND LANDSCAPING OF PARKING, LOADING AND ACCESS AREAS

#### 9.3.5.1 Discussion, Purpose and Reasons

In some situations, either due to the nature or scale of the activity itself or its location in relation to other activities, parking and access areas need to be developed to a standard that ensures any detrimental affects are avoided or reduced to an acceptable level.

The detrimental effects that need to be considered include:

- Transfer of mud, stones and other material across footpaths and onto the street. This is not only an amenity issue, but also a safety issue, particularly for pedestrians and cyclists.
- Dust.
- Noise.
- Glare from headlights.
- Loss of privacy.

Methods to reduce or avoid these detrimental effects relate to forming the surface, landscaping, screening and delineating the access area.

#### 9.3.5.2 Environmental Result

Parking, loading and access areas should be developed to a standard that ensures that any detrimental effects of activities carried out in the those areas is avoided or mitigated to a level that is compatible with the amenities of the area.

#### 9.3.5.3 Standards

Where parking, loading and access is required on a site, the following standards shall be met:

1. Except for a driveway to be used for a single dwelling house, and produce stalls in the Rural zone, the whole of the required parking or loading spaces, internal access drives and aisles, and turning areas shall be formed and drained and thereafter maintained with an all weather, dust-free surface, such as bitumen, concrete or cobblestones.
2. Where three or more parking and/or loading spaces are provided, such parking and loading spaces shall be clearly marked out and identified.
3. Any group of three or more parking spaces shall be effectively screened on any side which adjoins a residential, reserve or conservation zone, by a solid fence not less than 1.8m in height, provided that if the written consent of the owner of the adjoining site is first obtained, the Council may accept alternative screening, (including planting) or no screening at all.
4. Kerbing or a similar barrier not less than 0.125m high to separate parking and loading areas from the road, shall be provided on those parts of the site frontage not used for vehicular access, where a parking or loading space or turning area or any sealed/paved area in the Town Centre, Industrial (Heavy), Industrial (Light) or Township zone adjoins a road.
5. Any group of five or more parking spaces, or any loading or vehicle storage area which faces onto any Strategic Highway, Regional Arterial or District Arterial road (refer to Section 8.9) or which adjoins a street and faces or adjoins any land zoned Residential, Reserve (Active) and (Passive) or Conservation (Wetland) and (Indigenous Forest), shall be provided with landscaping along the frontage of that area (except for required vehicular access) to a minimum depth of 2m, and shall include at least one tree able to grow taller than 2m for every 10m of frontage. Such trees may be grouped so as not to obscure the site or building.

6. Any required landscaping shall be provided in accordance with Performance Standard 9.3.12.
7. Any group of five or more parking spaces at ground level, shall be provided with sufficient internal landscaping including trees to soften and break up the expanse of the area.  
  
This landscaping area shall be provided at the rate of 1m<sup>2</sup> of landscaping for each five and part thereof of parking spaces and shall be suitable for planting trees capable of growing to a height in excess of 2 metres, which can provide shading.
8. Vehicle parking, loading and access areas shall not be paved, concreted, fenced or otherwise constructed until all required services have been installed.

#### 9.3.5.4 Assessment Criteria

1. The extent to which the standard and method of formation achieve a result similar to that of a formed permanent hard surface.
2. Whether the nature or volume of vehicular traffic is such that detrimental affects will not be created or are at a level which is compatible with the amenities of the area.
3. Whether other methods of screening and/or landscaping create a visual screen, psychological buffer or physical barrier to a level that headlights are screened, or nuisances such as noise, fumes and dust are reduced to a level which is compatible with the amenities of the site and adjoining sites.

### 9.3.6 PAYMENT-IN-LIEU OF PARKING (TOWN CENTRE ZONE)

#### 9.3.6.1 Discussion, Purpose and Reasons

In the Town Centre zone, Council wishes to encourage the development of a "pedestrian friendly" environment. One of the methods that can assist in achieving this objective is to ensure that parking is provided at the required level and in the appropriate places (having regard to matters such as traffic and pedestrian flows, high parking generating activities).

In those situations where it is impracticable to provide the necessary parking spaces either on the site of the activity or on an alternative site, then a cash-in-lieu payment instead of providing the required parking may be accepted by Council. In this way, Council is able to accumulate sufficient funds to coordinate the purchase and development of carparking areas.

Council's policies for the implementation of cash-in-lieu payments rests on the following factors:

1. supply and demand
2. distance
3. funds accumulated.

As part of its monitoring responsibilities, Council will be assessing when the demand for parking exceeds the supply. When this balance is in favour of providing additional parking, then the cash-in-lieu payments will be used to provide a parking facility.

Any cash-in-lieu received from a development in the Town Centre zone, will be targeted for a parking facility either within the Town Centre zone itself or within 200 metres walking distance of the Town Centre zone boundary.

Failure to provide the appropriate level of parking can lead to problems of illegal and hazardous parking, and the Town Centre zone becoming less attractive for business, shopping and other activities. This can lead to flow-on pressures for retailing activities to establish in industrial zones.

#### 9.3.6.2 Environmental Result

To maintain a safe and efficient traffic operation on the street network, and to maintain and improve the environmental qualities and amenities of the Town Centre zone for business, shopping, recreational and other activities.

#### 9.3.6.3 Standards

In the Town Centre zone, whenever the required car parking cannot be provided either on site or on an alternative site and Council has not granted consent to a lesser number of carparks, a cash-in-lieu payment of \$1,000.00 per space or the value of an area of 24m<sup>2</sup> per space of the site (whichever is the lesser) shall be made to Council. The figure of \$1,000.00 is in 1994 terms and will be adjusted at the same rate as the Construction Cost Index. (Note: The \$1,000.00 figure is exclusive of GST).

#### 9.3.6.4 Assessment Criteria

There are no assessment criteria for this standard.

### 9.3.7 DOMESTIC EFFLUENT DISPOSAL

#### 9.3.7.1 Discussion, Purpose and Reasons

##### A. On Site Disposal

Where there is no public reticulated sewerage system available all existing and future development must be capable of satisfactorily treating and disposing of sewage on-site, or through small scale community based schemes, which have been approved as non-complying activities. For Council owned and operated public sewerage treatment systems, the designation procedure will be used to provide any new facilities.

Standards are imposed to ensure that the quality of natural waters is maintained and protected from contamination from effluent discharges, to prevent human health risks and avoid problems of smell nuisance.

A general authorisation to discharge domestic waste water to land via an on-site waste water disposal system is included as a provision in the Transitional Regional Plan administered by the Waikato Regional Council. The provisions of the Regional Plan set limits on the volume of waste discharged, the methods of disposal and the minimum area of land required to be contained within the legal boundaries of the premises producing the waste. Outside these requirements a discharge permit must be obtained from the Waikato Regional Council.

The purpose of these standards is to ensure sufficient area is available on a site to provide for effluent disposal. This area needs to be of sufficient size and shape to provide for the residential buildings, the septic tank itself and alternative effluent fields. Other legislation provides for the actual design and construction of the effluent disposal system.

##### B. Reticulated Systems

Reticulated sewerage systems are available in most of the urban areas in the District. All of these systems have capacity to allow additional connections to them. Subdivision is an appropriate time for the sewerage connections to be made to the lot(s). Alternatively, the connections need to be made at the time of development.

#### 9.3.7.2 Environmental Result

To allow residential development in those areas which are not serviced by a public sewerage system, but only in a manner that protects the water and land from contamination and does not create a risk to health or a detraction to the amenity of the area through smell.

To ensure that where a reticulated sewerage system is available to lots where domestic sewage needs to be disposed of, the system is provided in a manner which is safe, efficient, economic, environmentally acceptable, meets consumer demand and improves public health.

#### 9.3.7.3 Standard

1. In all zones, where a dwelling is to be built in an area that is unserved with a sewerage system, an effluent disposal area for disposal of all effluent, foulwater and stormwater shall be provided as follows:

Minimum area	2,500m <sup>2</sup>
Minimum dimension	30 metres.

**Effluent disposal area** means a continuous area of land, which in its entirety is suitable for normal domestic drainage purposes in accordance with NZS 4610.

- Can include all yards and area to be used for residential activities.
- Excludes any area located within any identified hazard area.

Applications for building and subdivision consents shall show the details and layout of the proposed sewage treatment system and effluent disposal area including evidence as to the sufficiency and suitability of the proposed disposal systems and disposal area. Evidence of satisfactory performance of similar systems on similar sites may be accepted in lieu of site specific evidence.

In addition to this standard, provision must be made for satisfactory disposal of all effluent, foulwater and stormwater in accordance with the requirements of any relevant Hauraki District bylaw, the Building Act 1991 and the rules and standards included in the provisions of the Waikato Regional Plan.

2. In all zones, where domestic effluent is to be disposed of and the lot(s) can connect to a reticulated sewerage system, a connection to that system shall be provided to the boundary of every lot in accordance with:
  - Part 4 of the Code of Practice for Urban Land Subdivision (NZS 4404:1981) including any update or replacement of that Code; and
  - Rule 8.1 Network Utilities; and
  - Any relevant rule of the Regional Plan.

3. In all zones, where sewage pump station(s) are required as part of a sewerage system, the following standards shall be complied with:

##### A. Design Flows

Design flows shall be based on 220 litres per head per day from the expected population. A dilution factor of 2 and a peaking factor of 2.5 shall be applied for the pump design.

##### B. Pump Stations

Each pump station shall be designed to store 12 hours of the gravity design flow without the application of peaking or dilution factors. It is not uncommon for power to be cut off for maintenance or other reasons, and this storage is required to prevent overflows.

A steel grating platform shall be provided in the pump station, serviced by a vertical ladder, above the normal operating level of the pumps. The grating may be omitted only where the distance between the grating and the pump station cover is less than 1.8 metres. All steelwork shall be hot dip galvanised after manufacture. Anchors in concrete shall be stainless steel. The platform shall be designed to allow normal routine checking of the pumps to be carried out without lifting the pumps out of the pump station.

##### C. Pumps

Pumps shall be correctly selected for the duty and head required by the pump station site.

Pumps shall be of submersible design, mounted on a guide rod or similar installation to allow removal without emptying of the pump station. Two pumps shall be provided for each pump station, sized to provide one duty and one standby. The control panel shall permit either pump to be operated as the duty pump.

Pumps shall be of a design with a double shaft seal to prevent ingress of water into the motor. The manufacturer shall guarantee a supply of spare parts for 15 years for pump maintenance purposes. (European manufacturers are generally able to provide this guarantee). The pumps shall come from an established New Zealand agent able to provide the required spares back-up. The impeller shall be of the "Neva Clog" or similar design with the maximum throughlet.

Each pump shall be provided with a "Flygt-Hillen ball check valve" or similar, to prevent backflow to the pump.

**D. Controls**

Pumps shall be connected to a switchboard with suitable level controls to adequately control the two pumps. The control shall include the following control levels:

- Lowest point - Both pumps off.
- Second point - Duty pump on.
- Third point - Standby pump on.
- Fourth point - Alarm level.

In addition, the pump station shall be supplied with telemetry equipment matching that supplied to other sewerage pump stations and compatible with the Council's Telemetry system.

**9.3.7.4 Assessment Criteria**

1. The extent to which the nature of the soil, the distance from open waterways or other factors are such that the effluent can satisfactorily be treated in a lesser area.
2. Whether the effluent can be disposed of on more than one area of land, but the separate areas still give the total useable area required.
3. Whether an alternative system of effluent disposal (eg composting toilet) is to be used (which has been approved by Council), which therefore requires a lesser area of land.
4. Whether the proposed design of the sewerage system can meet the maximum potential demand arising from likely development of the land as permitted in accordance with this District Plan.
5. Any relevant assessment criteria contained in Part 4 of the Code of Practice.
6. Whether the sewerage facilities are designed, located and constructed to allow relatively easy operation, cleaning, inspection and maintenance, as well as:
  - Minimising any risk to the environment or to public health through contamination of water or the ground.
  - Minimising any loss of enjoyment and /or development of lots as a result of the facilities location.
  - Enabling the individual connections to be readily made to the existing reticulated system.
7. Whether the sewerage system is constructed to have a design life that will not require substantial maintenance in the future. As a guide, sewerage systems should be designed to have a minimum life of 50 years.

**9.3.8 NON-DOMESTIC EFFLUENT DISPOSAL****9.3.8.1 Discussion, Purpose and Reasons**

Care in the siting of treatment plants, ponds and effluent disposal systems for non-human wastes (including stock truck effluent disposal systems) and/or for effluent disposal of a scale greater than "domestic", is important to avoid unreasonable smell nuisance or any health risk for the occupants of neighbouring properties and dwellings.

In some cases the amenities of neighbouring properties will not be affected by a closer distance due to variable factors, such as prevailing and seasonal weather conditions, topography, method of treatment and type and quantity of effluent. For this reason the buffer distance may be reduced between an isolated rural dwelling and the effluent disposal area, with the written consent of the affected owners and occupiers, or by a discretionary activity consent.

The responsibilities of the Waikato Regional Council with respect to the design, location, treatment and disposal methods are requirements to protect the water, land or air from the detrimental effects of discharging contaminants into the environment.

The purpose of this performance standard in this District Plan is to protect the amenity values of neighbouring properties.

**9.3.8.2 Environmental Outcome**

To allow for the disposal of non-domestic effluents from activities in a location that avoids or reduces to an acceptable level, any detrimental effects of the effluent disposal process.

**9.3.8.3 Standards**

In any zone, all plants, ponds or effluent disposal systems (including disposal onto the land by way of spray or trickle irrigation) used for the disposal of non-human wastes and/or wastes of a scale greater than "domestic" associated with activities shall comply with the following standards:

1. Any required resource consent for the discharge has been obtained from the Waikato Regional Council.
2. The plant or ponds including the area onto which the effluent is being discharged or disposed of meets the buffer distances set out in the table below.

For the purpose of compliance with the buffer distances specified in the table, distances shall be measured from the nearest perimeter of the area used for handling or disposal of effluent.

<b>BUFFER DISTANCE FOR NON-DOMESTIC EFFLUENT TREATMENT SYSTEMS &amp; DISPOSAL AREAS (EXCLUDING PIG EFFLUENT DISPOSAL)</b>	
	<b>Distance</b>
Any boundary of the holding	50 metres
Boundary of any other Zone	100 metres
Any dwelling (*1)	100 metres
Community facility in a rural zone	100 metres

- \*1. This buffer distance may be reduced in whole or part subject to the written consent of the owners and occupiers of the isolated rural dwelling, provided that the buffer distance from the boundary of the holding is still met.

BUFFER DISTANCE FOR NON-DOMESTIC EFFLUENT TREATMENT SYSTEMS & DISPOSAL AREAS FOR PIG EFFLUENT DISPOSAL			
	MINIMUM DISTANCE IN METRES		
	Land Spreading (i) Anaerobic Lagoon	(ii)	Subsoil injection Aerobic Lagoon
Boundary of Residential Zone	1500	2000m	
Boundary of Rural Residential, Reserve, Marae Development, Town Centre, Industrial (Light), Industrial (Heavy), Township, Reserve (Passive) and Reserve (Active) zones and the boundary of the site of a Community facility not within any of the zones.	500	1000	200m
Any dwelling.	250	500	150

- (i) Effluent for surface spreading not to have been stored for more than 48 hours.
- (ii) Effluent for surface spreading stored anaerobically without treatment for more than 48 hours

For the purpose of this standard the following definitions shall apply:

**A. Any Dwelling**

Means any habitable dwelling or any form of visitor accommodation which has been lawfully established (not including dwellings or visitor accommodation on the holding on which non-human waste and/or wastes of a scale greater than "domestic" are being discharged or disposed of).

**B. Community Facility**

Refer to definition in Section 4.0.

- 3. Where any effluent or manure (liquids, solids or slurry) is taken across a property boundary or along public roads, it shall be in enclosed containers or pipes so as to avoid a nuisance.

**9.3.8.4 Assessment Criteria**

1. Whether the method (including type and quantity) of effluent treatment and disposal is such that effects such as smell are not created.
2. The extent to which there are prevailing and seasonal weather conditions (particularly wind direction and intensity, number of calm days) around the site that ensure the detrimental effects of the effluent disposal method are dealt with to a degree which would allow reduced buffer distances.
3. Whether the topography between the area used for handling or disposal of effluent and the land or building to which the buffer distance applies creates a barrier which ensures the detrimental effects are prevented or contained.
4. Whether the nature of existing and likely development between the area used for handling or disposal of effluent and the land or building to which the buffer distance applies, is such that the effects of the disposal system will not be noticeable or objectionable.
5. Whether the disposal of effluent from pig farms (either as farming or factory farming activity) is being carried out in compliance with the Code of Practice for Pig Farming - New Zealand Pork Industry Board.

**9.3.9 WATER SUPPLY**

**9.3.9.1 Discussion, Purpose and Reasons**

The provision of an adequate and potable water supply is required for public health, commercial and industrial consumption, and for the safety of the community (eg fire fighting purposes).

In some parts of the District there is no urban or rural water supply that a subdivision or development can connect into. Also, where rural water supplies are available, there is no requirement that connection has to be made to the supply. For all those situations, adequate water supply can be obtained from rainwater storage, bores or a combination of both. This is not a District Plan matter, but rather can be addressed at the time of building consent. As part of a building consent, evidence of the system to provide an adequate water supply will have to be included with the consent application.

Where an urban water supply is provided, connection to that system is required to enable the community to meet its social, economic and health needs. Due to the manner in which the rural water supply systems were set up and financed, connection to the supply cannot be required. Council will however encourage connection by incentive and information regarding the benefits of connecting to the system.

In parts of Paeroa, Waihi and on the Hauraki Plains, Council is unable to guarantee the water supply pressure due to the height of the land in relation to the reservoir and the draw off of water for dairy farming purposes. This limitation is noted on the Property Information Database and will be drawn to the attention of prospective purchasers and developers at the time of purchasing the property or undertaking building on the property through Land Information Memorandum (LIM) or Project Information Memorandum (PIM).

**9.3.9.2 Environmental Result**

To allow residential development in a manner that does not create a risk to health and wellbeing.

**9.3.9.3 Standard**

1. In any urban zone, where a potable water reticulation system is provided, every allotment shall be connected at the boundary at the time of subdivision, to that system in accordance with:
  - Part 5 of the Code of Practice for Urban Land Subdivision (NZS 4404:1981), including any update or replacement of that Code; and
  - New Zealand Standard 7643; and
  - Rule 8.1 Network Utilities
2. In those areas where a potable water supply is not available and/or the developer chooses not to connect to a rural water supply, then evidence of a satisfactory water supply system shall be provided as part of the building consent application.
3. Water pipes in all zones shall comply with the following design standards:
  - Where the pipe is less than 100mm in diameter, it shall be made of UPVC or an equivalent material.
  - Where the pipe is greater than 100mm in diameter, it shall be made of UPVC or MDPE or an equivalent material.

4. In any zone outside the urban area, all pipes across roads shall be installed by underground thrusting only. (Note: A lease may be required from the relevant roading authority (Council or Transit NZ) to lay a pipe under a road (refer S.341 Local Government Act 1974).

#### 9.3.9.4 Assessment Criteria

1. Whether the proposed design meets the maximum potential demand arising from likely development of the land as permitted in accordance with this District Plan, and sufficient pressurised water is available for fire fighting purposes.
2. Any relevant assessment criteria contained in Part 5 of the Code of Practice.
3. Whether the facilities are designed, located and constructed to allow relatively easy operation and maintenance, as well as:
  - Minimising any loss of enjoyment and/or development of lots as a result of the facilities location.
  - Enabling the individual connections to be readily connected to the existing reticulation system.
4. Whether the water system is constructed to have a design life that will not require substantial maintenance in the future. As a guide, water systems should be designed to have a minimum life of 50 years.

#### 9.3.10 STORMWATER DRAINAGE

##### 9.3.10.1 Discussion, Purpose and Reasons

Control and disposal of stormwater is important in the Hauraki District for different reasons in different areas of the District. Reasons include the low-lying nature of some land, areas of high rainfall (eg Waihi) and the increase in impermeable surfaces as a result of higher density urban development in the towns.

The control and disposal of stormwater enables land use activities to establish and operate, and also ensures that people and communities are protected from the social and economic disruption that flooding due to inadequate stormwater disposal can produce.

Stormwater needs to be disposed of before it can become contaminated by other effluent (eg septic tank), chemicals, oils or pesticides, and in a manner which causes minimal, if any, detriment to the environment (ie both the quality and quantity of stormwater needs to be addressed).

There are a number of means available to control and dispose of stormwater including on-site soakage, roadside channels, soakage into reserves or open areas, piping to existing streams or other water bodies and connecting to established stormwater systems. The technique to use for stormwater drainage will need to be assessed for each individual situation. However, the disposal needs to avoid flooding downstream, erosion or instability to the land.

##### 9.3.10.2 Environmental Result

To dispose of stormwater effluent in a manner that is compatible with the natural environment, as well as ensuring that the risks to the community as a result of flooding and/or contamination of stormwater are avoided.

##### 9.3.10.3 Standards

1. In any zone, all stormwater shall be disposed of in accordance with:
  - Part 4 of the Code of Practice for Urban Land Subdivision (NZS 4404:1981), or any replacement or update of that code; and
  - Any relevant rule of the Regional Plan; and
  - Rule 8.1 Network Utilities.
2. All public drains created at the time of subdivision, shall be covered by an easement or shall vest as "Local Purpose Reserve (Drainage)" in the Hauraki District Council on the survey plan of subdivision .

All public drains shall:

  - Be of sufficient width to enable access for maintenance and replacement work. (Refer to the Diagram for width of types of drains, in Performance Standard 9.3.20).
  - Be unencumbered by any physical structures. (Refer to Performance Standard 9.2.9).
3. Every building consent application for a dwelling or any other building on any new lot created at Whiritoa from any subdivision or subsequent subdivision of Lot 2 DP 329044 shall provide confirmation that on site detention and soakage systems will be constructed, maintained, and operated to ensure that the rate of runoff from the lot subject of the building consent does not exceed that of the equivalent area of undeveloped land assumed to have a runoff coefficient of 0.2.

All roof water shall be routed through a detention tank or tanks having sufficient capacity to detain runoff from a 0.01 Annual Exceedence Probability (AEP) rainfall event. The tank(s) shall have a restricted outlet such that the rate of outflow does not exceed that of the equivalent area of undeveloped land assumed to have a runoff coefficient of 0.2. The runoff coefficient for roof areas shall be taken as 1.0.

Runoff from all other impervious areas of the site, including driveways, parking areas, paved outdoor living areas and the like, shall be collected and discharged to an on site soakage system. The on site soakage system shall be designed to store and dispose to ground soakage all runoff from a 0.01 AEP rainfall event without overflow. In the event that soakage capacity of the soils on any site is not sufficient, detention storage for all impervious areas shall be provided as for roof water above. For the avoidance of doubt, should it not be possible to provide either soakage disposal or detention storage for an impervious area due to soil conditions, site levels or other constraint, then the areas shall be planted or grassed so as to have a runoff coefficient not greater than 0.2.

Detention and soakage systems shall be designed and their proper installation certified by a Chartered Professional Engineer. Detention and soakage systems shall be maintained by the owner and a certificate of fitness shall be provided to the Council by the owner at intervals not exceeding 5 years certifying that the detention and soakage systems are operating in accordance with the design, and that no unauthorised modifications to the system have been made.

Any additional impervious areas shall be subject to the conditions set out above.

4. At the time of subdivision and/or development or any subsequent subdivision and/or development of Lot 67 DPS 14798, a comprehensive stormwater management system shall be designed and installed to ensure that the peak outflow (rate of discharge) from the sub-catchment will be the same or less than prior to subdivision and/or development and shall have particular regard to the quality of stormwater ultimately discharging to the Ramarama Street.

4. Whether the stormwater facility is designed to minimise any detriment to the environment, particularly with respect to the contamination of natural water, erosion of land or subsequent instability of that land and downstream flooding.
5. The extent to which the stormwater design has been developed with the outcome of coping with additional stormwater flows which may be added to the system in the future. As a guide, stormwater facilities should be able to cope with stormwater disposal requirements anticipated in the next 50 years.
6. Whether the stormwater disposal system is constructed to have a design life that will not require substantial maintenance in the future. As a guide, stormwater systems should be designed to have a minimum life of 50 years.

#### 9.3.10.4 Assessment Criteria

1. Whether the design capacity of the system is sufficient to cope with the stormwater surface flows created from a:
  - 10 year storm frequency event in the case of Residential, Marae Development, Town Centre, Township and Reserve (where a community facility is located) zones.
  - 5 year storm frequency event in the case of Industrial (Light) and (Heavy) and Reserve (where there are no community facilities) zones.
2. The relevant assessment criteria contained in Part 4 of the Code of Practice.
3. The degree to which the facilities are designed, located and constructed to allow relatively easy operation, cleaning, inspection and maintenance. In particular:
  - Pipelines, access chambers and pumping station inverts should be designed to be self cleansing under normal operations.
  - All materials, fittings and other equipment should be compatible or readily adaptable to the existing reticulation system to enable future connections to that system to be achieved.
  - Inspection and access points should be readily accessible, especially in the event of emergencies.

### 9.3.11 TELECOMMUNICATIONS AND POWER

#### 9.3.11.1 Discussion, Purpose and Reasons

In a similar way to water supply, the provision of telephone and power services enables a community to meet its social, economic and cultural needs in a manner that has little detriment to the environment.

The physical process of providing the services can have a detrimental effect on the environment. These effects can be minimised by incorporating all services to the allotment(s) at the time of subdivision construction. Providing services in an ad hoc manner after the subdivision is completed is also wasteful of resources. Where necessary easements will be required to ensure continued access by the various utility operators to reticulated services and equipment.

Reorganisation of the electrical industry has seen the removal of the former supply area boundaries, enabling any licensed electricity operator to install its own electrical equipment and supply customers from it. It is important that such equipment is compatible with the existing network with which it is to be connected.

#### 9.3.11.2 Environmental Result

To provide telephone and power supply to the community in a coordinated way and in sufficient quality, quantity and reliability to meet the community demands, while ensuring any detriment to the environment is minimised to an acceptable level.

#### 9.3.11.3 Standards

In any zone, telecommunications and power shall be provided to the boundary of each allotment at the time of subdivision in accordance with:

- The requirements of the relevant supply authority, including any necessary easements (refer also to Rule 9.3.19); and
- Part 5 of the Code of Practice for Urban Land Subdivision (NZS 4404:1981) including any update or replacement of that Code; and
- Rule 8.1 Network Utilities.

#### 9.3.11.4 Assessment Criteria

1. Whether the proposed design meets the maximum potential demand arising from likely development of the land as permitted under this District Plan.
2. Whether the services are located and installed in a manner that minimises any potential hazard or risk.
3. Any relevant assessment criteria contained in Part 5 of the Code of Practice.
4. The degree to which the facilities are designed, located and installed to allow relatively easy maintenance, access (particularly in emergency situations) and connection to individual lots.
5. Whether the systems are constructed to have a design life that will not require substantial maintenance in the future. As a guide, telecommunication and power supplies should be designed to have a minimum life of 50 years.

### 9.3.12 LANDSCAPING

#### 9.3.12.1 Discussion, Purpose and Reasons

Landscaping is specified in the District Plan as being required either in a particular zone (eg APA in the Industrial zones) or in a particular situation (eg for parking over a certain number of spaces). The purpose of landscaping is to provide a visual and psychological barrier from activities or buildings.

Landscaping can have a physical effect in terms of filtering wind-blown debris, and screening unsightly buildings, storage areas or parking areas.

Landscaping can also have a psychological or perceived effect in terms of reducing detrimental effects. The example of noise is a situation where people perceive that noise has been reduced by vegetation, even though little or no reduction can be physically measured.

In order for landscaping to be effective, it must be:

- Located in the correct place.
- Of sufficient depth to allow the vegetation to grow and provide an effective buffer.
- Established in plants that are suitable to the environment.
- Established with a maintenance programme to ensure plants survive and where plants die, are replaced.

Council wishes to promote landscaping in particular situations, rather than relying on the use of rules, as Council recognises that the most effective way in which landscaping will be established and maintained is through the commitment of individuals and companies. As such, Council will be seeking to publicly recognise landscaping that has been undertaken and maintained to a good standard. This recognition can be in the form of using the example in guidelines on landscaping, reports in local newspapers, recognition plaques at the site and other means.

#### 9.3.12.2 Environmental Result

To use landscaping as a method of reducing, mitigating or eliminating detrimental effects of activities and/or buildings, thereby enhancing the amenities of the environment.

#### 9.3.12.3 Standards

Any activity required to provide landscaping shall comply with the following standards:

1. A landscape plan containing sufficient information to permit the proposal to be adequately assessed shall be provided and include:
  - Existing landscape features, landforms and development.
  - Proposed landscape features, landforms and development.
  - Specification of materials to be used, including precise identification of plant types.
  - Indicative maintenance programme.
2. A bond shall be entered into with Council, to ensure that the landscaping is undertaken and completed.
3. Any required landscaping shall be completed in conjunction with the establishment of the activity or development and shall be maintained in a satisfactory manner while the activity or development remains.
4. Any required landscaping shall be designed and implemented so as to facilitate its long term maintenance in a cost effective manner.

### 9.3.12.4 Assessment Criteria

1. Any required landscaping shall be assessed as to the degree that it is designed and implemented so as to:
  - Support the natural environment.
  - Enhance neighbourhood amenities.
  - Secure the required softening of yard space and buildings.
  - Screen unsightly activities or facilities.
  - Minimise such nuisance as noise, dust and fumes.
  - Protect road safety from the adverse effects of inappropriately located landscaping.
  
2. Any required landscaping shall be assessed as to the degree that it utilises types of plants and materials which:
  - Are suited to the local environment.
  - Will stand up to the particular conditions found on the site.
  - Will not give rise to problems with services and traffic safety.
  - Will satisfy the intentions of the District Plan or resource consent.
  
3. In relation to the addition to or alteration of a scheduled feature:
  - the extent to which this would assist with the protection of the feature.
  - the extent to which the amenities of neighbouring properties will not be significantly compromised.

### 9.3.13 PROTECTION OF TRAFFIC SIGHT LINES

#### 9.3.13.1 Discussion, Purpose and Reasons

Visibility at all intersections (road and rail) is an important aspect of maintaining traffic safety throughout the District. While there is no substitute for careful, defensive driving, factors such as visibility at intersections can decrease the risk of traffic accidents and consequent injury.

It would be impracticable for Council to negotiate the purchase of pieces of land on every corner in the District, survey them off and thereafter maintain them free of any impediment to drivers visibility.

All new roads are created with corner splays at the time they are subdivided. Also, when subdivision of land on a corner occurs, the opportunity is taken to require the appropriate corner splay to vest in Council as road.

Accordingly, the standards for sight lines below, are accommodated within the standards for corner splays under Performance Standard 9.3.14 - CORNER SPLAYS.

The corner splays in Performance Standard 9.3.14 are of larger dimension than the traffic sight line, as the corner splay is also required to provide the physical space for the turning of vehicles.

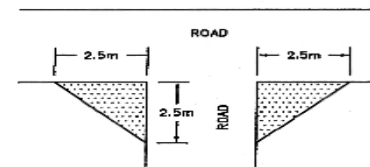
#### 9.3.13.2 Environmental Result

To manage the roading resource in a manner that contributes to peoples' health and safety.

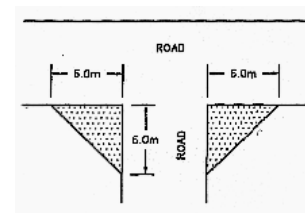
#### 9.3.13.3 Standards

No construction of buildings, fences or other structures, placing of obstructions or the growth of vegetation shall be permitted in the immediate vicinity of road and railway intersections as follows.

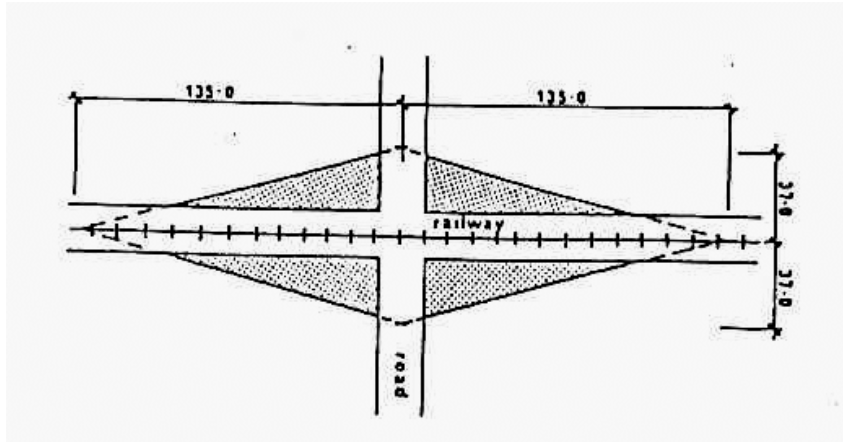
Zone	Standard	
1. Town Centre, Industrial (Light) and Township	Road Intersections	1 metre in height within the area shown in the diagram, except above first floor level.



2. All other zones	Road Intersections	1 metre in height within the area shown in the diagram.
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2. All zones Railway Intersections 1 metre in height within the area shown in the diagram.



Note: Where there are two or more rail tracks 37m sight line applies from the centreline of the nearest track.

This standard does not apply where a corner splay has already been vested and cleared in accordance with Performance Standard 9.3.14 - CORNER SPLAYS.

#### 9.3.13.4 Assessment Criteria

1. Whether the existence of traffic management methods (stop signs, railway signals) provide a level of traffic safety that cancel out the need for sight lines.
2. Whether factors such as traffic speed are such that traffic safety is maintained without the need for sight lines.
3. Whether train movements (time of day, speed of train) are such that traffic safety is maintained without the need for sight lines.
4. The assessment criteria for Performance Standard 9.3.14 - CORNER SPLAYS.

Note: The consent of the controlling authority for the railway facility will be required before Council will consider granting an application for reduced sight lines.

#### 9.3.14 CORNER SPLAYS

##### 9.3.14.1 Discussion, Reasons and Purpose

Subdivision and development is an appropriate time at which to obtain corner splays where these have not already been provided. The "Protection of Traffic Sight Lines" (Performance Standard 9.3.13), provides an interim mechanism to enhance traffic safety at intersections until such time as Council can obtain the corner splay. The corner splay not only provides for traffic sight lines, but also provides the area of land to provide for the turning of traffic. As such, the dimensions of the corner splay are greater than for sight lines.

##### 9.3.14.2 Environmental Result

To manage the roading resource in a manner that contributes to peoples' health and safety.

##### 9.3.14.3 Standard

Where land at an intersection is subject to subdivision, development or where a new subdivision involves creating an intersection, corner splays to the dimensions set out below shall be shown on the subdivision plan and shall be shown as "Road" to vest in the Council on the survey plan to be certified by Council pursuant to Section 223 of the Act.

<u>Zone</u>	<u>Standard</u>
Residential and Industrial (Heavy)	6.0 metre splay.
Township, Town Centre and Industrial (Light)	2.5 metre splay.
Rural, Rural-Residential, Marae Development	40 metres on Strategic Highways, Regional Arterial and District Arterial Roads. 15 metres on Collector and Local Roads.
Reserve, Conservation and Flood Ponding	N/A.

Note: The corner splays shall be defined by a diagonal line joining points, the standard distance back from where two straight lines (one line along each street/road boundary) meet.

##### 9.3.14.4 Assessment Criteria

1. Whether the taking of corner splay will not significantly improve visibility for motorists due to the structures (buildings, land or vegetation) between the corner and the necessary sight line, or there is a difference in road levels.
2. Whether a lesser standard will give a similar and adequate level of visibility and turning areas, because of factors such as reduced traffic speeds in the area, low volumes of traffic or the nature of the traffic.
3. The full corner splay cannot be provided due to existing physical features which cannot be reasonably removed.
4. The assessment criteria in Performance Standard 9.3.13 - PROTECTION OF TRAFFIC SIGHT LINES.

### 9.3.15 ROADS

#### 9.3.15.1 Discussion, Purpose and Reasons

Public roading can have significant impacts on the environment, whether at the time of formation or through regular maintenance activities. For that reason it is considered appropriate that those activities be in accordance with all the performance standards for the relevant zones in order to achieve sustainable land use. In terms of the use of roads, while the movement of people, animals and vehicles is not limited by this rule, it ensures that any buildings constructed or activities undertaken on legal road are managed in terms of likely impacts.

Exemptions from noise standards are provided for vehicles travelling on roads in recognition of the higher levels considered acceptable and also in recognition of other control methods able to be used to deal with excessive noise (eg speed limits, heavy truck bypass bylaws, smoothing of roads and enforcement by the Police of traffic laws relating to vehicle noise).

Emergencies and unavoidable damage repairs are recognised as being activities which would be unreasonably constrained if subject to this rule.

#### 9.3.15.2 Environmental Result

Apart from the movement of traffic, the establishment of and other activities on roads can create similar detrimental effects to the environment or amenity of the area, as any other activity in the zone. These effects should be managed in the same terms as other activities.

#### 9.3.15.3 Standards

In all zones, all activities related to the establishment and use of a public road that are not established and operated in accordance with a requirement to designate, shall be carried out in accordance with the relevant standards for permitted activities in the zone, except for:

1. Performance Standard 9.4.1 - NOISE in terms of operating traffic noise only.
2. Activities necessary in emergencies and/or to remedy damage caused by natural events such as landslips, earthquakes, lightning or flooding (Section 330 of the Resource Management Act 1991).

This performance standard does not override the provisions of Rule 8.1.6.1 Provision for Roads in All Zones.

#### 9.3.15.4 Assessment Criteria

The assessment criteria for standards applicable in the relevant zone shall apply to roading.

### 9.3.16 STREET AND ROAD SYSTEM

#### 9.3.16.1 Discussion, Purpose and Reasons

The way in which the street and road system is laid out can have a significant impact on:

- The volume and type of traffic that is attracted to use that street or road.
- The speed of traffic.
- Impact on the amenities of adjoining land use activities.
- The amount of energy used by vehicles. For example, the design of residential streets can increase their attractiveness to become a "short-cut" between main traffic routes. Roads or streets that need to carry large volumes of traffic can be designed to achieve that purpose by reducing the number of intersections, providing turning bays that avoid disruption to traffic flows and providing linkages to other main roads.

#### 9.3.16.2 Environmental Result

To create a road system that provides for the safe and efficient movement of traffic (vehicular and pedestrian) in a manner that promotes the sustainable management of resources used.

#### 9.3.16.3 Standards

The creation of a new road in any zone shall comply with:

1. Part 3 of the Code of Practice for Urban Land Subdivision (NZS 4404:1981) or any standard that updates or replaces that standard.
2. Any proposed road or street shown on the District Planning Maps.
3. The roading hierarchy shown in Section 8.9.
4. For the land to the west of Roberts Street and north of Bradford Street, rezoned to 'Residential' as a result of Plan Change 10 (legally described as Lot 1 DPS 30015, Part of Lot 2 DPS 30015, Sect 309 SURD Ohinemuri, Lots 1-4 DPS 72869) no new road connection to Cornwall Street/Lawrence Road.

#### 9.3.16.4 Assessment Criteria

1. The General Principles contained with Part 3 of the Code of Practice.
2. Whether the proposed street or road will provide for:
  - The convenient, safe and efficient movement of vehicles, cyclists and pedestrians throughout the neighbourhood.
  - Concentrating significant traffic flows onto the main roading network.
  - A level of amenity for adjoining activities demanded by the community, particularly residential amenity.
  - Those other functions required by the street or road eg conveying of services, landscaping, parking.
  - Convenient linkages between parts of the towns and between towns.
  - In respect of the land to the west of Roberts Street and north of Bradford Street, rezoned to 'Residential' as a result of Plan Change 10 (legally described as Lot 1 DPS 30015, Part of Lot 2 DPS 30015, Sect 309 SURD Ohinemuri, Lots 1-4 DPS 72869) new road connection to Maddocks Street in a manner that does not unduly compromise the safe and effective operation of the Goldfields Railway.

### 9.3.17 STREET AND ROAD DESIGN

#### 9.3.17.1 Discussion, Purpose and Reasons

A range of factors are involved which combine to provide a design that matches the purpose of the street or road. These factors include, widths, gradients, pavement surfaces, kerbing and channelling. These design factors also recognise that streets and roads have a number of purposes other than conveying vehicles, cycles and pedestrian traffic. Other purposes include contributing to stormwater control, providing security through street lighting and enhancing the appearance of an area through the planting of trees.

The standards set out below seek to provide a street or road design that meets these purposes.

In addition, the resources required to form or upgrade a road or street are substantial. In order that resources are not wasted and therefore are available for use by future generations, roading needs to be to a standard that can cope with the anticipated traffic for a certain length of time. Proper initial road construction can significantly reduce maintenance costs and use of resources at a later date.

#### 9.3.17.2 Environmental Result

To provide a roading network that is designed to minimise adverse effects on the environment and involve the least use of resources in its development and maintenance.

#### 9.3.17.3 Standards

Where a subdivision results in a need to upgrade an existing road or create a new road, that road development shall comply with the following:

##### A. Upgraded Roads

Urban Areas (ie 50-80km/h speed restriction)	Part 3 of the Code of Practice for Urban Land Subdivision (NZS 4404:1981), or State Highway Pavement Design and Rehabilitation Manual (IRB) (Lower grade flexible pavements) or any standard that updates or replaces those standards.
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Rural Areas (ie 80-100km/h speed restriction)	Guide to Geometric Standards for Rural Roads (Counties Association and National Roads Board, 1985), or State Highway Pavement Design and Rehabilitation Manual (NRB) (Lower Grade flexible pavements).
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##### B. New Roads

Urban Areas (ie 50-80km/hr speed restriction)	Part 3 of the Code of Practice for Urban Land Subdivision (NZS 4404:1981), provided that in those parts of the Residential Zone, rezoned to "Residential" as a result of Plan Change 8, in Ngatea the crown level of any road shall not be less than RL 1.3 metres.
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Urban and Rural Areas (ie 80-100km/h speed restriction)	State Highway Pavement Design and Rehabilitation Manual (NRB) (Lower grade flexible pavements).
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#### 9.3.17.4 Assessment Criteria

1. Whether the width, alignment, strength and surfacing of any carriageway is sufficient to accommodate in a safe and efficient manner the volume and type of traffic likely to use it, including service and emergency vehicles in local residential streets and heavy trucks in industrial streets.
2. The adequacy of provision for the movement of pedestrians, cyclists and the disabled.
3. The adequacy of provision within the street reserve for car parking spaces relative to the existing and potential developments on adjoining land.
4. Whether the carriageway, kerb, channel, footpath and associated works such as street lighting will be constructed so as to have a design life that will not require premature maintenance or replacement. As a guide, construction and materials should have a minimum design life of 25 years.
5. The degree to which the extension to an existing, a new or an upgraded street or road "matches" the rest of the existing street or roading network (eg levels, design, construction).
6. The degree to which the design and construction of the road has been developed to allow for ease of cleaning and maintenance, for example the clearing of stormwater channels and drains.
7. Whether the design and construction of the street or road allows for easy installation and maintenance of network utility services and amenity street tree planting.

### 9.3.18 GLARE AND LIGHTING

#### 9.3.18.1 Discussion, Purpose and Reasons

Some building materials, particularly glass and unpainted corrugated iron create glare, which in some circumstances has the potential to be a detraction in adjoining areas and in some cases can be a hazard to motorists.

Lighting has a similar potential to glare, in creating a hazard and/or a detraction from amenities. In addition, because it is in operation during night-time, lighting can be a cause of disturbance to residential amenities in a similar manner to noise. Lighting can be associated with security, advertising signs, sports fields or to allow night-time outside work.

Glare from buildings can be avoided or minimised by using screening or landscaping, painting and orientation of walls to reflect glare away from adjoining areas.

Lighting can be orientated or shaded in order that the spill of lighting remains within the site.

#### 9.3.18.2 Environmental Result

Glare and lighting from buildings or activities should be managed in a way that allows the building or activity to be established and continue to operate in a manner that does not detract from the amenities of adjoining properties or zones, and does not create a hazard to traffic.

#### 9.3.18.3 Standards

##### A. *Glare*

In all zones, buildings are to be constructed and finished to ensure reflection (glare) from the building surfaces does not reflect into adjoining properties, or into the vision of motorists on a street or road.

##### B. *Lighting*

In all zones, lighting shall be installed, designed, shaded and arranged in order that the level of lighting measured on the boundaries of the site is no greater than 8.0 lux.  
(For the limitations related to lighting associated with advertising and signs, refer to Section 8.7).

#### 9.3.18.4 Assessment Criteria

1. Whether the level of "brightness" from the surface or lighting is such that it will create a traffic hazard or interfere with the operation of activities on properties outside the site.
2. Whether the nature of the activities on adjoining sites or zones is such that any glare or lighting spill would not be noticeable and would not have a detrimental effect.

### 9.3.19 INTERNAL ACCESS (PRIVATE WAYS, RIGHTS OF WAY, ACCESS LOTS)

#### 9.3.19.1 Discussion, Purpose and Reasons

In a number of situations, the most practical way of obtaining access to a lot can be over other land, especially to overcome physical problems of getting to a site. In other situations, a combined access arrangement allows a subdivision pattern that makes the most efficient use of the land (ie large areas of land are not taken up with unneeded roads) and also at a lower cost. For the Council, internal access arrangements are the responsibility of the landowners, and are not a roading cost to the general ratepayer.

In most cases, the reduced volume of traffic on the internal access means that the costs of formation and the amount of resources used is reduced, as the standards are less than those needed for a road.

The reduced standards (eg width, formation) for internal access must not be at the expense of or detriment to the amenities of an area, particularly residential areas. For this reason, the number of lots than can be served by an internal access needs to be controlled to ensure the volume of traffic is not such that it creates a detriment to the amenities of the area or traffic conflicts where the access meets the road in an "uncontrolled" manner. In addition, poor maintenance of internal access in the vicinity of its intersection with the road can compromise the safe and efficient use of the adjacent road, by the transmission of metal and dirt onto the footpath and roadway.

The rules set out below restrict the number of lots that can be served by the internal access and the length of the internal access, as the traffic volumes and traffic behaviour (especially speed) become similar to that of a public road. Private control is unlikely to be able to deal with the potential detrimental effects from such traffic.

For similar reasons, the internal access standards are linked to the potential detriment effects from such traffic.

In addition, the internal access standards are linked to the potential number of allotments that could be subdivided. This also ensures that the potential of the land resource for development is not compromised or precluded as a result of limited access.

Internal accesses can be provided as part of an overall subdivision application or as a separate application under Section 348 of the Local Government Act 1974. The standards set out in this rule are applicable to both types of applications.

#### 9.3.19.2 Environmental Result

That internal access to lots be provided in a manner that enables physical or legal access to be achieved but in a manner that does not detrimentally affect the environment and amenities of the area, or create a traffic hazard within the internal access itself or its intersection with the road.

To enhance the residential amenities of multi-unit developments by providing accessways that allow easy vehicle movements and do not create traffic noise as a result of vehicles carrying out unnecessary movements up and down an accessway.

#### 9.3.19.3 Standards

Internal access shall be set out and formed in accordance with the standards set out below:



Access to more than five lots shall be provided to full road standard in accordance with Rules 9.3.15, 9.3.16 and 9.3.17 and shall vest in the Hauraki District Council as "Road".

Where an existing internal access serves more than five lots, this rule shall only apply when additional lots are to be created which require access from it.

4. Formation shall be in accordance with Part 3 of the Code of Practice for Urban Land Subdivision (NZS 4404:1981) or any replacement or update of that code.

Other Zones		Maximum Length	Minimum Width	
			Legal	Formation
1.	Town Centre	30m	7m	7m
	Reserve (Passive) and (Active)	60m	3.5m	3.5m
	Township	30m	6m	6m

2. No more than four lots shall be served by an internal access.

Access to more than four lots shall be provided to full road standard in accordance with Rules 9.3.15, 9.3.16 and 9.3.17 and shall vest in the Hauraki District Council as "Road."

Where an existing internal access serves more than four lots, this rule shall only apply when additional lots are to be created which require access from it.

3. Formation shall be in accordance with Part 3 of the Code of Practice for Urban Land Subdivision (NZS 4404:1981) or any standard that updates or replaces that standard.

1. No two or more internal access strips may lie adjacent or in close proximity to one another unless easements are granted over each access strip in a manner which enables their combined use with a single point of access to a public road.
2. Where it is physically possible, separate internal access should not be created in close proximity to each other. Rather, the internal access should be combined into one, thereby reducing the number of access points to the road.
3. The formation of internal access, whether created as part of a subdivision or pursuant to Section 348 of the Local Government Act 1974, shall be formed prior to the certificate being approved by Council in accordance with Section 224 RMA or the Section 348 Certificate LGA.

Note: There are no standards for internal access in the Flood Ponding or Marae Development zones.

1. Any relevant assessment criteria contained in Part 3 of the Code.
2. Whether the internal access will still allow for access by larger vehicles such as furniture trucks and for emergency vehicles.
3. Other techniques proposed, such as passing bays, that would allow for reduced access widths and/or increased access length.
4. The safety and convenience of the internal access.
5. Whether underground services can be installed and maintained without disrupting and/or damaging the formation of the accessway itself.
6. Whether the distance to the lots is such that the standard access width is not necessary.
7. Traffic speed control by techniques such as speed humps or corners that would allow increased access length and/or reduced access widths.
8. Inappropriate modification of the environment, including the removal of trees or vegetation that would result from providing the accessway to the required dimensions.
9. The physical nature of the site would make providing the accessway inappropriate or impractical.

#### 9.3.19.4 Assessment Criteria

In determining appropriate conditions to be imposed on a resource consent, regard shall be had to the following matters:

## **9.3.20 DRAINS**

### **9.3.20.1 Discussion, Purpose and Reasons**

As part of development and/or subdivision, it may be necessary to ensure for the continued ability for water to drain from one allotment to another. Although there is "common law" relating to the responsibilities of disposing and accepting water, the opportunity should be taken to legalise the situation by creating an easement over the drain.

In addition, for some developments, drainage is an integral part of ensuring that the activity can establish and continue to operate. Performance Standard 9.2.9 provides for the setback of buildings and other structures from the edge of drains to ensure such structures do not inhibit the ability of public drains to be accessed and maintained.

Where drainage easements are required to be set aside and drains formed, as part of a subdivision or development, they need to be of sufficient dimensions to ensure that they function correctly, and can be serviced and maintained.

### **9.3.20.2 Environmental Result**

That the resource investment in rural developments is protected from the effects of anticipated floods, water ponding and high water tables.

### **9.3.20.3 Standards**

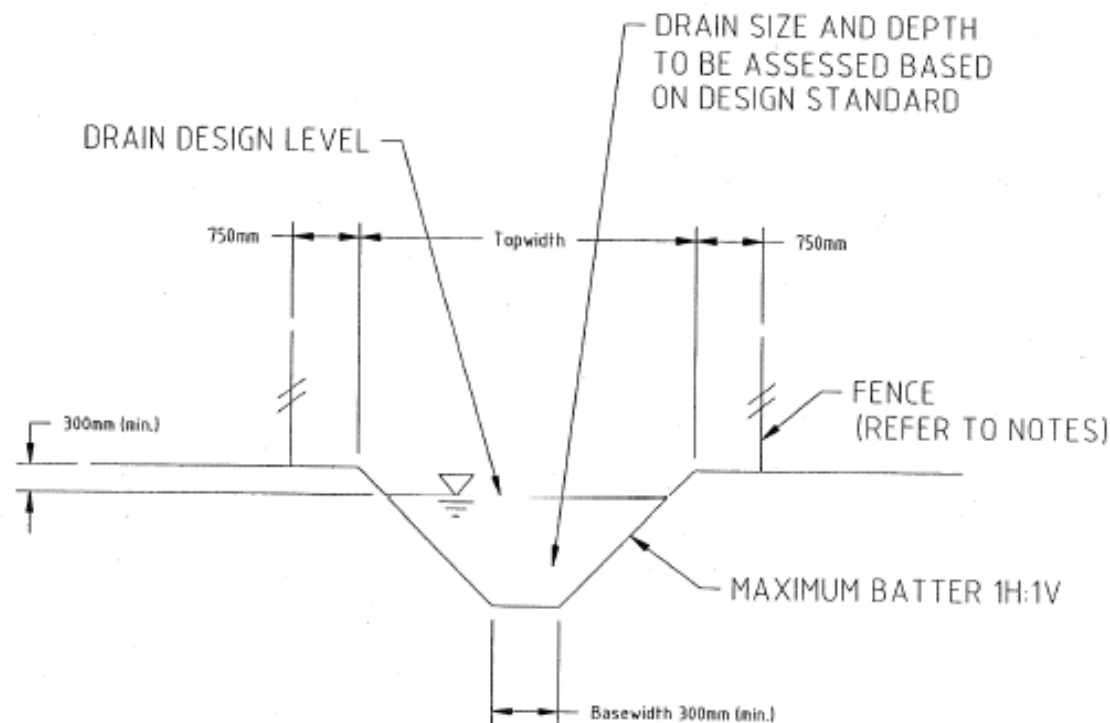
In the Rural zone, drainage easements shall be provided and drainage works shall be carried out. The drains shall be designed and constructed in accordance with the requirements of the "Drain design standard" diagram set out below.

Easements shall be created which cover the drain and the area contained between the fences, and shall be of sufficient width to allow for access of maintenance equipment and deposition of spoil removed from the drain. A minimum width of 8 metres from the top edge of an open drain is required.

### **9.3.20.4 Assessment Criteria**

1. Whether the scale or other characteristics of the activity or subdivision are such that the drain type can be lesser than that which would normally be required, or no drain is required at all.
2. Whether there are other works in the area that when carried out will remove or reduce the need for a drain to be provided.
3. Whether there are physical, legal or other impediments that would make compliance with the drain type standard unreasonable or impracticable to provide, and whether an alternative to the standard still substantially achieves a similar level of operation to that of a complying drain type.

# DRAIN DESIGN STANDARD



## NOTES

### A) FENCES

1. Fences shall be no higher than 750mm.
2. Fences shall be stock proof and have a minimum of two electrified wires.

### B) DESIGN STANDARD FOR DRAIN SIZE AND DEPTH

1. The minimum base width of the drain shall be 300mm.
2. Drains located in designated drainage areas shall be designed to pass 38mm of runoff in 24 hours.
3. Drains located in areas outside designated drainage areas shall be designed to pass the peak flow from the annual 3 hour storm event without having a detrimental effect on downstream properties.
4. Culvert crossings of drains should have no more than 25mm of headloss at the design flow.