

# APPENDIX O

## o1 OFFENSIVE TRADES

As listed in the Third Schedule to the *Health Act 1956*.

- Blood or offal treating
- Bone boiling or crushing
- Dag crushing
- Fellmongering
- Fish cleaning
- Fish curing
- Flax pulping
- Flock manufacturing or teasing of textile materials for any purpose
- Gut scraping and treating
- Nightsoil collection and disposal
- Refuse collection and disposal
- Septic tank desludging and disposal of sludge
- Slaughtering of animals for any purpose other than human consumption
- Storage, drying or preserving of bones, hides, hoofs or skins
- Tallow melting
- Tanning
- Wood pulping
- Wool scouring

# APPENDIX P

## **p1 LANDSCAPE DESIGN CRITERIA FOR MAJOR URBAN ARTERIAL ROUTES**

### **p1.1 INTRODUCTION**

Rotorua is located at the intersection of two major State Highways, (SH5 and SH30) which are a vital part of the national road transport network. Hence, a lot of people either pass through or stop in Rotorua. These State Highways are also the major routes used by tourists visiting Rotorua. Council has been aware for some time that the visual appearance of these roads requires attention. It is important for the future of tourism in Rotorua that visitors obtain a positive first impression of Rotorua City.

As well as State Highways leading into Rotorua along Te Ngae Road, Fairy Springs Road, Old Taupo Road and Sala Street and the Amohau/Pukuatua arterial, other major arterial routes including Fenton Street, must be considered. Future arterial routes such as the proposed Eastern Arterial Route must also be included in the design criteria.

### **p1.2 OBJECTIVE**

To improve the visual appearance of the main existing roads and arterial routes leading into and passing through Rotorua.

### **p1.3 BRIEF ROAD ANALYSIS**

#### **p1.3.1 FAIRY SPRINGS ROAD (SH5)**

Fairy Springs Road is an environmentally sensitive link through the city. The Bay of Plenty Transport Study 1989 confirmed the need to provide for careful and detailed landscaping as this road is the main northern entrance to the City and is therefore of significant tourist use and value. This road passes through a range of land uses such as residential, commercial, industrial, recreational and tourist activities. In order to create a higher standard of visual amenity there is a need for more controlled landscaping standards. Landscaping along this road also has to be balanced against the maintenance of vehicular access and sight lines, and the

provision for signs and advertising hoardings in relation to the various activities along this route.

p1.3.2 **TE NGAE ROAD (SH30)**

For part of its length State Highway 30 currently functions as both a higher volume urban road and a major State Highway. It passes directly through the Eastern Suburbs and has grown in significance and in traffic load at the same time as the growth of the suburbs.

It is also an important route for tourists as it connects the City with the airport. It passes through various land uses including residential, commercial, industrial, forestry and some undeveloped areas. The Whakarewarewa Forest provides a significant degree of visual and environmental amenity, but this tends to be marred by the opposing view of industrial/commercial buildings and advertising.

p1.3.3 **OLD TAUPO ROAD (SH5)**

For much of its length, Old Taupo Road runs through predominantly residential areas with some commercial and reserve land uses. The latter provide welcome open green spaces ie Arikikapakapa Golf Course, Rotorua Boys High School and Medical Officers Reserve. The remainder of the road however passes through an industrial area with very little visual amenity. Road verges are used for parking in front of businesses. Landscaping of this area will need to take into account vehicle movements and parking as well as provision for signs and advertising hoardings in relation to the various activities along this route.

p1.3.4 **FENTON STREET**

Fenton Street, although not a State Highway is the main route into the City from the south. For much of its length it is lined with hotels, motels and other tourist accommodation.

Fenton Street is characterised by the line of pin oaks (*Quercus Palustris*) which have been planted down the central median as far north as Arawa Street. These trees are intended to signify the presence of an arterial route and have also been used in Amohau Street and Arawa Street.

p1.3.5 **AMOHAU/PUKUATUA STREET (SH30A)**

This arterial route connects Te Ngae Road to the east with Old Taupo Road to the west. It runs through predominantly Reserve, Commercial and Residential Zones each of which give it a very different character.

Where the road passes through the Commercial Zone, it is characterised by central median strips planted where possible with ground cover and pin oaks. This area has a high pedestrian count which will increase when the Railway Land is fully developed. The Reserve Zones, in contrast comprise mainly open grassland and trees or shrubs.

## **p1.4 DESIGN PHILOSOPHY**

Main roads entering a town or city should, by their location and design, present that town or city in its most interesting light. They should provide a series of evolving views of a city's outstanding physical features. In Rotorua there is the lake, surrounding hills, significant buildings, and areas of high environmental amenity. Much of what a visitor to the City sees or knows of a city is observed from its arterial roads.

### **p1.4.1 ENVIRONMENTAL FACTORS AFFECTING STREETScape**

- (a) Landscaping
  - road layout - sightlines/natural features alignment;
  - median strip;
  - use of the front yard of adjoining properties;
  - use of road reserve; and
  - continuity of design and plant species selection
- (b) Type of land use
  - design of buildings;
  - maintenance of properties;
  - signs/advertising; and
  - level of activity

## **p1.5 LANDSCAPING AND PLANTING CRITERIA**

Any proposed landscaping required on an arterial route as part of an application of a Rule shall have regard to the following criteria:

- (a) Planting on major arterial routes into the City requires strong tree masses that interrupt the appearance of the built environment. Small plantings tend to clutter and detail is lost to the high speed traveller. Strong tree masses planted at regular intervals along a main arterial can create a sense of place to the frequent road user. Where possible these trees will be planted on median strips or road verges but where this is not possible adjoining landowners will be encouraged to incorporate trees into their landscaping.
- (b) A dense plantation of trees and shrubs between the road and adjoining activity is useful as both a visual screen (as used on some parts of Te Ngae Road) and as a buffer against noise and dust. This form of landscaping is most appropriate as a buffer between traffic noise and residential areas.
- (c) Trees should be chosen and sited so that they will not outgrow their positions, damage surface or underground services, overshadow adjoining buildings or require frequent pruning. Plant varieties which are likely to shed branches should not be planted close to the roadway.
- (d) Trees and shrubs should be set back a sufficient distance from the edge of the roadway to allow for growth without prejudicing minimum clearances.

If the road is likely to be widened in the future, then they should be located where they will not be disturbed (eg median strip).

- (e) Trees and shrubs should not be planted where they might interfere with driver visibility, either when the driver is joining, or attempting to join, the main road. Council will have regard to the location of activities having high vehicle movements when considering the placement and design of landscape planting.
- (f) It is also important that large stands of trees do not grow to affect the effectiveness of street-lighting. The replacement cost of lighting is avoidable if new planting locations are subservient to an existing network of street lights.
- (g) Drivers' perceptions are affected by speed - this will vary according to traffic conditions, so landscaping design guidelines must cater for variable driving speeds.
- (h) Where median strips occur, these will wherever possible be planted with Pin Oaks to extend the theme of pin oaks characterising major arterial routes. Planting intervals should be sufficient to achieve an avenue effect.
- (i) At the approaches to the City, "welcome signs" may be installed with native plantings which will enhance and complement the natural surroundings of the area. These "welcome signs" may incorporate sculptural features that are unique to Rotorua and which provide a definite entry statement.

# APPENDIX Q



# APPENDIX R

## **r1 PROSPECTING AND EXPLORATION**

### **r1.1 RULES FOR PROSPECTING AND EXPLORATION ACTIVITIES**

The following Performance Standards and Rules apply to prospecting and exploration within the District. They are designed to give effect to the purposes and principles of the *Resource Management Act 1991*, and to the Objectives and Policies established by Council in relation to mineral related activities.

Prior to carrying out prospecting and exploration activities other than those defined as minimum impact activities in Section 2(1) of the *Crown Minerals Act 1991*, a written statement is to be provided to the District Council containing the following.

- (a) A description of the activities proposed, their location, and the anticipated duration and timing of those activities.
- (b) A statement identifying those parties that have been consulted, confirmation that the obligations inherent in the *Crown Minerals Act 1991* pertaining to landowner access will be met prior to activities commencing, and confirmation that residents and the community adjacent to the proposed activities have been advised as to prospecting and exploration proposals in a public notice.
- (c) A statement of the anticipated effects of activities on the natural and physical environment, and on neighbouring residents.
- (d) A statement indicating the proposed mitigation measures.

Areas subject to prospecting and exploration, and other areas physically disturbed by associated activities, are to be progressively rehabilitated; Council's policy being to ensure that such prospecting and exploration only results in temporary disturbance of the physical and natural environment.

## **r1.2 PERFORMANCE STANDARDS FOR PROSPECTING AND EXPLORATION**

### **r1.2.1 CONSENTS**

No prospecting and/or exploration shall be commenced until all permits or consents required under legislation have been obtained.

### **r1.2.2 WORK PROGRAMME**

Prior to the commencement of activities, a written work programme outlining the scope and nature of activities proposed, the areas to be prospected/explored, and the timing of such activities is to be provided to Council for information purposes. Any variation to this programme is to be advised to Council if there are likely to be adverse environmental effects following such variation.

### **r1.2.3 PROSPECTING AND EXPLORATION ACTIVITIES AND METHODS**

These are to be confined to the following, in terms of activities and scale.

- (a) Existing published data collection and analysis, and remote sensing techniques;
- (b) Geological mapping;
- (c) Seismic surveys;
- (d) Geophysical surveys involving airborne techniques and/or ground surveys;
- (e) Geochemical surveys, including soil sampling, sediment stream sampling, rock sampling and vegetation or water sampling. Sampling methods are limited to hand held machinery, soil and rock samples not to exceed 5 kilograms per sample;
- (f) Gridding and line surveying, to a maximum of 1 metre width, with vegetation clearance only where essential;
- (g) Trenching and Costeaning, subject to a maximum depth of 10 metres and base width of 2 metres. Progressive rehabilitation of trenching is to be undertaken, such that no more than 50 metres of trenching is left open at any one time;
- (h) Exploration drilling, subject to a maximum drilling pad size of 200 square metres;
- (i) Bulk sampling, subject to a maximum of 500 square metres per site being undertaken;

- (j) Exploration tunnels, subject to compliance with all Performance Standards related to waste management and disposal, to health and safety legislative requirements, and to regional Rules relating to water use and discharge. The maximum volume of excavated material is not to result in more than 500 square metres of surface area being covered, to a maximum height of 2 metres; and
- (k) Investigations related to old mine workings, including dewatering and gathering samples.

#### r1.2.4 **GENERAL PROTECTION OF THE ENVIRONMENT**

In conducting prospecting and exploration activities, environmental disturbance shall be kept to a minimum, all flora and fauna shall be protected except for such disturbance as is unavoidably necessary in the conducting of activities, and earth surface disturbance shall be limited to that specifically required for prospecting and exploration purposes.

#### r1.2.5 **FIRE PRECAUTIONS**

Reasonable precautions shall be taken to minimise fire hazards. The provisions of the *Forest and Rural Fires Act 1977* shall be adhered to. Fire fighting equipment is to be readily available, and preventative measures such as exhaust discharge and spark emission controls utilised where appropriate on equipment.

#### r1.2.6 **EXPLOSIVES AND BLASTING**

- (a) All explosives shall be stored in accordance with the provisions of the Dangerous Goods Regulations. All blasting procedures shall be carried out so as to ensure the safety of persons. Prior to any blasting Council and any potentially affected residents are to be advised in writing, and a notice of blasting times erected at road entrances to the areas affected. Details of all blasts shall be recorded in a record book.
- (b) Times of day, airblast overpressure noise level and ground vibration peak particle velocity limits are suggested for those mining, quarrying and related operations which involve the repeated use of explosives.

Blasting operations should in most cases be confined to the periods Mondays to Fridays 9.00am to 3.00pm. Blasting outside of those times should be approved only where blasting during the preferred times is clearly impractical, and should then be limited in number.

In that context, the criteria for impact on residential premises are shown in the following table:

<b>LIMITED CRITERIA FOR THE CONTROL OF BLASTING IMPACT AT RESIDENCES</b>		
<b>Time of Blasting</b>	<b>Blast Overpressure Level (dB[linear])</b>	<b>Ground Vibration, Peak Particle Velocity (mm/sec)</b>
Monday - Friday 9.00am to 3.00pm	115	5
Monday - Friday 8.00am to 9.00am and 3.00pm to 6.00pm	105	2
Saturday midday onwards, Sunday, Public holidays - All day and any day, 6.00pm to 8.00am	nil	nil

- (c) All measurements are to be taken at any affected residence.
- (d) Specialised monitoring equipment is necessary since the energy content of noise and vibration is predominantly of ultra-low frequencies.
- (i) airblast overpressure monitoring equipment should have a cut-off frequency of 2 Hz and cover range of at least 2 Hz to 250 Hz;
- (ii) ground vibration monitoring equipment should have a cut-off frequency of 4 Hz and cover a range of at least 4 Hz to 100 Hz.
- (e) Temperature inversions and wind can enhance the overpressure noise levels by as much as 20dB at distances of 2km or more from the centre of the blast. When temperature inversion is present, blasting operations should be confined to the hours of 11.00am to 1.00pm.
- (f) There could be some exceedance of the overpressure limit of 115dB(lin) on infrequent occasions. This should be limited to not more than 5% of the total number of blasts and should not exceed 120dB(lin) at any time.
- (g) The ground vibration also may sometimes exceed the limit of 5 mm/sec on infrequent occasions. This should be limited to not more than 5% of the total number of blasts and should not exceed 10 mm/sec at any time. Experience indicates however, that ground vibration for mines and quarries can generally be maintained below 1mm/sec.

## r1.2.7

**ARCHAEOLOGICAL/HISTORICAL SITES**

No damage to, or modification of, any archaeological site (as defined by the *Historic Places Act 1993* or identified in Appendix A) is permitted without the prior written consent of the New Zealand Historic Places Trust.

**r1.2.8 NOISE**

Daytime noise levels (7.00am to 6.00pm) arising from prospecting and exploration activities shall not exceed 55dBA (as defined in NZS 6802), night-time noise (6.00pm -7.00am) levels shall not exceed 45dBA, measured within 20 metres of the nearest household unit, not owned by the prospector or explorer.

**r1.2.9 ACCESS ROADING**

If new tracks are required to carry out exploration activities, they shall be sited and constructed to cause minimum disturbance to the landscape, and least risk of erosion and impact on water courses. Where cut and fill is required, seeding, compacting and benching should be carried out. Cut off drains and culverts shall be provided where needed to handle stormwater. Where tracks are intentionally intended to be temporary, on cessation of exploration activities revegetation and rehabilitation measures shall be implemented. Grades shall not exceed 1:5, and track width shall not exceed 4 metres. Apart from crossings, a buffer strip of not less than 10 metres in width (measured on the ground surface) shall be left between the track and any stream, creek, river or lake.

**r1.2.10 REFUSE**

Any debris, litter, rubbish or dangerous, unsightly or offensive matter shall be removed from the area that has been prospected or explored, and disposed of appropriately in a properly designated landfill.

**r1.2.11 SOIL AND WATER PROTECTION**

Topsoil required to be removed for prospecting and/or exploration purposes shall be stockpiled in a manner suitable for later use for rehabilitation purposes. Precautions need to be taken to ensure that topsoil and other overburden materials do not enter into any watercourse. Unless in accordance with a Regional Rule or a resource consent, prospecting and exploration operations shall be carried out so that there is no noticeable alteration to the quality or quantity of natural water. No activities shall be carried out that initiate or accelerate watercourse bank slumping or erosion, or result in the deposition of any vegetation, soil, rock or debris in watercourses. No machinery other than a pump shall be operated in any watercourse.

**r1.2.12 PUBLIC ACCESS AND SAFETY**

Existing rights of private and public access over the area subjected to prospecting and exploration shall be respected. All reasonable steps shall be taken to protect the safety of all persons in the area and, where necessary, temporary signs shall be erected warning the public of any danger arising from exploration activities.

**r1.2.13 CHEMICAL AND FUEL STORAGE**

All chemicals and fuels shall be stored in accordance with Dangerous Goods Regulations, with regard to safety, reactivity and security. Bunding shall be provided where appropriate, and in particular fuel storage facilities shall be designed in a manner so as to minimise the risk of contamination of water and soil.

**r1.2.14 STOCK SAFETY AND PROTECTION**

If required by the land owner or occupier, areas affected by activities shall be designed in a manner so as to minimise the risk of danger to stock.

**r1.2.15 FISHERIES PROTECTION**

Precautions shall be taken to prevent damage to any trout and native fisheries, and aquatic life in general, by virtue of potential contamination or physical disturbance of aquatic habitats. The rights of the public to fish shall not be limited as a result of prospecting or exploration.

**r1.2.16 SURVEY MARKS**

Other than marks made during the course of prospecting and exploration, no survey marks may be removed, and no exploration is permitted within a 10 metre radius of any trig station.

**r1.2.17 LIGHTING**

Any night lighting established shall be located and shaded so as not to create a nuisance to adjacent residents, or cause a traffic hazard.

**r1.2.18 CESSATION OF ACTIVITIES**

At the completion of prospecting and exploration activities, areas physically affected are to be left in a clean and tidy condition. All plant and equipment is to be removed, boreholes filled or capped, and trenches, costeans and bulk sample pits backfilled. Access tracks and associated features are to be left in a stable condition, or removed if of a temporary nature.

**r1.2.19 RESTORATION AND REHABILITATION OF AFFECTED AREAS**

Where areas have been disturbed by prospecting or exploration, such areas shall be progressively restored and rehabilitated. Previously stockpiled topsoil will be replaced over disturbed areas, contoured appropriately, and re-pastured or revegetated. In situations where exploration has involved depositing of overburden and rock on the surface, these should be either used to backfill excavated areas, or covered with topsoil to prevent acid generation. Where

necessary, native plant species endemic to the area shall be used for revegetation purposes. The rehabilitated areas will be maintained and managed to a point where they will be able to support themselves. If, in the opinion of the District Council, a bond to guarantee the satisfactory implementation of rehabilitation is necessary, Council shall require such a bond prior to the commencement of prospecting and/or exploration activities. The quantum of any bond shall be based on the likely and reasonable cost of implementing and managing rehabilitation work. Failure on the part of the prospector/explorer to carry out adequate rehabilitation will result in Council calling up the bond and arranging for the necessary work to be undertaken.

r1.2.20 **UNDERGROUND WORKINGS**

In the event of prospecting or exploration activities involving the opening up of underground workings, the disposal of any solid materials will need to be handled in a manner consistent with these District Plan Rules. Any discharges of minewater shall be subject to appropriate resource consents relating to the taking and discharging of mine water.

r1.2.21 **LIABILITY**

Prior to commencing of prospecting or exploration, the party responsible for the proposed activities shall effect and maintain during the currency of the activities public liability insurance for an amount determined by the District Council. This amount shall be based on a consideration of the nature and scale of activities proposed and the likely and reasonable cost of the risk to the environment. The indemnity expressed in the insurance policy shall be sufficiently wide in its coverage so as to include claims arising from damage caused by or resulting from fire, and all fire fighting costs, resulting from the prospecting and/or exploration activities.

# APPENDIX S

## s1 MINING AND QUARRYING

### s1.1 COVERAGE

Council's principal interests in mining and quarrying include:

- The effects of the operation on matters identified in Sections 6 and 7 of the *Resource Management Act 1991*;
- Compaction of fill, overburden and wastes, and identification of sites on hazard registers and property files;
- The effects of the introduction of hazardous substances;
- Safety of the operation;
- Noise generation; and
- Traffic generation on public roads including the effects on the roads themselves.

### s1.2 CONSENTS

As well as requiring a consent from Council, mining and quarrying operators may require consents from the relevant regional council. Where this is the case, Council will consult with the regional council to ensure that the assessments are co-ordinated as much as possible. Where an operation is expected to affect a State Highway (such as by generating extra traffic crossing), Council will consult with Transit NZ as an affected party.

In assessing any application for mining or quarrying, Council will take into account the Rules specified in Appendix R as though those Rules were a base for applications for mining and quarrying. Council may decline any application for mining or quarrying, or grant it subject to any conditions to avoid, remedy or mitigate adverse effects on the environment.

### s1.3 ASSESSMENT CRITERIA

In assessing any application for mineral or bulk material extraction, Council shall have regard to the relevant matters stated in the *Resource Management Act 1991*, and shall have particular regard to matters in s1.1 above as they relate to this section and s1.4 below, Council will seek to ensure that:

- (a) no mining or quarrying will occur within established rural settlements and/or papakainga or on land identified on the Planning Maps for residential activity within the planning period;
- (b) in considering any mining or quarrying application, Council will give particular attention to the likely effect of the extractive activity on places or objects of historical or spiritual importance to the tangata whenua of the District;
- (c) in considering any application for mining or quarrying within any reserve, Council will give consideration to the intrinsic attributes and values of the reserve in relation to the significance of the mineral resource sought to be extracted and the likely effects of the extraction activity on the reserve;
- (d) the applicant for any mining or quarrying consent within or adjacent to an existing and/or designated future water supply catchment area, will provide conclusive evidence that the proposed activity will not adversely affect the quality or quantity of the water supply;
- (e) the effect of the mining or quarrying activity on the landscape and its values, both short-term and long-term, will be considered in assessing any mining application;
- (f) in assessing any mining or quarrying proposal, particular relevance will be given to the potential impact on the ecological and landscape values of the area, on any geothermal features and amenities of the surrounding area, and on tourism activities and values;
- (g) where consent to a mining or quarrying application is granted, the site will be required to be progressively restored during the course of the mining activity, and all tailings shall be permanently established; and
- (h) consideration be given to require bonds to be entered into with Council to ensure that all restoration work is satisfactorily undertaken, and that other conditions are met.
- (i) any mining or quarrying application within two kilometres of the boundary of Rotorua Airport, shall be accompanied by conclusive evidence that the proposed activity will in no way adversely affect the safe and efficient operation of that airport.

## **s1.4 FURTHER MATTERS**

Council will also have regard to:

- (a) the scale and method of the mining or quarrying operation proposed, the transport network, the processing site and waste disposal, an assessment of the environmental effects including the hazards, and the post-mining management of the site(s);
- (b) the extent to which the applicant has carried out a programme of public consultation, identified the spiritual, social, economic and environmental concerns of affected and other interested parties, and resolved the conflicts identified. This shall include the extent to which meaningful discussions and consultations with the tangata whenua have been carried out and their concerns addressed or met;
- (c) how adequately an environmental impact assessment has been prepared in accordance with the Fourth Schedule of the *Resource Management Act 1991*. Issues and concerns, conflict resolution, hazards and post-mining land management arising from the public consultation process as set out in 4(b) above, together with the requirements of the *Resource Management Act 1991* and the criteria from 3 (above), must be addressed;
- (d) the extent to which the application has identified the potential hazards, evaluated these, and presented contingency plans for these, and whether these are adequate for the life of the project, the term of any licence granted by another authority, and for the future beyond;
- (e) whether consents are needed from a Regional Council, and if so, whether they have been applied for;
- (f) the extent to which any consents put or to be put on the operation by a Regional Council meets the District Council's requirements;
- (g) whether adequate provision is made for the management and ownership of the mine and waste disposal sites after mine closure; and
- (h) the extent to which any tailings dam(s) meets such safety standards as exist from time to time, taking into account the characteristics of the climate, geology and earthquake risk for the areas.

Applications will therefore need to include adequate detailed information to enable assessment in terms of (a)- (h) above to be made.

## **s1.5 REHABILITATION**

In setting any conditions requiring rehabilitation, Council will favour the use of indigenous species that grow naturally in the area where this is appropriate to the surrounding land uses, the intended future use of the site, and any rehabilitation conditions set by regional councils.

## **s1.6 MANAGEMENT PLANS**

Where a regional council requires an operator to produce a Management Plan of the operation to cover regional council matters, Council will favour its matters being incorporated in that plan also. Where this is done satisfactorily, Council will consider incorporating the Management Plan into Council's conditions of any consent.



# APPENDIX U

## **NOTE:- LAKES A ZONE**

*For Financial Contributions for Subdivision and Development in the Lakes A Zone, refer to Appendix U that forms part of Rule 1.1 of the Lakes A Zone and to Appendix 1.0 of Volume 2 of the Lakes A Zone.*

## **u1 FINANCIAL CONTRIBUTIONS FOR RESERVES AND HERITAGE PURPOSES**

The Objectives and Policies relating to financial contributions for reserves and heritage purposes are set out in Part Eleven. Further reference to the Rules contained in this Appendix can be found in Parts Six, Seven, Eight, Nine, Ten and Sixteen.

### **u1.1 GENERAL RULES**

A financial contribution for reserves and heritage purposes will become a condition of a resource consent in accordance with the Rules outlined in **u1.2**, **u1.3**, and **u1.4** below. Unless exceptional circumstances exist, the maximum contribution as specified in the Rules below will be levied.

Engineering requirements as outlined as Performance Standards in Appendix W and landscaping required as a Performance Standard in the Plan are not a financial contribution in terms of Appendix U.

### **u1.2 RULES FOR SUBDIVISION CONSENTS**

A financial contribution will be required for all subdivision consents in accordance with the following Rules.

Council may impose a financial contribution for reserves and heritage purposes in cash, land, works, services or a combination of these. Subject to the Rules in **u1.4** below, where the financial contribution is taken as:

- (a) **Cash:** The contribution will not exceed 5% of the land value of the lots or lease areas shown on the approved scheme plan as assessed by Council and to which additional Certificates of Title will be issued.
- (b) **Land:** The contribution will be an area of land to a value not exceeding 5% of the value of the lots or lease areas shown on the proposed scheme plan and to which additional Certificates of Title will be issued.
- (c) **Works and/or services:** The contribution of works and/or services will be to a value not exceeding 5% of the land value, as assessed by Council, of the lots or lease areas shown on the proposed scheme plan and to which additional Certificates of Title will be issued. Council may negotiate with

the applicant the provision of off-site works and services in consultation to partly or wholly satisfy the contribution in this regard.

- (d) **Combination of a, b and/or c:** Council may impose a combination of (a), (b) and (c) as a contribution provided that the value of the total contribution will not exceed 5% of the value as assessed by Council of the lots or lease areas shown on the approved scheme plan and to which additional Certificates of Title are intended to be issued.

## **u1.3 RULES FOR RESOURCE CONSENTS**

A financial contribution for reserves and heritage purposes will be required, subject to **u1.4** for the following land use activities.

### **u1.3.1 ADDITIONAL HOUSEHOLD UNITS**

A financial contribution will be required for all additional household units. Council may impose a financial contribution in cash, land, works, services or a combination of these. Where the financial contribution is taken as:

- (a) **Cash:** The contribution will not exceed 5% of the land value as assessed by Council that the additional household unit has exclusive rights to plus a pro-rata proportion of any common areas on the lot or lease area.
- (b) **Land:** The contribution will be an area of land to a value not exceeding 5% of the land value as assessed by Council that each additional household unit has exclusive rights to plus a pro-rata proportion of any common areas on the lots or lease areas.
- (c) **Works and/or Services:** The contribution of works and/or services will be to a value not exceeding 5% of the land value, as assessed by Council, that each additional household unit has exclusive rights to, plus a pro-rata proportion of any common areas on the lot or lease area. Council may negotiate with the applicant the provision of off-site works and/or services to partly or wholly satisfy the financial contribution in this regard.
- (d) **Combination of a, b and/or c:** Council may impose a combination of (a), (b) and (c) as a contribution provided that the value of the total contribution will not exceed 5% of the land value, as assessed by Council, that each additional household unit has exclusive rights to plus a pro-rata proportion of any common areas on the lots or lease areas.

### **u1.3.2 TOURIST ACCOMMODATION**

A financial contribution will be levied on tourist accommodation activities which provide for additional units of accommodation. This contribution will not exceed 1% of the total value of the costs associated with the construction of the units of

accommodation as assessed by Council. The contribution may be levied as cash, land works on services, or a combination of these.

**u1.3.3 SUBSIDIARY HOUSEHOLD UNITS**

A financial contribution will be levied on subsidiary household units. The contribution will not exceed 1% of the value as assessed by Council of the lot or lease area on which the subsidiary household unit will be located. The contribution will normally be levied in cash.

**u1.3.4 HOUSEHOLD UNITS IN COMMERCIAL AND INDUSTRIAL ZONES**

A financial contribution will be levied on additional household units and on household units in addition to any commercial or industrial use on lots and lease areas in Commercial and Industrial Zones. The contribution will not exceed 1% of the value of the household unit as assessed by Council.

**u1.3.5 DEVELOPMENTS PROPOSED ON LOTS AND LEASE AREAS ADJOINING A LAKE OR RIVER**

A financial contribution in the form of an esplanade reserve or an esplanade strip may be levied on developments proposed on lots or lease areas adjoining a lake or river. The land value of the esplanade reserve or esplanade strip will not exceed 5% of the value of the proposed development as assessed by an independent valuer or alternatively by negotiation between Council and the applicant. In the consideration of any requirement for an esplanade reserve or an esplanade strip Council will refer to the Objectives, Policies and Rules of Part Eleven.

**u1.4 INTERPRETATION**

**u1.4.1 SUBDIVISION IN ALL ZONES**

(a) Subdivision of vacant land or land occupied with non-substantial buildings

The financial contribution will be averaged over all the lots and lease areas shown on the approved scheme plan and to which Certificates of Title will be issued.

(b) Subdivision of land occupied with substantial buildings

The financial contribution will be levied only on the lots and lease areas to which additional Certificates of Title will be issued and which are not occupied with substantial buildings.

#### u1.4.2 SUBDIVISION IN RURAL A AND B ZONES

When a financial contribution is levied on lots and lease areas in the Rural A and B Zones, the value of the financial contribution will be calculated on a land area of 2,000 square metres. This area will be deemed to be located on the proposed or most suitable location for a house site as assessed by Council.

**NOTE: LAKES A ZONE**

*For the Lake A Zone refer to section u.1.4.2 of Appendix U that forms part of Rule 1.1 of the Lakes A Zone.*

#### u1.4.3 SUBDIVISION IN RESIDENTIAL ZONES

For the purpose of calculating financial contributions on lots or lease areas shown on an approved scheme plan which may accommodate one or more additional household units in Residential Zones, the following Table will be used to determine the area of land on which the financial contribution will be based.

<b>DETERMINATION OF LAND AREA ON WHICH TO BASE FINANCIAL CONTRIBUTION</b>		
Zone	Size of proposed lot or lease area	Area of land to be used for financial contribution
Residential A	500 m <sup>2</sup> or greater	450 m <sup>2</sup>
Residential B	900 m <sup>2</sup> or greater	850 m <sup>2</sup>
Residential C	300 m <sup>2</sup> or greater	250 m <sup>2</sup>
Residential D	900 m <sup>2</sup> or greater	850 m <sup>2</sup>
Transitional Development	1000 m <sup>2</sup> or greater	950 m <sup>2</sup>

#### u1.4.4 ADDITIONAL AND SUBSIDIARY HOUSEHOLD UNITS

- (a) A financial contribution for additional household units will apply to the second and subsequent units proposed on any single Certificate of Title regardless of the number of lots which may exist on that Certificate of Title.
- (b) Except for the Residential B Zone, for Residential Zones, the minimum area which will be used to calculate the financial contribution for an additional household unit will be the minimum net site area specified in the Zone, as listed in Table R16 in Part Sixteen of this Plan. For the Residential B Zone, this area shall be 450m<sup>2</sup>. The maximum area in Residential Zones to be used for the purpose of calculating the financial contribution will be set in accordance with the maximum area for subdivision as listed in the above Table.
- (c) For Rural A and B Zones, a 2,000 m<sup>2</sup> house site will be used when calculating the financial contribution for additional household units and subsidiary household units.

- (d) The minimum contribution will be \$200.00 for a subsidiary household unit in any Zone.
- (e) The minimum contribution will be \$500.00 for additional household units in the Rural Zones.

**u1.4.5****FINANCIAL CONTRIBUTIONS NOT TO APPLY**

- (a) Subject to Rules **u1.4.6(a)** and **u1.4.6(b)** a financial contribution will not be levied on lots and lease areas to which additional Certificates of Title are intended to be issued, if the lot or lease area is occupied with a substantial building.
- (b) Financial contributions will not be levied on household units which are erected in accordance with a second or subsequent stage of a previously approved cross-lease plan.
- (c) Financial contributions will not be levied on lots where Council is satisfied that the lot or lease area would qualify to gain a separate Certificate of Title under Section 226 of the *Resource Management Act 1991* and the lot is not subject to an amalgamation condition.
- (d) Financial contributions will not be levied for subdivision of vacant land or land occupied with buildings other than substantial buildings within the Commercial H Zone.

Where financial contributions are levied under **u1.3** a contribution of private land permanently set aside as open space or recreation facilities will be taken into account.

**u1.4.6****FINANCIAL CONTRIBUTIONS FOR SUBDIVISION OF LOTS OR LEASE AREAS WITH NEW OR APPROVED HOUSEHOLD UNITS OR SUBSTANTIAL BUILDINGS**

- (a) Council may require a financial contribution for subdivision based on the market value as assessed by Council of a lot or lease area occupied with a substantial building/s if a period of not more than six months has passed from the date that the Code Compliance Certificate for the building is issued; or
- (b) Council may require a financial contribution based on the market value as assessed by Council of a lot or lease area if a building consent has been issued for the lot or lease area and the Code Compliance Certificate has not been issued.

Any financial contribution previously paid within the time frames specified in the above Rules will be credited against any further financial contribution payable under (a) or (b) above.

**u1.4.7 DEFINITION OF SUBSTANTIAL BUILDING**

“Substantial building” is defined as a household unit in Residential and Rural Zones. In all other Zones, a substantial building is defined as a building including fixed plant and machinery with a value in excess of \$50,000 as assessed by Council.



# APPENDIX V

**NOTE:- LAKES A ZONE**

*Appendix V has relevance within the Lakes A Zone. Refer to Appendix V that forms part of Rule 1.1 of the Lakes A Zone.*

## **v1 SUBDIVISION AND DEVELOPMENTS INFORMATION REQUIREMENTS**

### **v1.1 INTRODUCTION**

Council will not approve any such subdivision or development (as defined in Part Nineteen) unless the following information requirements where applicable are complied with.

### **v1.2 DEVELOPMENT OF LAND**

Prior to development of any land in the District, the proposed developer of the land shall, before any work involving the disturbance of the land surface (other than necessary investigative work) is commenced, notify Council in writing of the proposed development.

Council will, before the issue of any building consent and before the development is commenced, require the proposed developer to submit to Council a Development Plan. The Development Plan shall include the information requirements as set out in **v1.4**.

### **v1.3 SUBDIVISION CONCEPT PLANS AND REPORTS**

Concept plans may be required by Council where:

- (a) the proposed subdivision will be comprised of more than 50 lots;
- (b) Council is of the opinion that the subdivision will have special or unusual features; or
- (c) the servicing of the subdivision will affect land owned by someone other than the subdivider.

Council may require the subdividing owner to include or attach to the concept plan and report details as necessary to:

- (i) give a general outline of the nature of the proposed subdivision;

- (ii) indicate the location of works and services in compliance with the criteria in Appendix W;
- (iii) indicate the approximate layout and contour of proposed allotments;
- (iv) describe any other land of the subdividing owner adjoining the land in the proposed subdivision which may be subdivided in the future;
- (v) identify any unusual physical aspects which may affect the subdivision; and
- (vi) identify design considerations, compliance with appropriate regional plans, regional land transport strategies and compliance with all aspects of the Minimum Engineering Requirements contained in Part Sixteen.

A subdivision concept plan will be made available for public inspection by any person (free of charge) during normal office hours at Council office for a period of 20 working days. Council will forward any comments made or submitted during this period to the subdivider.

## **v1.4 SUBDIVISION SCHEME PLANS AND REPORTS**

The subdivision scheme plan and reports shall be prepared in accordance with the *Resource Management Act 1991* and, in addition, shall include such detail as is necessary to:

- (a) identify all areas subject to inundation, erosion, subsidence, slippage or filling;
- (b) identify all upgrading of existing road and utility service infrastructure;
- (c) establish that each proposed lot has a suitable and stable building site, including any testing reports and certificates from Soils Engineers identifying that existing filling is suitable for the permitted uses; and
- (d) provide all the information required by v1.3(i) - (vi).
- (e) identify the locality (in a diagram) and the rural number or street number.

## **v1.5 COPIES OF APPLICATIONS FOR SUBDIVISIONS**

With an application for Council's consent, the subdivider must provide seven copies of the scheme plan and reports (this number includes copies for Telecom and Rotorua Electricity).

## **v1.6 ADJACENT LAND**

Concept and scheme plans for subdivision must show the full extent of possible further subdivision of the block in the Title or Titles being dealt with. This is to indicate the number of sections and the limits of roading, drainage and water supply which may be needed in the future and to make it clear that the scheme does not prejudice full development. The extent of possible further subdivision may be shown by inset at a smaller scale. Details of other land, either owned by the subdivider or another party, adjoining the proposed subdivision that is relevant to the proposal may also be required.

## **v1.7 SUBDIVIDER'S OR DEVELOPER'S REPRESENTATIVE**

The subdivider or developer shall identify a suitably qualified and experienced representative, (hereinafter referred to in this Part as the "subdivider's or developer's representative") who has suitable experience in all phases of subdivisional engineering work and the subdivider or developer shall notify Council of the name of the person so employed before any work commences.

The subdivider's or developer's representative shall be responsible for:

- (a) the preparation and submission for approval of engineering plans and specifications in terms of the standards in Appendix W and *Rotorua District Council Engineering Code of Practice*;
- (b) supervision of the works as detailed in the approved plans and specifications; and
- (c) certifying to Council upon completion of the works that the works have been carried out in accordance with the approved documents.

The subdividers or developer's representative shall be available for a meeting on the site of the works within eight ordinary working hours of being so requested by the appropriate Council officer. While each stage of the works must be notified to officers of Council, they will not undertake day to day supervision and the subdivider's or developer's representative shall be responsible for ensuring that the work complies with all aspects of Part Sixteen and Appendix W.

When required by Council, the subdivider or developer shall also appoint a registered engineer experienced in soils engineering (the soils engineer) to control

and certify earth fillings, roading subgrades and to issue the requisite certificates for the stability of the subdivision as required (see **v1.9**). If suitably qualified, the subdivider's or developer's representative may act as the soils engineer.

## **v1.8 SUITABILITY OF SITE FOR SUBDIVISION**

All applications for subdivision shall include sufficient detail to demonstrate that the site is suitable for the proposed activity having regard to the provisions of the District Plan, erosion, subsidence, standards for filling, geothermal activity, slippage, inundation or public services (particularly where sewerage, water supply and public services are not available and will not be available within five years).

Applicants are to show that all existing infrastructure to be used or connected is adequate to cope with the proposed increase in usage, or to show upgrading requirements where necessary.

Council may approve the scheme plan, with or without conditions or amendments, require submission of a new scheme plan, or refuse to approve the scheme plan in terms of its statutory authority under . Council will require comment from the appropriate regional council, the New Zealand Historic Places Trust and Transit New Zealand when appropriate.

If Council approves the scheme plan, it will inform the subdividing owner and state any conditions of approval.

If Council does not approve the scheme plan, it will inform the subdividing owner of its reasons for not doing so.

## **v1.9 STABILITY IN RELATION TO SUBDIVISION AND DEVELOPMENT**

Where, in the opinion of Council, the stability of the land requires investigation, a report from a registered engineer experienced in soil mechanics shall be supplied prior to scheme plan or development approval. This report shall set out the facts relating to the investigation together with test results and other data on which recommendations are based. The report shall be subject to approval along with other subsequent engineering information and should be in the format outlined in the *Rotorua District Council Engineering Code of Practice*.

## **v1.10 APPROVAL OF PLANS FOR SUBDIVISION AND DEVELOPMENT AND SPECIFICATIONS**

The subdivider's or developer's representative shall submit two sets of engineering plans and specifications, covering all aspects of the work, for initial perusal and amendment, where appropriate.

All plans and specifications shall be drawn up in accordance with **v1.11** and the *Rotorua District Council Engineering Code of Practice*. Detailed calculations for pavement design, stormwater and sanitary pipe sizes, water reticulation and open channel flow together with appropriate catchment area plans, shall be submitted with the documents for approval.

Following the checking by Council one copy of the plans shall be returned to the subdivider's or developer's representative with any required amendments endorsed thereon. The subdivider's or developer's representative shall then amend the plans and resubmit at least two complete sets to Council.

Provided Council is satisfied that the amendments have been carried out in accordance with Council's requirements Council will approve the documents. All plans and specifications will then be stamped "*Approved subject to conditions shown and as set out in the accompanying letter*". A copy of the approved plans must be kept on site at all times.

## **v1.11 PLANS/DRAUGHTING FOR SUBDIVISION AND DEVELOPMENT**

### **(a) General**

All drawings, including scheme plans, shall be prepared and submitted on sheets of the Standard ISO Type A Series. Principal drawings are to be on A1 or A2 sizes as appropriate. Detailed drawings, site plans etc may be of A3 or A4 sizes. A 40mm border is to be provided along the left-hand edge of all sheets for binding.

### **(b) Draughting**

All draughting is to conform to NZS 5902 or other New Zealand Standard where appropriate. In particular, the minimum height of letters is to conform to NZS 5901, Part 1: Table 1.6.3. In order to make microfilm file copies, the drawings must be no finer than 0.18mm and all lines must be of uniform density.

### **(c) Drawings to be submitted**

- (i) locality plan;
- (ii) roading plan, long-section, cross-section and typical cross-sections;
- (iii) sanitary, stormwater and water reticulation: A separate plan showing all reticulation in relation to section boundaries. Long-sections of each drainage line. Plans showing the complete catchments and areas for each drainage system;
- (iv) landscaping and earthworks: A separate plan showing original contours and areas of cutting and filling together with a 6m grid of depths relative to original level. Existing vegetation, physical features, buildings etc to be shown together with any proposed planting. Details of vehicular access to each lot must be shown;

- (v) staged development plan: Where a block is to be developed in stages each stage must include a plan showing how the particular stage relates to the whole block and also to other stages;
- (vi) detailed drawings as appropriate.

**(d) Scales**

The following scales shall be used:

Plans: 1:500 to 1:200

Long Section: - Horizontal 1:500 or 1:200 )  
 - Vertical 1:100 or 1:50 ) where necessary

Cross-Section: - Horizontal 1:100 or 1:50 )  
 - Vertical 1:100 or 1:50 ) where necessary

**NOTE:** The vertical scale may be exaggerated where necessary for clarity.

Details: - General 1:10, 1:20, 1:50  
 - Roading (eg kerb lines, cul-de-sac heads) 1:200

Scheme Plans: - Urban 1:500 to 1:1000

**NOTE:** Urban scheme plan scales are required to conform wherever possible to the Engineering Plan Scale (ie 1:500)

- Rural To specific approval.

All dimensions and levels shall be in metric measurement.

**(e) Orientation of plans**

(i) Plans and long-Sections:

The north point shall be to the top of the sheet wherever practicable. All plans and long-sections shall have the lesser distance (m) on the left-hand side of the sheet. For drainage and water supply the lesser distance of a line shall be at the downstream end of the pipe.

(ii) Cross-Sections:

Cross-sections shall commence at the bottom left-hand corner of the sheet and proceed upwards in order of increasing traverse distance. Where the road reserve is 20m wide it may not be possible to place two columns of sections on one sheet, in which case the sheet may be rotated 90° clockwise and the sections plotted from the "bottom" of the sheet to the "top".

The left and right kerb lines shall be determined by facing in the direction of increasing distance. For open channel flow, left and right banks shall be determined by facing in the direction of flow.

**(f) Plotting of features**

All existing features must be plotted on the plan, with spot levels on permanent features such as manholes (invert and lid), culverts (invert level inlet and outlet), kerbs, walls, etc.

A clear description of each plotted feature must be given, indicating what it is and what material it is made of. Size and condition of pipes and culverts must be stated together with the direction of flow. Discharge points (and areas) of catchments draining onto road reserves are to be given.

**v1.12 UPGRADING OF INFRASTRUCTURE IN  
RELATION TO SUBDIVISION OR DEVELOPMENT**

The upgrading of any existing road or utility service infrastructure, necessary as a result of the subdivision or development must be identified and quantified prior to the application for consent being submitted to Council.

**v1.13 ADDITIONAL INFORMATION REQUIREMENTS  
FOR APPLICATIONS FOR SUBDIVISIONS IN THE  
RURAL ZONES**

In cases of application for subdivision in the Rural Zones the following information shall also be provided.

**(a) Physical description**

- (i) soils - type  
drainage characteristics;  
limitations;  
suitability for on-site waste disposal and proposed activity;  
susceptibility to erosion;  
contribution to ground/surface waterflows to nearby waterbodies;
- (ii) topography - slope, drainage pattern, gullies surface/ground water flow paths;  
identification of gullies, steeper slopes appropriate for retirement;
- (iii) vegetation - type, age, values;  
influence on water flow; erosion prevention;  
identification of existing cover;
- (iv) development - location and purpose of building, services;  
intensity of existing activity;
- (v) drainage features - ponds, dams, streams, lakes, wetlands, seepages;  
direct relationship to water/nutrient flows;

potential for riparian zones, esplanade reserves.

**(b) Proposed development**

- (i) new lots for subdivisions - boundary location, size of lots;  
relationship to physical characteristics of the site;  
location of boundaries in relation to sensitive areas;
- (ii) development - use of site, buildings, including building platforms;  
earthworks, areas to be paved;  
status and effects of activities on nutrient contributions and implications for water quality;  
effects of buildings in terms of demand for services;  
potential change in water flows, surface runoff concentration;  
resource consents required.
- (iii) services - waste disposal, water supply, stormwater;  
suitability of soils and topography for proposed systems;  
alternative systems considered;  
effect of reticulated water supply where available;  
appropriateness of lot size;  
mitigation of effects;  
resource consents required.
- (iv) areas to be reserved - esplanade reserves or strips, covenants;  
riparian buffer area provisions;  
areas to be planted/protected;  
fencing proposed;  
other measures.

**(c) Assessment of effects**

A report shall set out an assessment of the actual and potential effects, on the environment, of allowing the activity in relation to the achievement of the Objectives and Policies of the Zone and the maintenance and enhancement of water quality.

Such assessment shall be in accordance with the Fourth Schedule to the *Resource Management Act 1991* and shall specify positive and negative effects as well as intended methods to mitigate any adverse effects.

# APPENDIX W

## w1 SUBDIVISION AND DEVELOPMENT STANDARDS

### w1.1 INTRODUCTION

The Engineering Works and Services criteria specified below are the Performance Standards to be achieved in meeting the Minimum Engineering Requirements specified in Part Sixteen of this District Plan.

### w1.2 PERFORMANCE STANDARDS

#### *EXPLANATION*

*The following are the performance standards for subdivision activities. The Rotorua District Council Engineering Code of Practice is the technical document "approved" by Council for meeting these standards. Any subdivision or development which meets the Code will be deemed to comply with the performance standards contained in the District Plan. Alternative design proposals must display a level of compliance equivalent to this approved document in meeting these performance levels. Proposals which fail to meet the level of performance of the Code will be assessed as non-complying activity applications.*

#### w1.2.1 EARTHWORKS AND LAND STABILITY

- (a) That all earthworks are carried out in a manner that minimises or avoids damage to the natural and physical environment.
- (b) That modifications to the natural environment resulting from earthworks be minimised or avoided in order to preserve existing landscape and habitat features as far as practicable.
- (c) That the land form is stabilised.
- (d) That the carrying out of bulk earthworks, the assessment of slope stability or the detailed evaluation of the suitability of natural ground for the foundations of buildings, road, services or other works, be evaluated, investigated, controlled and certified by a soils engineer.

- (e) That construction control testing be carried out by an Organisation with Telarc Registration in all relevant tests.
- (f) That earthworks are carried out, as applicable, in accordance with the:
  - (i) Specification for Earthworks Construction (F/1) - Transit NZ, and
  - (ii) NZS 4431:1989 *Code of Practice for Earth Fill for Residential Development*.
- (g) That where the volume of filling does not exceed 50m<sup>3</sup> and the depth does not exceed 450mm, the requirements for testing will not be enforced.
- (h) That for areas with high water tables the ground water table must be established. In the case of land adjacent to rivers and streams, the ground water table must be established with reference to the average water level of the river or stream at maximum lake level. For areas in close proximity to lakes, the ground water table must be established with reference to the maximum desirable lake level.

Filling to not less than 1 metre above mean water table level as above will be required. Minimum floor levels of habitable buildings will be required to be fixed at 1.5 metre above mean water table level and recorded as a restriction on property titles and Council's Hazard/Caution Register. In reserve areas and other areas not required to support buildings or services, Council may agree to lower standards than for the remainder of the earth fill. The extent of such low density fills shall be defined on the "As Built" drawings and on the title, if appropriate.

#### w1.2.2 **ROADING AND LANDSCAPING**

- (a) **General policy**

That adequate levels of access, safety and convenience are provided for all road users including pedestrians and cyclists in the District, while ensuring acceptable levels of amenity, and protection of the environment from the impact of traffic.
- (b) **Roading network**
  - (i) That a distinctive and hierarchical network of roads is provided having regard to the desired servicing levels, with clear physical distinctions between each type of road, based on road formation, convenience, traffic volumes, vehicle speeds, public safety and amenity.
  - (ii) That provision for the safe and convenient movement of pedestrians and cyclists throughout the development is provided.
  - (iii) That streets, service lanes and accessways are laid out to fit in with the general roading requirements of the locality in which they are situated, and to conform with any provisions of this District Plan. The roading layout must provide for access to adjoining land where deemed necessary by Council.

- (iv) That efficient provision is made for utility services, that is, water supply and reticulation, sewerage reticulation and disposal facilities, stormwater and land drainage, electricity, street lighting, telecommunication, gas and for landscaping and street trees.
  - (v) That roads within any residential neighbourhood are designed to avoid functioning as through traffic roads for externally generated traffic.
  - (vi) That a road hierarchy and network is established which provides convenient linkages between residential neighbourhoods within the District, and a road and pedestrian network which provides convenient linkages to activity centres.
- (c) **Road design**
- (i) That allowance is made for sufficient width of carriageway and berm to allow roads to perform their designated functions within the road network.
  - (ii) That allowance is made for all users of the road, including adequate provision for traffic moving lanes, passing facilities and parking areas for vehicles, the safe and convenient movement of pedestrians/cyclists and aesthetically pleasing and functional landscaping and tree planting.
  - (iii) That the systematic reduction of traffic speeds and volumes, coupled with alternative provisions for parking may allow variations of the road width and footpath width standards.
  - (iv) That the incorporation of features to provide for increased safety and reduced vehicle speeds within residential streets is encouraged.
  - (v) That 7.5m<sup>2</sup> for each of the potential lots (based on minimum permitted lot sizes) shall be set aside within the road reserve for the purpose of landscaping and street tree planting. Such areas are to be planted and landscaped and are to be spread evenly throughout the street to provide aesthetically pleasing areas and each such area must be able to contain a 3m diameter circle and be free from utility services.
  - (vi) That road geometry provisions are consistent with the needs of the road classification, physical land characteristics, use and safety.
  - (vii) That provision is made on the carriageway for two on-street parking areas for each lot. In a standard width street and carriageway this would be satisfied by the normal parking lanes adjacent to the kerb. For non-standard and carriageway widths this requirement may be reduced where alternative off-street parking is provided as part of the development work.
  - (viii) That all off-street parking spaces, access drives and turning areas shall be designed to facilitate the free flow of vehicles, the safe

and convenient movement of pedestrians and the preservation and enhancement of the amenities of the area.

- (ix) That all off-street parking spaces, access drives and turning areas required under (viii) above, shall be designed, formed, drained and constructed as part of the overall development and shall be surfaced with permanent wearing materials.
- (x) That the requirements for utility services are allowed for.
- (xi) That satisfactory provision shall be made at cul-de-sac heads for the on-carriageway turning of service and delivery vehicles, including rubbish collection vehicles.

(d) **Road construction**

- (i) That road pavement and edge treatment are suitable for ensuring a satisfactory containment and drainage of the roadway pavement, and in particular, to use pavement materials suitable for the function of the road.
- (ii) That roads are constructed to an appropriate strength to enable the carriage of the proposed vehicles at a minimum total cost to the community, both in initial construction and long term maintenance.
- (iii) That roads are designed and constructed with a design life of 25 years. Except for vehicle pavement wearing surfaces which may be designed for re-surface treatment in 12 year stages.
- (iv) That a pavement edge is provided that is appropriate for the control of vehicle movements, performs any required drainage function and is structurally adequate.
- (v) That both pre-construction and stage construction testing is carried out to ensure that pavements are designed and constructed to perform in accordance with their function.
- (vi) At the intersection of new roads and existing roads, the new road formation shall connect with the existing road with the work to be carried out by the subdivider to the satisfaction of Council, and shall include the provision of common stormwater disposal.
- (vii) That the subdivider shall arrange for the installation of the necessary underground street lighting cable, standards and fittings for all new roads in accordance with the relevant New Zealand Standard, together with accessway lighting where required.

The standard lamp fitting is "Goughlight 500".

- (viii) That standard street nameplates shall be erected by the subdivider at all street intersections on both streets. Street nameplates and mountings are to be in accordance with the Standard Drawings and are to include the words "No Exit" where applicable.

Alternatively the subdivider may reimburse Council for the provision and erection of the nameplates.

- (ix) That all regularly used vehicle crossings (eg. urban, residential, rural tanker entrances) are formed, surfaced and drained to allow safe and effective vehicle access from the carriageway to the boundary and in locations giving visibility equal to the safe stopping distance for the carriageway speed limit.

All vehicle crossings are to be of concrete construction except where kerb and channel does not exist. In these cases two coat sealed construction will be accepted.

### w1.2.3 **UTILITY SERVICES**

#### w1.2.3.1 **General**

- (a) That all existing utility services available are extended wherever practically possible, allowing for, the connection of each new property within the subdivision, capacity for future land use in the catchment being serviced, and assessing the adequacy of the existing utility services available, including upgrading such services where inadequacy exists.
- (b) That where one or more of the utility services are not available, that the subdivision is able to sustain the lack of the particular service in its own right.
- (c) That the location of utility services is provided for within road reserves in the first instance, and otherwise parallel to common property boundaries wherever practically possible.
- (d) That utility services are provided in a manner which can be economically maintained over their design life.
- (e) That utility services within road reserves are provided at the location and depth required by the street servicing cross-section.
- (f) That the actual connection to the existing water supply reticulation will be carried out by Council staff and charged to the subdivider. Connections to stormwater and sanitary drainage reticulations shall be carried out by the subdivider under the supervision of the appropriate Council Officer. The subdivider shall give Council five working days notice of intention to connect to any existing service reticulation. Connections will be permitted only after the new reticulation has passed the necessary testing, and any fees paid.
- (g) That unless resolved otherwise by Council, or unless otherwise permitted by this Plan, all services shall be entirely underground. Separate lots shall be set aside for sites required by service authorities for transformers etc. None of these facilities will be permitted within the normal road reserve and sites for these facilities are to be set aside as utility or additional road reserve.

- (h) That all significant residential subdivisions will be required to be served by communal sewerage and water supply schemes. Water and sewerage services will be mandatory in areas where these services are already operating or likely to be available within five years.
- (i) That all easements for the identification and protection of private and public services and secondary flow paths are to be granted by the applicant.
- (j) That all services are supplied to ensure maximum conservation of resources in a sustainable manner.
- (k) For subdivision and development, lots, lease areas, building sites and buildings shall be serviced independently with stormwater, sanitary sewerage and water supply to the point of discharge/supply as deemed appropriate by Council.

w1.2.3.2 **Water supply and reticulation**

- (a) That an adequate, reliable, safe and efficient supply of potable and wholesome water is provided.
- (b) That a reticulation system which is adequate for fire fighting purposes and for estimated domestic, commercial and industrial consumption is provided.
- (c) That for fire fighting purposes, the system shall comply with the requirements of the current Fire Service Code of Practice within all Subdivisions and Developments.
- (d) That all lots are able to be serviced by connections from water mains within the adjacent berm and not by connections crossing road carriageways. With the exception of lots created within rural water supply areas which shall be serviced by connections at appropriate and accessible lot boundaries. Individual lots and buildings shall be separately serviced unless managed by a body corporate.
- (e) That all connections and mains are constructed to ensure the minimum leakage of water and easy connection for service connection fittings.
- (f) That every residential property receives a minimum service of 30 metre head and 30 litres/minute.
- (g) That every commercial and industrial property receives minimum head and flows designed in accordance with specific approved parameters.
- (h) That all Industrial streets shall be serviced by fire fighting mains in each berm.
- (i) That all mains are provided with isolation valves to enable independent isolation of each berm main between carriageway intersections.
- (j) That the reticulation system is designed and constructed for a functional design life of 50 years.

**w1.2.3.3 Sewerage reticulation and disposal facilities**

- (a) That a sewerage reticulation system which is adequate for the maintenance of public health, eliminates the ingress of stormwater and groundwater, and also avoids the occurrence of system surcharging or overflows is provided.
- (b) That new disposal facilities are provided, or existing facilities are upgraded, which allow discharge of the effluent collected in the sewerage reticulation system to be disposed of in an environmentally appropriate manner, provided that a discharge consent is obtained from the regional council.
- (c) That where an extension to the sewerage reticulation system or the provision of a new system inclusive of a disposal facility is not practicable, then disposal of effluent is to be contained within the property boundaries, provided that a discharge consent is obtained from the regional council, where such disposal contravenes the regional plan.
- (d) That for the purposes of the minimum subdivision and development standards in relation to sanitary sewerage in Part Sixteen, sewage disposal requiring a discharge consent is not considered satisfactory until the consent is obtained.
- (e) That domestic sewerage reticulation and sewage disposal systems be designed to cater for flows of 220 litres per head per day and a peak factor of four.
- (f) That industrial and commercial sewerage reticulation and sewage disposal systems be designed in accordance with specific approved parameters for the development.
- (g) That the reticulation system be designed such that each lot is provided with a minimum 100mm diameter connection to a minimum of 500mm inside the property boundary and at a depth capable of servicing the entire building site.

Where existing reticulation restricts the site areas that can be serviced, such restrictions must be identified and recorded on property titles.

- (h) That accessible inspection chambers are provided at all changes of grade, direction and pipe size as required for access and cleaning purposes.
- (i) That self cleansing velocities are maintained within reticulation systems.
- (j) That no private sewage pumping station be installed without approval in writing from Council, and adequate registration on the property Certificate of Title stating the maintenance and operational responsibilities of the property owner.
- (k) That the reticulation and pumping system is designed and constructed to allow the passing of 75mm solids.
- (l) That the reticulation and disposal system is constructed to prevent the ingress of ground, soil, groundwater or surface water.

- (m) That the reticulation and disposal system is designed and constructed for a functional design life of 50 years, except for electrical and mechanical equipment which may be designed and constructed for a functional design life of 15 years.

w1.2.3.4 **Stormwater and land drainage**

- (a) That a stormwater reticulation and disposal system that is adequate to safeguard people from injury or illness and to protect property from damage caused by surface water is provided.
- (b) That a piped primary system capable of carrying surface water resulting from a storm having a 10% probability of occurring annually shall be constructed.
- (c) That a secondary flow system capable of carrying surface water resulting from a storm having a 2% probability of occurring annually shall be constructed to ensure that such surface water shall not enter buildings.
- (d) That adequate provision is made for the collection and disposal of stormwater runoff from impermeable surfaces.
- (e) That all stormwater reticulation and disposal systems are constructed to convey surface water to an appropriate outfall using gravity flow where possible, and in a manner which avoids the likelihood of blockages, leakage, penetration by roots, or the entry of groundwater where pipes or lined channels are used and avoids the likelihood of damage from superimposed loads or normal ground movements.
- (f) That accessible inspection chambers are provided at all changes of grade, direction and pipe size.
- (g) That self cleansing velocities are maintained within reticulation systems.
- (h) That the reticulation and disposal system is designed and constructed for a functional design life of 50 years.
- (i) That damage to the environment both during and after the development construction phase is minimised or avoided.
- (j) That surface flows on carriageways are controlled in order to enable safe and comfortable vehicle and pedestrian access across and along road reserves.
- (k) That a stormwater system is provided which can be economically maintained.
- (l) That adequate provision is made to separate contaminants from stormwater runoff.

w1.2.3.5 **Electricity, Street Lighting, Telecommunication and Gas**

- (a) That adequate provision is made for the supply and installation of electricity, street lighting, telecommunication and gas services.

- (b) That street lighting is provided in a manner to ensure safety of vehicles, cyclists and pedestrians using the roading network.
- (c) That electricity, telecommunication and gas services be installed underground in accordance with the Rules of this Plan.
- (d) That the requirements for the provision of electricity, street lighting, telecommunication and gas meets with the approval of the relevant network utility operator.

#### w1.2.4 **FENCING**

Fencing shall be required at the sides of any road, street, reserve or accessway, if in the opinion of Council such fencing is necessary to ensure the safety of the public, or to avoid remedy or mitigate any adverse effect on the environment.

Fences shall be required on both sides of pedestrian accessways.

Other fences to be erected will be specified by Council and must be constructed in accordance with the Standard Drawings. Temporary fencing shall be erected by the subdivider to protect the general public, particularly children, from all danger areas in the subdivision. Signs shall be erected warning persons of the dangerous areas. The use of barbed wire is prohibited.

Fencing covenants in favour of Council will be required over all lots fronting land, other than roads, vested in Council.

#### w1.2.5 **WORKS AND SERVICES COMPLETION REQUIREMENTS**

##### w1.2.5.1 **Completion certificate**

The Completion Certificate will be issued by Council when the following have been complied with:

- (a) All Engineering construction work required as a condition of approval has been completed to Council's satisfaction. Council may agree to accept a bond in lieu of completion of portions of the construction work.
- (b) Payment of the Maintenance Deposit and Cash Bonds where applicable.
- (c) Payment of all fees and other charges, eg. reserves contribution, road upgrading, inspection charges etc.
- (d) "As-Built" drawings received, checked and approved by Council for all works.
- (e) Approval of Survey Plan.
- (f) All other conditions of approval.

Upon completion of the maintenance periods and the issue of a completion certificate allowing deposit of the Survey Plan, Council will take over and assume responsibility for maintenance of such vested services.

w1.2.5.2 **Maintenance and final acceptance**

The subdivider shall be responsible for the maintenance of the works for a period of three (3) months, from the date on which Council certifies in writing that the work has been completed after notification by the subdivider's representative. Other items of work (eg. silt traps) may have longer periods of maintenance as specified by Council.

Prior to final acceptance at the completion of the Maintenance Period, the subdivider shall have the following works carried out.

- (a) Berm grass to be mown;
- (b) Carriageways swept;
- (c) Drainage system, including cesspits, cleaned out.

An inspection of the subdivision shall be carried out by Council prior to the acceptance at the completion of the Maintenance period. Any section of the works that does not comply with the approved plans and specifications must be rectified by the subdivider before any of the subdivision will be accepted.

If the subdivider wishes to obtain a Completion Certificate prior to the end of the Maintenance Period, then a sum equal to five percent (5%) of the value of the works under maintenance is to be deposited with Council before issuing of the Completion Certificate. This sum will be held until the maintenance periods have been satisfactorily completed. The actual priced contract schedule for the work is to be submitted with the five percent (5%) deposit.

w1.2.5.3 **Bonds for uncompleted work**

Bonds for uncompleted subdivisional works are not favoured and would normally only apply to second coat sealing and planting where approved by Council. Bonds will normally be in cash for one hundred and twenty-five percent (125%) of the value of the work as determined by Council.

w1.2.5.4 **Emergency procedure**

Council is to be informed without delay if, during the course of construction works, any situation arises whereby the security of public or private property, or the operation of any public facility is endangered. Council may instruct the subdivider's representative to carry out such remedial measures as Council thinks fit to remove the danger. Any work so ordered is to be done at the expense of the subdivider. If the work is not commenced within 8 hours of the issuing of the instruction, Council may arrange for the required work to be carried out at the subdivider's expense. Should any emergency arise requiring immediate attention, Council may carry out the work and recover the costs from the subdivider.

w1.2.5.5 **Damage**

All damage to existing roads, services or private property, or disturbance of survey boundary marks due to, or caused by, any new works as a result of subdivision or development, shall be the liability of the subdivider/developer. The

damage must be repaired by the subdivider/developer immediately following instruction from Council. If the work is not commenced within 16 working hours, then Council may arrange for the necessary work to be carried out and charged to the subdivider/developer. This provision includes removal of mud and debris from existing roads in the vicinity of the works. A daily removal of such debris may be necessary in the interests of traffic safety.

All damage caused to survey marks, including boundary marks and caused by a person other than the Subdivider or Developer and Contractors, shall be the liability of the person disturbing those marks.

## CRITERIA FOR PUBLIC & PRIVATE ROADS AND PRIVATEWAYS

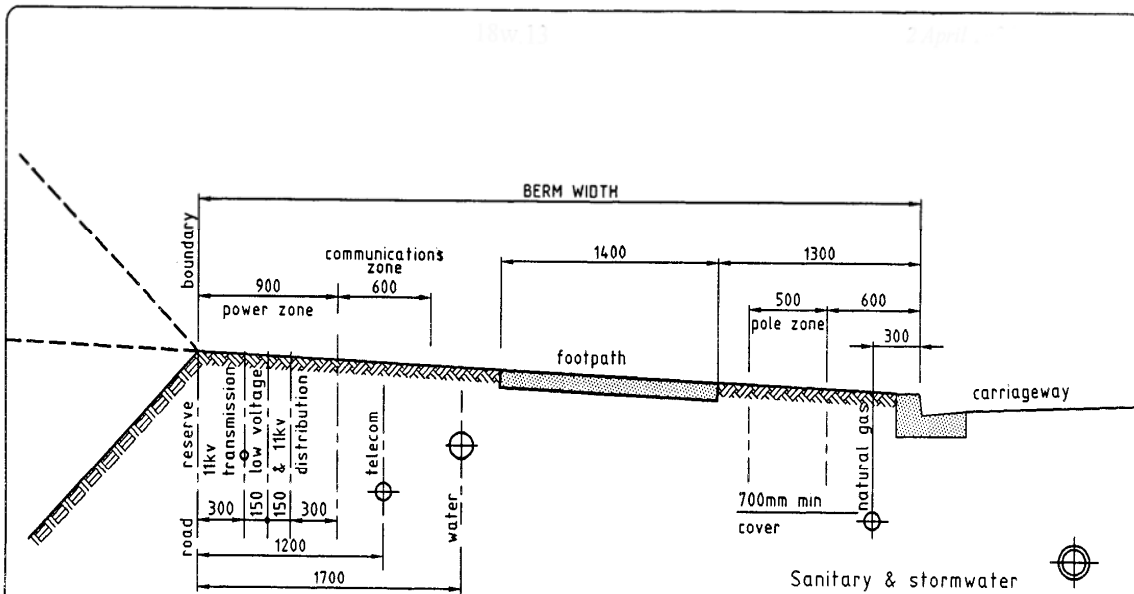
Type & description	Road Reserve Width (m)	Carriageway Width(m)	Kerb/ Edging	Predicted Traffic Vpd & Type	Footpath Width (m)	Maximum Deflection (mm)(5)	Maximum Grade & Desired speed (km/h)		
							Flat <sup>(2)</sup>	Rolling <sup>(2)</sup>	Hilly <sup>(2)</sup>
<b>URBAN Primary</b> A. Arterial	Specific Design	Specific Design	Vertical	Up to 30000 Vpd	2@1.4m	0.75	5% <sup>(1)</sup> 70km/h	6% <sup>(1)</sup> 60km/h	7% <sup>(1)</sup> 55km/h
B. Principal Major & Minor	20.00	13.00	Vertical	Up to 15000 Vpd	2@1.4m	0.75	5% <sup>(1)</sup> 70km/h	6% <sup>(1)</sup> 60km/h	7% <sup>(1)</sup> 55km/h
<b>Secondary</b> C. Local Distributor (150-450 lots)	20.00	11.00	Vertical	Up to 8000 Vpd	2@1.4m	0.75	6% <sup>(1)</sup> 60km/h	7% <sup>(1)</sup> 55km/h	9% <sup>(1)</sup> 50km/h
D. Local (Up to 150 lots)	20.00	8.50	Vertical		2@1.4m	1.00	7% <sup>(1)</sup> 50km/h	8% <sup>(1)</sup> 45km/h	10% <sup>(1)</sup> 40km/h
E. Culdesac									
i) 13-40 Lots max.	20.00	8.50	Vertical	Light No passenger vehicles.	2@1.4m	1.00	7% <sup>(1)</sup> 50km/h	8% <sup>(1)</sup> 45km/h	10% <sup>(1)</sup> 40km/h
ii) Up to 12 Lots	16.50	7.50	Vertical	Light No passenger vehicles.	1@1.4m	2.00	8% <sup>(1)</sup> 40km/h	10% <sup>(1)</sup> 35km/h	12% <sup>(1)</sup> 35km/h
F. Private ROW Access Lot									
i) 1-2 Potential Units	3.00	2.5-3.0	Vertical & Flush or Mountable	Light <sup>(4)</sup>	None required	2.50	10% <sup>(3)</sup> 30km/h	12% <sup>(3)</sup> 30km/h	15% <sup>(3)</sup> 25km/h
ii) 3-4 Potential Units	4.5	4.0		Light <sup>(4)</sup>	None required	2.50	10% <sup>(3)</sup> 30km/h	12% <sup>(3)</sup> 30km/h	15% <sup>(3)</sup> 30km/h
iii) 5-8 Potential Units	6.0	5.0							
<b>RURAL</b>									
Rural A	20.00	6.00	K&C where stormwater problems exist		Not reqd	2.50	Specific Design required	Specific Design required	Specific Design required
Rural B	20.00	6.00			1@1.4m <sup>(7)</sup>	2.50			
Rural D	20.00	6.00			2@1.4m	2.50			
Rural E	20.00	6.00			1@1.4m	2.50			
Rural Cul de sac									
i) 13-40 Lots max	16.50	6.00	K&C where stormwater problems exist.	Light	1@1.4m <sup>(7)</sup>	2.50	7% <sup>(1)(3)</sup> 50km/h	8% <sup>(1)(3)</sup> 45km/h	10% <sup>(1)(3)</sup> 40km/h
ii) Up to 12 Lots	16.50	6.00	K&C where stormwater problems exist.	Light	1@1.4m	2.50	8% <sup>(1)(3)</sup> 40km/h	10% <sup>(1)(3)</sup> 35km/h	12% <sup>(1)(3)</sup> 3km/h

### Notes

- (1) These grades may be increased by 1% for lengths under 150m.
- (2) Flat 0-8% cross slope, Rolling 8-15%, Hilly over 15% cross-slope.
- (3) 5% maximum if no kerb.
- (4) Commercial and industrial ROWs subject to specific design.
- (5) On finished Basecourse (Refer drawing for subgrade Benkleman beam deflections).
- (6) One Unit requires 2.5m wide carriageway, Two units require 3m wide carriageway.
- (7) Footpaths will not be required in the Rural B Zone where it is proven that there are no Pedestrian traffic generators.

### **NOTE:- LAKES A ZONE**

**For the Lakes A Zone refer to Appendix 2.0 'Criteria and Standards for Public Roads' and Appendix 10.0 'Standards for Private Roads and Private Ways' in Volume 2 of the Lakes A Zone.**



Sanitary & stormwater sewers located:-  
 a. beneath the carriageway,  
 b. in clear areas of the berm,  
 c. in the front building restriction area of private property adjacent to the road reserve.

THIS CROSS SECTION APPLIES WHERE:

	road reserve width	carriageway width	berm width
	20.0m	11.0m	4.5m
	16.5m	7.5m	4.5m
OTHER CASES	20.0m	13.0m	3.5m
	20.0m	8.5m	5.75m

Where berm width is 3.5m - water moves to carriageway & footpath moves to 800mm from kerb.

Where berm width is 5.75m - spare space is between water & footpath

- LANDSCAPING/TREE PLANTING AREAS:  
to be incorporated into berms and to be free of services.
- COMPETITIVE NETWORKS:  
locations are for like service networks. competitive networks will be in respective locations and at varying depths or adjacent to each other.

ROTORUA DISTRICT COUNCIL



STANDARD DRAWING – ROADING

NOT TO SCALE

STANDARD BERM DETAILS

LOCATION OF SERVICES FOR SUBDIVISIONS

RD 02

# APPENDIX X

**NOTE:-LAKES A ZONE**

*Appendix X has relevance within the Lakes A Zone. Refer to Appendix X that forms part of Rule 1.1 of the Lakes A Zone.*

## x1 PRINCIPLES OF THE TREATY OF WAITANGI

These five principles are:

- the principle of Government - the Kawanatanga principle. The first article of the Treaty gives expression to the right of the Crown to make laws and its obligation to govern in accordance with constitutional process;
- the principle of self-management - the Rangatiratanga principle. The second article of the Treaty guarantees to Maori the control and enjoyment of those resources and taonga which it is their wish to retain. The preservation of a resource base, restoration of iwi self-management and the active protection of taonga, both material and cultural are necessary elements of the Crown's policy of recognising Rangatiratanga;
- the principle of equality. The third article of the Treaty constitutes a guarantee of legal equality between Maori and other citizens of New Zealand;
- the principle of reasonable co-operation. The Treaty is regarded by the Crown as establishing a fair basis for two peoples and one country; and
- the principle of redress. The Crown accepts a responsibility to provide a process for the resolution of grievances arising from the Treaty. This process may involve the Waitangi Tribunal or direct negotiation.

**Note:** As the Treaty is a living document, the principles will develop and evolve over time as a result of Waitangi Tribunal decisions.

# APPENDIX Y

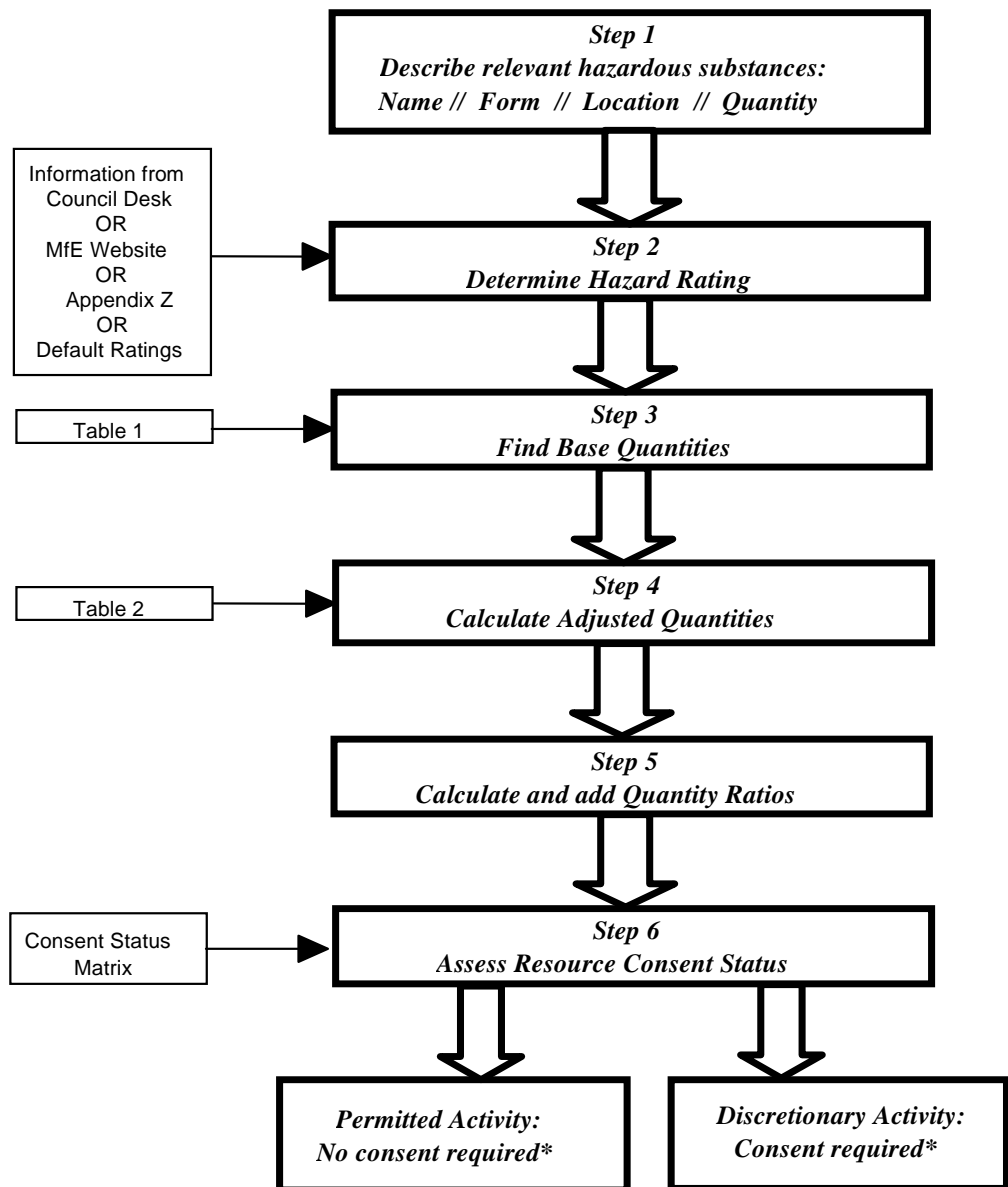
## NOTE:-LAKES A ZONE

Appendix Y has relevance within the Lakes A Zone. Refer to Appendix Y that forms part of Rule 1.1 of the Lakes A Zone.

## y1. HAZARDOUS FACILITIES SCREENING PROCEDURE

The Hazardous Facility Screening Procedure (HFSP) is applied to hazardous facilities in all zones and in addition to other zone-specific rules. The HFSP is used to screen hazardous facilities and their sites. However, where hazardous facilities on the same site are separated more than 30 metres from each other, they may be dealt with as separate facilities and the HFSP is applied to them separately.

Appendix Y provides a step-by-step guide and an **attached worksheet** (Attachment 1) on how to use the HFSP.



**NOTE:** Compliance with minimum performance standards is always required.

### The HFSP Step-by-Step Guide

STEPS	HFSP CALCULATIONS				EXPLANATION
<p><b>1. Describe the hazardous facility</b></p> <p>Prior to using the HFSP, it is necessary to compile a full description of the hazardous facility in question. This includes the creation of an inventory of hazardous substances held on the site, including:</p> <ul style="list-style-type: none"> <li>names of the hazardous substances;</li> <li>quantities of the hazardous substances;</li> <li>the physical form of the substances at 20°C and 101.3 kPa; and</li> <li>the location of use or storage on the site, including separation distances from the site boundary and neighbouring hazardous facilities (on-site and off-site).</li> </ul> <p>The description should also include site-specific details, including neighbouring land uses and the surrounding environment, with a focus on sensitive land uses and receptors (for example, retirement accommodation, aquifers or wetlands).</p>	<p><b>Substance Name</b></p> <p>Substance 1 Substance 2 ..... Substance 10</p> <p><b>Petrol</b></p>	<p><b>Substance Form</b> (liquid, solid, gas)</p> <p><b>EXAMPLE</b></p> <p><b>Liquid</b></p>	<p><b>Location of substances on site</b></p> <p><b>&lt;30 metres</b></p>	<p><b>Proposed Quantity (P)</b> (tonnes or m<sup>3</sup>)</p> <p><b>50 †</b></p>	<p>The HFSP uses standard units of tonnes (for solids, liquids and liquefied gases) and m<sup>3</sup> (for compressed gases). In some cases, it may therefore be necessary to convert substance quantities to these units. In the case of liquids, specific gravity (or density) must be taken into consideration when converting litres or m<sup>3</sup> to tonnes (i.e.</p> <p style="text-align: center;"><u>volume of liquid (litres) x specific gravity = tonnes.</u> 1000</p> <p>Adjustments to quantities are also necessary where a substance is diluted with water or mixed with another substance. In this instance, only the percentage quantity of the hazardous substance or product in the dilution or mixture is assessed for the purposes of HFSP calculations (unless a mixture is more hazardous than its components, in which case data on the mixture need to be used).</p> <p>An exception to this are products or brands that already constitute dilutions or mixtures of hazardous substances and which have been classified in terms of their hazardous properties as the ‘whole’ dilution or mixture for life cycle management purposes. Examples of this are corrosives, oxidising substances and pesticides, which are often sold commercially as standard solutions or strengths. In these cases, quantity adjustments are only applied when these commercially supplied concentrations are further diluted or mixed.</p>

<p><b>2. Determine Hazard Rating</b></p> <p>For the purposes of the HFSP, the effects of substances are categorised into three Effect Types:</p> <ul style="list-style-type: none"> <li>• Fire/Explosion Effect Type: addressing damage to the built environment and safety of people;</li> <li>• Human Health Effect Type: addressing adverse effects on the well-being, health and safety of people;</li> <li>• Environmental Effect Type: addressing adverse effects on ecosystems and natural resources.</li> </ul> <p>Each Effect Type is divided into three Hazard Rating Levels:</p> <p>◆ High    ◆ Medium    ◆ Low</p> <p>The rating levels are predominantly based on the HSNO classification system.</p>	<p><b>Substance Name</b></p> <p>Substance 1 Substance 2 ..... Substance 10</p> <hr/> <p><b>Petrol</b></p>	<p><b>Hazard Rating</b></p> <p>Fire/ Explosion</p> <p>High (H) or Medium (M) or Low (L)</p> <p><b>EXAMPLE</b></p> <p><b>High</b></p>	<p>Human Health</p> <p>High (H) or Medium (M) or Low (L)</p> <p>-</p>	<p>Environment</p> <p>High (H) or Medium (M) or Low (L)</p> <p><b>High (Default)</b></p>	<p>The HFSP rates hazardous substances in terms of each of the three Effect Types as having a high, medium or low hazard. The Hazard Rating of a substance is derived from:</p> <ol style="list-style-type: none"> <li>1. The list of HFSP-rated hazardous substances is available from the Council Desk or MFE website.</li> <li>2. The HSNO classification (refer Appendix Z or ERMA website). Once a substance has been classified under HSNO, Hazard Ratings can be assigned for each Effect Type as shown in Appendix Z.</li> <li>3. Where a substance is neither found in the list of HFSP related substances available at the Council Desk nor the HSNO databases on the MfE/ERMA websites, default ratings should be used (Fire/Explosion Effect Type: <b>Medium</b>, Human Health Effect Type: <b>Medium</b> and Environment Effect Type: <b>High</b>)</li> </ol>
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3. Find Base Quantities The Base Quantity (B) is pre-calibrated. It is the amount of a substance that has been assessed as generating no significant off-site effects in a heavy industrial area before site- and substance-specific considerations have been taken into account (refer Step 4). Base Quantities for different hazardous properties and hazard ratings in each Effect Type are listed in Table 1.	Substance Name	Base Quantities (B)			Environment
		Fire/Explosion	Human Health		
	Substance 1	B <sub>1</sub>	B <sub>1</sub>	B <sub>1</sub>	For example, in the Fire/Explosion Effect Type [Sub-category Flammables], non-significant off-site effects in a heavy industrial area are represented by a Base Quantity of: <ul style="list-style-type: none"> <li>◆ 100 tonnes of a HSNO Category D flammable liquid which has a low hazard level for the Fire/Explosion Effect Type.</li> <li>◆ 30 tonnes of a HSNO Category C flammable liquid which has a medium hazard level for the Fire/Explosion Effect Type.</li> </ul>
	Substance 2	B <sub>2</sub>	B <sub>2</sub>	B <sub>2</sub>	
	.....	.....	.....	.....	
	Substance 10	B <sub>10</sub>	B <sub>10</sub>	B <sub>10</sub>	
	<b>Petrol</b>	<b>EXAMPLE 10 †</b>	<b>-</b>	<b>1 †</b>	

<p><b>4. Calculate Adjusted Quantity (A)</b></p> <p>The pre-calibrated Adjustment Factors (FF, HF, EF) are multiplied with the Base Quantities (B) to account for substance properties and site-specific environmental circumstances. This multiplication yields the Adjusted Quantity (A).</p> <p>Adjustment Factors differ for each of the Effect Types, and take into account the following considerations:</p> <ul style="list-style-type: none"> <li>• the physical state of the substance;</li> <li>• the type of storage;</li> <li>• the type of activity or use;</li> <li>• separation distances to the site boundary;</li> <li>• the environmental sensitivity of the site location.</li> </ul> <p>The Adjustment Factors are listed in Table 2.</p>	<p><b>Substance Name</b></p> <p>Substance 1</p> <p>Substance 2</p> <p>.....</p> <p>Substance 10</p> <p><b>Petrol</b></p>	<p><b>Adjusted Quantities (A)</b></p> <p>Fire/Explosion</p> <p>A<sub>1</sub></p> <p>A<sub>2</sub></p> <p>.....</p> <p>A<sub>10</sub></p> <p><b>EXAMPLE</b></p> <p><b>100 †</b> <b>(10 tonnes × 10)</b></p>	<p>Human Health</p> <p>A<sub>1</sub></p> <p>A<sub>2</sub></p> <p>.....</p> <p>A<sub>10</sub></p> <p>-</p>	<p>Environment</p> <p>A<sub>1</sub></p> <p>A<sub>2</sub></p> <p>.....</p> <p>A<sub>10</sub></p> <p><b>3 †</b> <b>(1 tonne × 3)</b></p>	<p>Different Adjustment Factors are applied for each Effect Type. For example, for the Fire/Explosion Effect Type, the temperature is relevant, while for the Human Health Effect Type, proximity to a potable water resource is important.</p> <p>In some instances, more than one Adjustment Factor within each Effect Type must be applied, which then need to be multiplied with each other to yield the total Adjustment Factor for the Effect Type. When the Adjustment Factors for each Effect Type have been calculated, they in turn are multiplied with the Base Quantity to yield the Adjusted Quantity).</p> <p>In the example given, the following parameters have been assumed:</p> <ul style="list-style-type: none"> <li>• &lt;30 to site boundary;</li> <li>• not adjacent to water body;</li> <li>• underground storage.</li> </ul>
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5. Calculate and add Quantity Ratios (FQ, HQ, EQ)	Substance Name	Quantity Ratios (FQ, HQ, EQ)			By using the dimensionless ratio of the Proposed Quantity of a hazardous substance over the Adjusted Quantity, it is possible to aggregate the effects presented by multiple substances held on the same site. Hence, it becomes possible to assess the cumulative potential effects which may be created by several substances present on the same site.
		Fire/Explosion	Human Health	Environment	
<p>This step requires the calculation of the Quantity Ratio for each hazardous substance in question. The Quantity Ratio is a dimensionless number. It is obtained by dividing the quantity of a substance that is proposed to be used or stored on a site, ie the Proposed Quantity (P) by the Adjusted Quantity (A).</p> <p>If several hazardous substances are used or stored on a site, the Quantity Ratios calculated for each of these substances are added up for each Effect Type.</p> <p>Note that FQ/HQ/EQ<sub>Total</sub> stands for the total sum of Quantity Ratio values from all assessed hazardous substances, within each Effect Type.</p>	Substance 1	FQ <sub>1</sub>	HQ <sub>1</sub>	Q <sub>1</sub>	
	Substance 2	FQ <sub>2</sub>	HQ <sub>2</sub>	Q <sub>2</sub>	
	.....	.....	.....	.....	
	Substance 10	FQ <sub>10</sub>	HQ <sub>10</sub>	Q <sub>10</sub>	
		<b>FQ<sub>Total</sub></b>	<b>HQ<sub>Total</sub></b>	<b>EQ<sub>Total</sub></b>	
		<b>EXAMPLE</b>			
	<b>Petrol</b>	<b>0.50</b>	<b>-</b>	<b>16.67</b>	
		(50 tonnes / 100 tonnes)		(50 tonnes / 3 tonnes)	

<p><b>6. Assess resource consent status of hazardous facility</b></p> <p>When assessing the resource consent status of a particular hazardous facility, the added Quantity Ratios for each Effect Type are compared with relevant Consent Status Indices in the Resource Consent Matrix in the district plan. If they are exceeded, a resource consent is required.</p>	<p><b>Substance Name</b></p> <p>Substance 1</p> <p>Substance 2</p> <p>.....</p> <p>Substance 10</p> <p><b>Petrol</b></p>	<p><b>Does Quantity Ratio exceed Consent Status Index?</b></p> <p>Fire/Explosion</p> <p><b>YES/NO</b></p> <p><b>EXAMPLE</b></p> <p><b>In a typical industrial zone:</b></p> <p><b>NO</b></p>	<p>Human Health</p> <p><b>YES/NO</b></p> <p>-</p>	<p>Environment</p> <p><b>YES/NO</b></p> <p><b>YES</b></p>	<p>When examining total Quantity Ratios against applicable Consent Status Indices, one or several substances may trigger a resource consent. This highlights the fact that when assessing hazardous facilities, it is often sufficient to assess just a few hazardous substances to start off with, mainly those that are either highly hazardous or are used/stored in high quantities.</p>
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**Table 1: Base Quantities (B) for all Effect Types and Hazard Ratings**

HSNO CATEGORY	UN CLASS EQUIVALENT	HAZARD LEVEL	UNIT	BASE QUANTITY (B)		
				Fire/Explosion	Human Health	Environment
<b>EXPLOSIVENESS</b>						
1.1	Class 1.1	High	tonnes	0.1	-	-
1.2	Class 1.2	Medium	tonnes	1	-	-
1.3	Class 1.3	Low	tonnes	3	-	-
<b>FLAMMABLE GASES</b>						
2.1 A+B (LPG)	Class 2.1	Medium	tonnes	30	-	-
2.1 A+B (excluding LPG)	Class 2.1	High	m <sup>3</sup>	10,000*	-	-
<b>FLAMMABLE LIQUIDS</b>						
3 A and 3 B	Class 3PGI and 3PGII	High	tonnes	10	-	-
3 C	Class 3PGIII	Medium	tonnes	30	-	-
3 D		Low	tonnes	100	-	-
<b>FLAMMABLE SOLIDS</b>						
4.1 (all categories)	Class 4.1	Medium	tonnes	10	-	-
4.2 (all categories)	Class 4.2	High	tonnes	1	-	-
4.3 (all categories)	Class 4.3	High	tonnes	1	-	-
<b>OXIDISING GASES, LIQUIDS AND SOLIDS</b>						
5.1 (all categories)	Class 5.1	Medium	tonnes (m <sup>3</sup> )	10 (10,000*)	-	-
5.2 (all categories)	Class 5.2	High	tonnes	1	-	-
<b>TOXIC GASES, LIQUIDS AND SOLIDS</b>						
6.1 A	Class 6.1 PGI	High	tonnes	-	0.5	-
6.1 A	Class 2.3 PGI	High	m <sup>3</sup>	-	30*	-
6.1 B	Class 6.1 PGII	Medium	tonnes	-	10	-
6.1 B	Class 2.3 PGII	Medium	m <sup>3</sup>	-	50*	-
6.7-6.9 (chronic toxicity categories)	OECD	Medium	tonnes	-	10	-
6.1 C	Class 6.1 PGIII	Low	tonnes	-	30	-
6.1 C	Class 2.3 PGIII	Low	m <sup>3</sup>	-	500*	-
<b>CORROSIVE GASES, LIQUIDS AND SOLIDS</b>						
(8A) 6.3-6.4 (corrosives, all categories)	Class 8	Medium	tonnes (m <sup>3</sup> )	-	10	-
<b>ECOTOXIC GASES, LIQUIDS AND SOLIDS</b>						
9.1-9.4A	(OECD 1)	High	tonnes (m <sup>3</sup> )	-	-	1 (30*)
9.1-9.4B	(OECD 2)	Medium	tonnes (m <sup>3</sup> )	-	-	30 (50*)
9.1-9.4C	(OECD 3)	Low	tonnes (m <sup>3</sup> )	-	-	100 (500*)

\* Base Threshold in m<sup>3</sup> at 101.3 kPa and 20 °C for permanent or compressed gases.

**Table 2 - Adjustment Factors**

<b>ADJUSTMENT FACTORS FOR ALL EFFECT TYPES</b>		
<b>Fire/Explosion</b>	<b>Human Health</b>	<b>Environment</b>
<b>FF1: SUBSTANCE FORM</b>	<b>FH1: SUBSTANCE FORM</b>	<b>FE1: SUBSTANCE FORM</b>
Solid = 1	Solid = 3	Solid = 3
Liquid, powder = 1	Liquid, powder = 1	Liquid, powder = 1
Gas (101.3 kPa and 20°C) = 0.1	Gas (101.3 kPa and 20°C) = 0.1	Gas (101.3 kPa and 20°C) = 0.1
<b>FF2: SEPARATION DISTANCE FROM SITE BOUNDARY (SUB-FACILITY)</b>	<b>FH2:-SEPARATION DISTANCE FROM SITE BOUNDARY (SUB-FACILITY) (GASES ONLY)</b>	<b>FE2: ENVIRONMENTAL SENSITIVITY</b>
< 30 metres = 1	< 30 metres = 1	More than 100 metres from a water resource <sup>2</sup> = 1
> 30 metres (> 60 metres) <sup>1</sup> = 3	> 30 metres (> 60 metres) <sup>1</sup> = 3	Adjacent to or within 100 metres of a water resource = 0.3
<b>FF3: TYPE OF ACTIVITY</b>	<b>FH3: TYPE OF ACTIVITY</b>	<b>FE3: TYPE OF ACTIVITY</b>
Use = 0.3	Use = 0.3	Use = 0.3
Above ground storage = 1	Above ground storage = 1	Above ground storage = 1
Underground storage <sup>3</sup> = 10	Underground storage <sup>3</sup> = 10	Underground storage <sup>3</sup> = 3
Final Fire/Explosion Adjustment Factor <b>FF = FF1 x FF2 X FF3</b>	Final Human Health Adjustment Factor <b>FH = FH1 x FH2 X FH3</b>	Final Environment Adjustment Factor <b>FE = FE1 x FE2 X FE3</b>

<sup>1</sup> If the facility is assessed as a sub-facility, the distance to the neighbouring sub-facility must be more than 60 metres (i.e. 2 x 30 metres) to qualify for an Adjustment Factor of 3.

<sup>2</sup> Water resource includes aquifers and water supplies, streams, springs, lakes, wetlands, estuaries and the sea, but do not include entry points to the stormwater drainage network.

<sup>3</sup> Applicable to UN Class 3 substances (flammable liquids) only.

**ATTACHMENT 1: HFSP CALCULATION SPREADSHEET**

APPLICATION NO																			
APPLICANT																			
CONTACT NAME																			
POSTAL ADDRESS																			
SITE ADDRESS																			
PHONE NUMBER																			
FAX NUMBER																			
E-MAIL																			
COMMENT																			
Ref. No.	Substances on this site	CAS No.	Effect Type	Hazard Rating	Base Quantity B t or m <sup>3</sup>	Substance Form	Distance to boundary less than 30 metres? YES NO	Adjacent to water? YES NO	Type of Activity A/Ground B/Ground Use	Adjustment Factors			Product of Adjustment Factors	Adjusted Quantity T	Proposed Quantity Q t or m <sup>3</sup>	Fire/Explosion Quantity Ratio	Human Health Quantity Ratio	Environment Quantity Ratio	
										F1	F2	F3							
1			Fire/Explosion																
			Human Health																
			Environment																
2			Fire/Explosion																
			Human Health																
			Environment																
3			Fire/Explosion																
			Human Health																
			Environment																
4			Fire/Explosion																
			Human Health																
			Environment																
5			Fire/Explosion																
			Human Health																
			Environment																
6			Fire/Explosion																
			Human Health																
			Environment																
7			Fire/Explosion																
			Human Health																
			Environment																
8			Fire/Explosion																
			Human Health																
			Environment																
9			Fire/Explosion																
			Human Health																
			Environment																
10			Fire/Explosion																
			Human Health																
			Environment																
<b>Total Quantity Ratios</b>																			



# APPENDIX Z

## NOTE:-LAKES A ZONE

*Appendix Z has relevance within the Lakes A Zone. Refer to Appendix Z that forms part of Rule 1.1 of the Lakes A Zone.*

## z1. HFSP RATING FOR HAZARDOUS SUBSTANCES

The full description of HSNO Classes, Sub-classes and Categories is contained in the HSNO Regulations.

Hazard	HSNO Class & Category	(UN Division)	Description	Effect Type	Hazard Rating
Explosiveness	1.1	1.1	Articles and substances having a mass explosion hazard.	Fire/Explosion	High
	1.2	1.2	Articles and substances having a projection hazard, but not a mass explosion hazard.	Fire/Explosion	Medium
	1.3	1.3	Articles and substances having a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard. This division comprises articles and substances that: <ul style="list-style-type: none"> <li>give rise to considerable radiant heat, or</li> <li>burn one after another, producing minor blast and/or projection effects.</li> </ul>	Fire/Explosion	Low
	1.4, 1.5, 1.6	1.4, 1.5, 1.6	Not applicable.		
Flammable Gases	2.1A, 2.1B	2.1	Flammable gases: <p>(i) gases which at 20°C and a standard pressure of 101.3 kPa:</p> <ul style="list-style-type: none"> <li>are ignitable when in a mixture of 13% or less by volume with air, or</li> <li>have a flammable range with air of at least 12% regardless of the lower flammability limit; or,</li> </ul> <p>(ii) gases or gas mixtures, other than those of (i) above, that at 20°C and a standard pressure of 101.3 kPa have a flammable range in mixture in air.</p> <p>Flammable aerosols, being a pressurised mixture of containing gas, compressed, liquified, or dissolved under pressure, with or without a liquid, paste or powder; comprising at least 45 % by mass of flammable ingredients, under a pressure greater than 100 kPa, which can be released in a finely divided spray.</p>	Fire/Explosion	High

	-	LPG	LPG	Fire/Explosion	<b>Medium</b>
		2.2	Not applicable.		
<b>Flammable Liquids</b>	3A	3 PGI	Flammable liquids comprising liquids, mixtures of liquids, or liquids containing solids in suspension which give off a flammable vapour at specific temperatures. Flash point: < 23°C Initial boiling point: < 35°C	Fire/Explosion	<b>High</b>
	3B	3 PGII	Flash point: < 23°C Initial boiling point: > 35°C	Fire/Explosion	<b>High</b>
	3C	3 PGIII	(a) Flash point: $\geq 23^{\circ}\text{C}; \leq 60^{\circ}\text{C}$ (b) Flash point: $> 60^{\circ}\text{C}$ , but liquid is manufactured, stored, transported or used (except deliberate burning) at a temperature at or above its flash point.	Fire/Explosion	<b>Medium</b>
	3D	Combustible Liquids	Flash point: $> 60^{\circ}\text{C}$ but $\leq 93^{\circ}\text{C}$	Fire/Explosion	<b>Low</b>
<b>Flammable Solids</b>	4.1 All Categories	4.1	<ul style="list-style-type: none"> <li>Flammable solids that are readily combustible or may cause fire easily through an ignition source or friction.</li> <li>Self-reacting substances that are thermally unstable and are liable to undergo a strongly exothermic decomposition even without the participation of oxygen (and related substances).</li> <li>Desensitised explosives: substances which are wetted with water or alcohol or diluted with other substances to suppress their explosive properties.</li> </ul>	Fire/Explosion	<b>Medium</b>
	4.2 All Categories	4.2	Substances liable to spontaneous combustion: <ul style="list-style-type: none"> <li>pyrophoric substances: liquid or solid substances which, even in small quantities, ignite within 5 minutes of coming in contact with air</li> <li>self-heating substances: solid substances which generate heat when in contact with air without additional energy supply.</li> </ul>	Fire/Explosion	<b>High</b>
	4.3 All categories	4.3	Substances which, in contact with water, become spontaneously flammable, or emit flammable gases.	Fire/Explosion	<b>High</b>
<b>Oxidising Capacity</b>	5.1 All categories	5.1	Oxidising substances: substances which in themselves are not necessarily combustible, but may cause or contribute to the combustion of other materials by yielding oxygen.	Fire/Explosion	<b>Medium</b>

	5.2 All categories	5.2	Organic peroxides: organic substances that are thermally unstable and may undergo exothermic, self-accelerating decomposition. They may: <ul style="list-style-type: none"> <li>• be liable to explosive decomposition,</li> <li>• burn rapidly,</li> <li>• be sensitive to impact or friction,</li> <li>• react dangerously with other substances</li> <li>• cause damage to the eyes.</li> </ul>	Fire/Explosion	<b>High</b>
<b>Toxicity</b>	6.1A	6.1 6.1 PGI	Substances which are liable to cause death or injury or to harm human health if swallowed, inhaled, or contacted by the skin. Oral toxicity LD <sub>50</sub> (mg/kg): ≤ 5 Dermal toxicity LD <sub>50</sub> (mg/kg): ≤ 50 Inhalation toxicity dust/mist LC <sub>50</sub> (mg/l): ≤ 0.05	Human Health	<b>High</b>
	6.1B	6.1 PGII	Oral toxicity LD <sub>50</sub> (mg/kg): >5 - 50 Dermal toxicity LD <sub>50</sub> (mg/kg): >50 - 200 Inhalation toxicity dust/mist LC <sub>50</sub> (mg/l): >0.5 - 1	Human Health	<b>Medium</b>
	6.1C	6.1 PGIII	Oral toxicity LD <sub>50</sub> (mg/kg): Dermal toxicity LD <sub>50</sub> (mg/kg): Inhalation toxicity dust/mist LC <sub>50</sub> (mg/l):	Human Health	<b>Low</b>
	6.1A	2.3	Toxic gases: gases which are known to be toxic or corrosive to humans and pose a hazard to health. This division is divided into the following categories: a) Inhalation toxicity gases LC <sub>50</sub> : < 100 ppm, vapours LC <sub>50</sub> : < 0.5 mg/l	Human Health	<b>High</b>
	6.1B		b) Inhalation toxicity gases LC <sub>50</sub> : ≥ 100 ppm - 500 ppm, vapours LC <sub>50</sub> : ≥ 0.5 mg/l – 2 mg/l	Human Health	<b>Medium</b>
	6.1C		c) Inhalation toxicity gases LC <sub>50</sub> : ≥ 500 ppm - 2,500 ppm, vapours LC <sub>50</sub> : ≥ 2 mg/l – 10 mg/l	Human Health	<b>Low</b>
	(8A) 6.4 All categories	8	Eye Irritation/Corrosiveness: Chemical Property: 2 > pH > 11.5. Effect: Draize Grade ≥ 1 for either corneal opacity or iritis or Grade 2 for either conjunctival redness or chemosis	Human Health	<b>Medium</b>
	(8A) 6.3 All categories	8	Skin Irritation/Corrosiveness: Chemical Property: 2 > pH > 11.5. Effect: Draize Grade ≥ 1.5 for erythema or oedema	Human Health	<b>Medium</b>
	6.4	(OECD 1 & 2)	Respiratory or contact sensitiser.	Human Health	<b>Medium</b>
	6.7A, 6.7B	(OECD 1 & 2)	Carcinogenicity: Suspected or presumed carcinogen.	Human Health	<b>Medium</b>
	6.9A, 6.9B	(OECD 1 & 2)	Known, presumed or suspected human target organ toxicity.	Human Health	<b>Medium</b>

	6.6A, 6.6B	(OECD 1 & 2)	Substances known or regarded as mutagenic OR Substances which cause concern for man owing to the possibility that they may induce heritable mutations in the germ cells of human.	Human Health	<b>Medium</b>
	6.8A, 6.8B	(OECD 1 & 2)	Known, or presumed Human Reproductive or Developmental Toxicant OR Suspected Human Reproductive or Developmental Toxicant.	Human Health	<b>Medium</b>
	6.8C	(OECD)	Effects on or via lactation: Data showing (i) a likelihood that the substance would be present in potentially toxic levels in human breast milk; AND/OR (ii) clearly defined adverse effect in the offspring of animals due to transfer in the milk; OR clearly defined adverse effect on the quality of the milk in animals; AND/OR (iii) human evidence indicating a hazard to babies during the lactation period.	Human Health	<b>Medium</b>
		6.2	Not applicable.		
<b>Ecotoxicity</b>	9.1A 9.2A 9.3A 9.4A	(OECD1)	Ecotoxic substances: any substance exhibiting a toxic effect on ecosystems. This division is divided into three categories. a) Very toxic to the aquatic environment; very toxic to the terrestrial environment; very toxic to terrestrial vertebrates; very toxic to beneficial invertebrates.	Environment	<b>High</b>
	9.1B 9.2B 9.3B 9.4B	(OECD2)	b) Toxic to the aquatic environment; toxic to the terrestrial environment; toxic to terrestrial vertebrates; toxic to beneficial invertebrates.	Environment	<b>Medium</b>
	9.1C 9.2C 9.3C 9.4C	(OECD3)	c) Harmful to the aquatic environment; harmful to the terrestrial environment; harmful to terrestrial vertebrates; harmful to beneficial invertebrates.	Environment	<b>Low</b>

# APPENDIX AA

## aa1. ROTORUA CITY DESIGN PRINCIPLES

The Rotorua City Design Principles are available on the Rotorua District Council website – [www.rdc.govt.nz](http://www.rdc.govt.nz) and can be found using the following pathway – Our Services/District Plan Policy/ District Plan. Scroll down to Part 18. At the end of Part 18 Appendices you will see Appendix AA and underneath the following three files that comprise the Rotorua City Design Principles:

- Rotorua City Design Principles – Part 1
- Rotorua City Design Principles – Part 2
- Rotorua City Design Principles – Part 3

