

PART 6 INDUSTRIAL ZONES

INDUSTRIAL DEVELOPMENT AND ENVIRONMENTAL AMENITY

6.1 INTRODUCTION

This part of the District Plan outlines the provisions for industrial development in Urban Papakura. The functions and environmental qualities of the industrial areas are described and the resource management strategy formulated to enable a continuation of efficient and environmentally acceptable development is set out.

6.2 OVERVIEW

Industrial activity is one of the means by which resources may be converted into usable products for the community. Areas of such activity are centres of local employment, markets for local suppliers and contributors to the wealth of the community. To this end, this Plan enables a wide range of activities to operate in a number of locations throughout the District.

At the same time, industrial activities have significant environmental effects within any district. On the one hand, such activities make a significant contribution to the quality of the social and economic environment by providing employment and generating economic activity. On the other hand, these self-same activities may result in adverse environmental effects such as air pollution, water pollution, noise, glare, odour, vibration, high volumes of heavy traffic and visual degradation.

These latter effects tend to mask the otherwise positive contribution made by industrial activities but, nevertheless, require the exercise of some control in order to secure environmental quality. Such control is further suggested in Papakura District because the industrial areas tend to be in close proximity to areas of residential activities and several significant watercourses.

The areas of industrial concentration are at Takanini, Central Papakura, Hunua and Drury. These localities display varying levels of environmental amenity and quality. The level of development ranges from relatively benign light industrial activities through to those involving processes which have a degree of environmental risk.

In addition to the traditional industrial areas, there are two areas of quarrying within the District and the distinctive “industrial” node at Ardmore Aerodrome. The quarrying areas are at Hunua Road and Drury. The Ardmore Aerodrome industrial area principally accommodates specialised activities related to the aviation industry.

The purpose of the industrial zones is to provide land for industrial activities. The needs of the community for other activities such as retailing, entertainment and office functions will generally be met in the commercial zones. There is a need, however, to provide in the industrial zones for limited commercial, service and related activities that are associated with or complementary to the needs of industry and the provisions of the Plan recognise this situation.

While the industrial zones generally are not considered suitable for residential activities, it is recognised that such accommodation on industrial lots may be justified in

particular circumstances. Further, the interface between light industrial areas and residential areas can be enhanced through allowing limited residential activities in industrial zones. Accordingly, the Plan makes limited provision for residential activities in industrial areas.

At the present time there is a surplus of land zoned for industrial purposes with clear spare capacity for the establishment of further activities. There is no justification for increasing the amount of industrial land within the District and the Council is determined to manage the existing situation in order to enable the progressive development of the present pool of industrial land.

At the same time, there are certain constraints to further industrial development in some parts of the District as a result of inadequate infrastructure. The development of certain industrial activities at Drury is restricted because of the lack of water supply and the limited capacity of the local effluent disposal system. This situation requires careful management to ensure that the widest opportunities are available to developers while minimising the costs of development to the wider community.

In recognition of the present pattern of activities and with a view to enabling further activities to become established, six industrial zones have been formulated for the District. There are four general industrial zones, a zone for quarrying activities and the specialised industrial zone at Ardmore. The distribution of these areas and the controls over the conduct of activities within them are designed to enable the future continuation of the present pattern of development and the use and development of existing resources while securing present levels of environmental quality.

6.3 RESOURCE MANAGEMENT ISSUES

- The efficient and effective future use of industrial land within the constraints imposed by infrastructure and in particular the limitations on water dependent development because of the lack of water supply.
- The retention and enhancement of environmental quality within land zoned for industrial activities.
- The protection of the environmental quality of land adjoining industrial areas.
- The protection of the quality of adjoining waterways.
- The conduct of activities such that any potential for development is not limited and environmental quality is maintained.
- The use and storage of hazardous substances.
- The extraction of aggregates and the operation of quarries in such a way that the quality of the surrounding environment is not degraded.

6.4 RESOURCE MANAGEMENT STRATEGY

The resource management strategy for the industrial zones is:

- to enable a range of activities to become established where environmental quality within and beyond the zone of industrial activity is not adversely affected.
- to continue the current distribution and amount of land zoned for industrial purposes.

- to establish a hierarchy of four general industrial zones.
- to establish a zone for quarrying activities.
- to establish at Ardmore Aerodrome a zone for aviation-related activities.
- to formulate performance standards in respect of bulk and location, noise, air pollution, glare, vibration, hazardous activities, the use, handling and storage of hazardous substances, traffic generation, landscaping, appearance and site development.
- to limit activities in the Drury area that use or dispose of large quantities of water or effluent.
- to require a “Coastal Protection Yard” and building and development set-backs as a buffer between the coastline and development in order to avoid, remedy or mitigate adverse effects.

6.5 OUTCOMES

The purpose of this strategy is to enable the emergence of functional industrial localities at selected locations throughout the District. These industrial areas will have appropriate internal environmental quality as well as achieving higher standards where these areas abut residential areas.

6.6 OBJECTIVES AND POLICIES

Objective

6.6.1 *To manage the use, development and protection of the resources of the industrial areas of the District so that acceptable environmental quality is achieved within industrial areas and beyond.*

Policies

- 6.6.1.1** To establish a hierarchy of four general industrial zones.
- 6.6.1.2** To establish a zone for quarrying activities.
- 6.6.1.3** To establish at Ardmore Aerodrome a zone for aviation related activities.
- 6.6.1.4** To enable a range of industrial and related activities to become established within the zones.
- 6.6.1.5** To require the provision of yards.
- 6.6.1.6** To limit the height of structures.
- 6.6.1.7** To require the provision of landscaping on all industrial lots.
- 6.6.1.8** To set noise and vibration standards on all activities within the industrial zones.
- 6.6.1.9** To set air pollution standards on all activities within the industrial zones.
- 6.6.1.10** To impose controls on the use, handling and storage of hazardous substances.

- 6.6.1.11 To set glare and vibration standards on all activities within the industrial zones.
- 6.6.1.12 To require the screening of yards and storage areas where these face residential areas.
- 6.6.1.13 To impose controls and structures for the protection of surface and groundwater quality both within areas of industrial activity and in areas adjacent to these.
- 6.6.1.14 To require the provision of parking which is adequate and appropriate to the level and intensity of the particular activity within all industrial lots.
- 6.6.1.15 To limit industrial activities until an adequate level of services is available or is made available to meet the requirements of the proposed activity.

Objective

- 6.6.2 *To provide for a range of permitted activities in the industrial zones in accordance with the objectives for those zones.*

Policies

- 6.6.2.1 To establish the Industrial 3 zone as the principal industrial zone offering the greatest opportunity for industrial activities.
- 6.6.2.2 To enable a wide range of industrial activities as discretionary activities in all zones.
- 6.6.2.3 To enable a range of industrial activities as controlled activities in the Industrial 1 zone.
- 6.6.2.4 To enable a range of industrial and commercial activities in the Industrial 2 zone.
- 6.6.2.5 To enable heavy industry to locate in the Industrial 4 zone.
- 6.6.2.6 To enable quarrying and related activities in the Extractive Industry zone.
- 6.6.2.7 To enable aviation related activities in the Ardmore Aerodrome zone.
- 6.6.2.8 To enable limited residential activities in the industrial zones.

Objective

- 6.6.3 *To enable a range of retail activities in the industrial zones where this does not comprise significantly the future viability, integrity and environmental enhancement of the Central Business Area.*

Policies

- 6.6.3.1 To enable the establishment of retail activities ancillary to permitted activities and subject to specified limitations.

- 6.6.3.2** To retain discretion over the establishment of significant retail activities in the industrial zones.

Objective

- 6.6.4** *To maintain and enhance the natural character and landscape values, public access, ecology and landforms of the natural coastal environment which is a matter of national importance.*

Policies

- 6.6.4.1** To protect significant natural features and ecological values of the coastal environment, including water quality and habitats.
- 6.6.4.2** To protect the natural character of the coastal margin, including the physical landform, natural features and vegetation.
- 6.6.4.3** To protect the value the coastline has to tangata whenua.
- 6.6.4.4** To provide for the operation of naturally occurring processes within the coastal environment.
- 6.6.4.5** To protect the existing and foreseeable opportunities for future esplanade reserves in situations where no esplanade reserve currently exists.
- 6.6.4.6** To maintain and enhance the natural character, landscape and amenity values of the coastal environment.
- 6.6.4.7** To ensure that facilities and structures are located so as to avoid the need for future coastal works in order to mitigate the effects of coastal erosion.

6.7 EXPLANATION

The purpose of the above objectives and policies is to protect the present areas of industrial activities as significant resources for the District. The industrial zones contribute much to the economic well-being of Papakura and offer great future potential for the emergence of areas of wide-ranging industrial and commercially-focussed activity.

This future potential will be maximised by retaining high standards of amenity within industrial areas and by ensuring the protection of neighbouring, non-industrial activities. Industrial environments offering pleasant conditions in which to operate and which are therefore attractive to further future development are fundamental in securing the success of the industrial areas of the District.

At the same time, the protection of neighbouring activities from the effects of industrial activities is equally important and is a complementary matter which is addressed in the District Plan. Industrial activities need not cause environmental degradation in adjoining non-industrial areas and can be managed to ensure harmonious co-existence. The District Plan provisions have been formulated to achieve this outcome.

Industrial activities have been structured into a zoning hierarchy to enable a wide range of activities. This allows activities with few environmental impacts and which offer local employment opportunity to become established within small, local communities. In

addition, the unique nature of both quarrying and aviation related activities has been recognised through the provisions of specific zones for these undertakings. Such classification properly identifies these specific activities and allows the formulation of precise rules governing the conduct of them.

6.8 RANGE OF ZONES

6.8.1 Industrial 1

This zone has an area of approximately 9 hectares and covers five locations: two areas along Great South Road, Takanini, Old Wairoa Road, Vernon Street, Pricor Street and Ron Keat Drive.

The Industrial 1 zone is a light industrial zone and provides opportunities for small, localised activities and the zone provisions protect environmental quality by particularly controlling traffic generation and building height. Limited residential activities are permitted and most light industrial activities are controlled activities.

6.8.2 Industrial 2

This zone lies adjacent and generally to the west of the Central Business Area and occupies some 6 hectares. A similar range of industrial and related activities to those in the Industrial 1 zone are acceptable within this zone. In addition, fringe commercial activities are provided for in recognition of the proximity of this zone to the Central Business Area. Further, all activities are subject to a more liberal height control.

6.8.3 Industrial 3

This zone is located in the northern part of the District at Takanini, the south-eastern part at Hunua and at Drury. It is the largest industrial zone in the District and occupies approximately 180 hectares.

The zone is a “medium” industrial zone, enabling a wide range of industrial and related activities while controlling those activities which require physical separation from other activities because of the potential for environmental degradation and loss of amenity.

The zone also acts as a buffer zone between activities in the Industrial 4 zone and the adjoining residential zones.

6.8.4 Industrial 4

This zone enables the establishment of those activities which require physical separation from adjoining sensitive activities but lies within a buffer created by the Industrial 3 zone. It occupies an area of approximately 106 hectares.

6.8.5 Extractive Industry

This zone covers the two areas of quarrying at Hunua Road and Drury. The provisions enable the continuation of quarrying and related uses within the zone while imposing strict development and operational controls to ensure high standards of operation and protection of sensitive water courses and streams.

6.8.6 Ardmore Aerodrome Zone

This zone makes provision for the aviation industry and related uses at Ardmore Aerodrome. The site is designated as “Aerodrome” and “Aerodrome Purposes” in the District Plan as a requirement of the Minister of Transport.

6.9 INDUSTRIAL 1 ZONE

6.9.1 INTRODUCTION

The Industrial 1 Zone is a light industrial zone located along the Great South Road, Takanini, at Old Wairoa Road, Vernon Street and Pictor Street. The zone enables the establishment of a range of light service industries in several parts of the District which adjoin sensitive, non-industrial areas. These localities are adjacent to areas of residential development and this proximity demands careful provisions to secure the proper future functioning of the industrial land as well as protecting the environmental quality of the residential areas. Further, there are some instances where a light industrial zoning is most appropriate because of the sensitive nature of the adjoining environment or activities.

6.9.2 OVERVIEW

A limited range of permitted activities is provided for in the zone. These are restricted to those of an accessory, residential or reserve nature is also provided for subject to site suitability and the application of special purpose conditions to the proposal.

Industries and processes requiring maximum segregation from other uses because of offensive, noxious or dangerous elements (Schedule 6A), those which may require segregation because of possible objectionable elements (Schedule 6B), those which are potentially capable of producing a high degree of air pollution (Schedule 6C) or a moderate degree of air pollution (Schedule 6D) are not permitted in the Industrial 1 zone. The storage and use of hazardous substances in quantities in excess of those specified in Level 1 of Schedule 6F will be discretionary activities within 75 metres of a residential area.

Where Industrial 1 lots adjoining residential zones, a 5 metre, densely planted yard will be required to provide visual separation. Height-in-relation-to-boundary controls also apply.

6.9.3 RESOURCE MANAGEMENT ISSUES

- The avoidance and mitigation of any adverse effects of industrial activities.
- The retention of functional industrial areas of local significance.
- The maintenance and, where possible, enhancement of amenity and environmental quality within the zone.

6.9.4 RESOURCE MANAGEMENT STRATEGY

The resource management strategy for this zone is:

- to enable residential activities to establish in the zone;
- to enable the establishment of locally-oriented service industries;
- to formulate performance standards so that activities are properly managed to secure amenity values both within and beyond the zone;
- to limit the height of buildings and structures and to secure appropriate site development in recognition of the proximity of adjacent residential activities; and
- to restrict the establishment of activities of an offensive, noxious or dangerous nature.

6.9.5 OUTCOMES

The principal outcome sought by the strategy is to ensure that industrial activities have minimal impact on surrounding areas. The aim is the operation of local industrial nodes which recognise sensitive neighbouring activities and function in accordance with environmental controls aimed at high levels of local amenity and environmental quality.

6.9.6 OBJECTIVES AND POLICIES

Objective

6.9.6.1 *To enable the establishment of light industry in selected local areas.*

Policies

6.9.6.1.1 To zone small localised industrial areas of the District adjacent to residential activity as Industrial 1.

6.9.6.1.2 To exclude activities and processes which may be noxious, offensive or involve elements of environmental risk.

6.9.6.1.3 To enable a limited range of ancillary activities within the Industrial 1 zone.

Objective

6.9.6.2 *To protect environmental quality and the amenities of sensitive, adjoining non-industrial areas.*

Policies

6.9.6.2.1 To enable the establishment of residential activities in the zone.

6.9.6.2.2 To impose controls which protect the environmental quality and amenity of neighbouring properties.

6.9.6.2.3 To impose amenity controls at site boundaries.

6.9.6.2.4 To adopt controls on noise, vibration, air pollution, glare and soil and water contamination.

6.9.6.2.5 To require the establishment and maintenance of landscaped buffer areas between industrial activities and adjacent activities.

6.9.6.2.6 To limit the height and location of activities.

6.9.6.2.7 To require the provision of landscaped front yards.

6.9.6.2.8 To require the provision of landscaped side yards adjoining residential zones.

6.9.6.2.9 To require the provision of rear yards adjoining residential zones.

- 6.9.6.2.10** To restrict the establishment of activities which require segregation because of offensive, noxious or dangerous elements (Schedules 6A and 6B).
- 6.9.6.2.11** To restrict the establishment of activities which are capable or potentially capable of a high or moderate degree of air pollution (Schedules 6C and 6D).
- 6.9.6.2.12** To impose storage and usage restrictions on hazardous substances and LPG.

6.9.7 EXPLANATION

The purpose of the above objectives and policies is to enable local industrial activity to become established in selected areas while securing and enhancing the levels of environmental quality. By way of strict controls on bulk and location and specific environmental impacts of activities, the amenity of the localities subject and adjacent to these industrial areas will be retained and improved.

6.9.8 RULES

6.9.8.1 Permitted Activities

Any residential activity that is ancillary to a Permitted Activity or Discretionary Activity where it complies with the requirements of Rule 6.15 and is in accordance with the criteria set out in Rule 6.15.2.2 – 5.

Any industrial activity where it complies with the Rules for Permitted Activities set out below.

1. General Provisions

Every activity shall comply with the requirements of Rule 6.15.

2. Use of Buildings and Lots

No building or lot shall be used for any activity in Schedule 6A or 6B or shall employ a process listed in Schedule 6C and 6D.

3. Hazardous Substances

No activity shall involve the storage or use of hazardous substances as set out in Schedule 6F.

6.9.8.2 Discretionary Activities

Any industrial activity where it complies with the Rules for Discretionary Activities set out below.

Any service station where it complies with the rules for discretionary activities set out below.

Any studio warehousing development where it complies with the Rules for Discretionary Activities set out below and with Rule 6.15.2.2 Specific Activity Criteria 6 Studio Warehousing.

1. General Provisions

Application must be made for a resource consent for a discretionary activity where it is proposed to vary the standards for permitted activities contained in Rule 6.15. An application for a discretionary activity may only be granted to vary those standards to the extent permitted in Table 6.2 and will be assessed in terms of the criteria contained in Rule 6.15.2.2.

2. Use of Buildings and Lots

No building or lot shall be used for any activity in Schedule 6A or 6B **or** shall employ a process listed in Schedule 6C or 6D.

3. Hazardous Substances

No activity shall involve the storage or use of hazardous substances listed in Schedule 6F in quantities in excess of those specified in Level II in the schedule **or** in quantities in excess of those specified in Level I of the schedule on lots partly or wholly within 75 metres of a residential zone or other residential activity.

6.9.8.3 Applications

Rule 9.5 in Section One, *General*, of the District Plan and Part 12 of this Section sets out the procedure to be followed for Discretionary Activity applications.

6.9.8.4 Subdivision

The rules for subdivision are contained in Part 9 of this Section of the Plan.

6.10 INDUSTRIAL 2 ZONE

6.10.1 DESCRIPTION

The Industrial 2 Zone adjoins the Central Business Area and enables the establishment of a range of light service industries and ancillary activities. Because of its proximity to the Central Business Area this zone constitutes an important component of the commercial core of the District.

6.10.2 OVERVIEW

The activities which may become established in this zone are complementary to those of the Central Business Area and the activity pattern of both the Industrial 2 zone and the Central Business Area have the potential for the area to further develop as the economic heart of Papakura.

As in the Industrial 1 zone, those industries and processes requiring maximum segregation from other uses because of offensive, noxious or dangerous elements (Schedule 6A), those which may require segregation because of possible objectionable elements (Schedule 6B), those which are potentially capable of producing a high degree of air pollution (Schedule 6C) or a moderate degree of air pollution (Schedule 6D) are not permitted in the Industrial 2 zone. Further, the storage and use of hazardous substances in quantities in excess of those specified in Level 1 of Schedule 6F will be discretionary activities within 75 metres of a residential or commercial area.

Within the Industrial 2 zone, the height provisions reflect the proximity of the zone to the Central Business Area and the more intensely built environment in this part of the District. At the same time, the Industrial 2 zone does adjoin other non-industrial areas and this proximity requires careful provisions to secure the proper future functioning of the industrial land as well as protecting the environmental quality of the adjoining residential and commercial areas.

6.10.3 RESOURCE MANAGEMENT ISSUES

- The development of a coherent commercial-industrial core for the District.
- The retention of service and light industrial activities which are complementary to the activities of the Central Business Area.
- The avoidance and mitigation of any adverse effects of industrial activities on adjoining non-industrial activities.
- The maintenance and, where possible, enhancement of amenity and environmental quality within the zone.

6.10.4 RESOURCE MANAGEMENT STRATEGY

The resource management strategy for this zone is:

- to enable the establishment of light industries and retail activities which are complementary to the activities of the Central Business Area.
- to place specific controls on activities in order to minimise adverse environmental impacts of industrial activities on the Central Business Area.

- to limit the height of buildings and structures and to secure appropriate site development in recognition of the proximity of adjacent residential activities.
- to provide for entertainment and community activities in recognition of the traffic and space requirements of these activities.

6.10.5 OUTCOMES

The principal outcome sought by this strategy is the operation of a light industrial precinct which is peripheral and complementary to the Central Business Area and which recognises sensitive neighbouring activities and the need to function in accordance with environmental controls aimed at high levels of local amenity and environmental quality.

6.10.6 OBJECTIVES AND POLICIES

Objective

6.10.6.1 *To enable the development of an industrial locality which is complementary and in close proximity to the Central Business Area.*

Policies

6.10.6.1.1 To enable selected industrial activities to develop within the zone.

6.10.6.1.2 To enable selected ancillary activities to develop within the zone.

6.10.6.1.3 To enable entertainment activities to develop within the zone.

6.10.6.1.4 To enable retail activities to develop within the zone.

6.10.6.1.5 To allow flexibility in height of structures.

Objective

6.10.6.2 *To protect environmental quality and the amenities of sensitive, adjoining non-industrial areas.*

Policies

6.10.6.2.1 To impose controls which protect the environmental quality and amenity of neighbouring properties.

6.10.6.2.2 To impose amenity controls at site boundaries.

To require the provision and maintenance of landscaped yards adjoining residential areas.

6.10.6.2.3 To adopt controls on noise, vibration, air pollution, glare, and soil and water contamination.

6.10.6.2.4 To restrict the establishment of activities which require segregation because of offensive, noxious or dangerous elements (Schedules 6A and 6B).

6.10.6.2.5 To restrict the establishment of activities which are capable or potentially capable of a high or moderate degree of air pollution (Schedules 6C and 6D).

6.10.6.2.6 To impose storage and usage restrictions on hazardous substances.

6.10.7 EXPLANATION

The purpose of the objectives and policies for the Industrial 2 zone is to enable the development of a zone which has a range of industrial and commercial uses which will form a complementary and vital part of the commercial heart of the District. Provisions relating to local amenity and environmental quality reflect the proximity of the zone to both the Central Business Area and neighbouring areas of residential development. Further, the proximity of reserves to the Industrial 2 zoning also requires considered provisions relating to the protection of the amenity of those areas.

6.10.8 RULES

6.10.8.1 Permitted Activities

Any residential activity that is ancillary to a Permitted Activity or Discretionary Activity where it complies with the requirements of Rule 6.15 and is in accordance with the criteria set out in Rule 6.15.2.2 – 5.

Any industrial activity, retail activity, entertainment activity or service station where it complies with the rules for permitted activities set out below.

1. General Provisions

Every activity shall comply with the requirements of Rule 6.15.

2. Use of Buildings and Lots

No building or lot shall be used for any activity in Schedule 6A or 6B **or** shall employ a process listed in Schedule 6C or 6D except as otherwise provided for by way of a resource consent.

3. Hazardous Substances

No activity shall involve the storage or use of hazardous substances listed in Schedule 6F in quantities in excess of those specified in Level I in the Schedule.

6.10.8.2 Discretionary Activities

Any industrial activity, retail activity, entertainment activity or service station where it complies with the Rules for Discretionary Activities set out below.

Any studio warehousing development where it complies with the Rules for Discretionary Activities set out below and with Rule 6.15.2.2 Specific Activity Criteria 6 Studio Warehousing.

1. *General Provisions*

Application must be made for a resource consent for a Discretionary Activity where it is proposed to vary the standards for permitted activities contained in Rule 6.15. An application for a Discretionary Activity may only be granted to vary those standards to the extent permitted in Table 6.2 and will be assessed in terms of the criteria contained in Rule 6.15.2.2.

2. *Use of Buildings and Lots*

No building or lot shall be used for any activity in Schedule 6A or 6B **or** shall employ a process listed in Schedule 6C or 6D except as otherwise provided for by way of a resource consent.

3. *Hazardous Substances*

No activity shall involve the storage or use of hazardous substances in excess of those specified in Level I of the Schedule on lots partly or wholly within 75 metres of a residential zone or other residential activity.

6.10.8.3 Applications

Rule 9.5 of Section One, *General*, and Part 12 of this Section sets out the procedure to be followed for all Discretionary Activity applications.

6.10.8.4 Subdivision

The rules for subdivision are contained in Part 9 of this Section of the Plan.

6.11 INDUSTRIAL 3 ZONE

6.11.1 INTRODUCTION

The Industrial 3 Zone is located in Takanini, Hunua Road and Drury and enables the establishment of a wide range of light to medium industrial and related activities. These localities comprise the focal points of manufacturing, processing, warehousing and distribution activities in Papakura and generate a range of social and environmental effects.

6.11.2 OVERVIEW

The future operation of these areas is important to the continuing well-being of the District. Stable and viable local industry provides a foundation on which to base the vision of Papakura and the continued secure functioning of land devoted to industrial activities is a principal aim of the Council. The concentration of these activities at recognised and acceptable nodes will assist the future development of industrial activities and provide certainty as to the location of those activities which have the potential to adversely affect the environment.

Because of the intense nature of the activities which operate in these areas and the potential for increasing activities in the future, the Industrial 3 zone places substantial demands on the natural and physical resources of the District. Land, water, air, infrastructure and services are all subject to demands from the activities in the zone to enable the efficient use and operation of these resources.

The provisions of the zone closely control those activities which require segregation from other activities because of the potentially offensive, noxious or dangerous nature of these. In addition, those activities which are capable of producing some degree of air pollution are also subject to controls.

Within the overall framework of environmental controls, particular areas have local constraints to development. The Drury locality suffers problems of both domestic and industrial effluent disposal which place constraints on the types of activities that may locate in the area. Accordingly, careful provisions to secure the proper future functioning of the industrial land as well as protecting the environmental quality of the residential areas have been formulated.

6.11.3 RESOURCE MANAGEMENT ISSUES

- The retention of suitable areas for a wide range of light-medium industrial activity.
- The control of any adverse effects of industrial activities.
- The maintenance and, where possible, enhancement of amenity and environmental quality within the zone.
- The protection of adjacent waterways.
- The retention and development of satisfactory access.
- The treatment and disposal of effluent.

6.11.4 RESOURCE MANAGEMENT STRATEGY

The resource management strategy for this zone is:

- to enable the establishment of a range of light to medium industrial activities.
- to properly manage industrial activities in order to secure amenity values both within and beyond the zone.
- to ensure that industrial activity does not impose adverse environmental impacts within industrial areas or in areas adjacent to these.
- to space specific controls on those aspects of industrial activities which may be likely to lead to detrimental effects.
- to limit the height of buildings and structures and to secure appropriate site development in recognition of the proximity of adjacent residential activities.

6.11.5 OUTCOMES

The intended outcome of this strategy is the operation of local centres of industrial activity which may properly function as such while recognising sensitive neighbouring activities. These industrial areas will operate in accordance with environmental controls aimed at appropriate levels of local amenity and environmental quality.

6.11.6 OBJECTIVES AND POLICIES

Objective

6.11.6.1 *To protect environmental quality within industrial areas and the amenities of adjoining industrial and non-industrial activities from adverse effects.*

Policies

6.11.6.1.1 To impose controls which protect the environmental quality and amenity of neighbouring properties.

6.11.6.1.2 To impose amenity controls at site boundaries.

6.11.6.1.3 To adopt controls on noise, vibration, air pollution, glare, and soil and water contamination.

6.11.6.1.4 To require the establishment and maintenance of buffer areas between industrial activities and adjacent activities.

6.11.6.1.5 To limit the height and location of activities.

6.11.6.1.6 To exclude the establishment of any activities requiring large quantities of water or requiring to dispose of large quantities of liquid trade wastes unless such wastes can be disposed of into a community sewerage system. This is unless the trade wastes generated are removed entirely from the site for disposal at an authorised location.

- 6.11.6.1.7 To limit the establishment of activities which require segregation because of offensive, noxious or dangerous elements (Schedules 6A and 6B).
- 6.11.6.1.8 To limit the establishment of activities which are capable or potentially capable of a high or moderate degree of air pollution (Schedules 6C and 6D).
- 6.11.6.1.9 To impose storage and usage limitations on hazardous substances and LPG.

6.11.7 RULES

6.11.7.1 Permitted Activities

- Any residential activity that is ancillary to a Permitted Activity or Discretionary Activity where it complies with the requirements of Rule 6.15 and in accordance with the criteria set out in Rule 6.15.2.2 – 5.
- Any industrial activity or service station, except in the Industrial 3 Zone at Drury, where it complies with the Rules for Permitted Activities set out below.
- Retail activities ancillary to a permitted activity on the same site provided that retail activities do not occupy more than 30% of the gross floor area of the industry and retail premises combined or 200 square metres, whichever is the lesser.
- Retail activities with a gross floor area less than 200 square metres and offering food and beverages.

1. *General Provisions*

Every activity shall comply with the requirements of Rule 6.15.

2. *Use of Buildings or Lots*

No building or lot shall be used for any activity in Schedule 6A or 6B **or** employing a process listed in Schedule 6C or 6D.

3. *Hazardous Substances*

No activity shall involve the storage or use of hazardous substances listed in Schedule 6F in quantities in excess of those specified in Level II in the schedule **or** in quantities in excess of those specified in Level I of the schedule on lots partly or wholly within 75 metres of a residential zone or other residential activity.

6.11.7.2 Discretionary Activities

- Any industrial activity, retail activity or service station where it complies with the rules for discretionary activities set out below.
- Any industrial activity in the Industrial 3 zone at Drury and subject to assessment in terms of Rule 6.15.2.1(e).
- Retail activities having a gross floor area greater than 400 square metres other than those offering food, beverages or clothing.

- Any commercial activity where it complies with the performance standards set out below.

1. *General Provisions*

Application for a resource consent for a Discretionary Activity shall be made where it is proposed to vary the standards for Permitted Activities contained in Rule 6.15. An application for a Discretionary Activity may only be granted to vary those standards to the extent permitted in Table 6.2. All applications will be assessed in terms of the criteria contained in Rule 6.15.2.

2. *Use of Buildings and Lots*

An application for a resource consent for a Discretionary Activity shall be made where any building or lot is to be used for any activity in Schedule 6B **or** employing a process listed in Schedule 6D.

Activities involving Schedule 6A uses or Schedule 6C processes are Non-Complying Activities within the Hunua Road, Dominion Road, Settlement Road industrial area and Discretionary Activities in the other areas in the District zoned Industrial 3.

3. *Hazardous Substances*

No activity shall involve the storage or use of hazardous substances listed in Schedule 6F in quantities in excess of those specified in Level II in the schedule **or** in quantities in excess of those specified in Level I of the schedule on lots partly or wholly within 75 metres of a residential zone or a residential activity.

6.11.7.3 Applications

Rule 9.5 of Section One, *General*, of the District Plan and Part 12 of this Section set out the procedure to be followed for all Discretionary Activity applications.

6.11.7.4 Subdivision

The rules for subdivision are contained in Part 9 of this Section of the Plan.

6.12 INDUSTRIAL 4 ZONE

6.12.1 INTRODUCTION

The Industrial 4 Zone is located in the south-eastern part of the urban area at Hunua Road. It is buffered from the adjacent residential area by land zoned for light to medium industrial use (Industrial 3). Although the zone includes a reasonably wide range of existing industries, there are activities established in the zone which require protection from adverse effects.

6.12.2 OVERVIEW

The area has access to Hunua Road and Boundary Road. Hunua Road is part of the arterial road network of the district and Boundary Road is a significant collector road. These roads meet the particular transportation requirements of those industrial activities which involve the movement of bulk raw materials and finished products and provide appropriate connection to the rest of the sub-regional road network.

The purpose of this zone is to allow for the establishment of medium industrial activities which have a degree of environmental impact. Environmental standards for the zone have been formulated to ensure that the purpose of the zone is achieved while also protecting the general environmental qualities of the zone and the specific functional requirements and the amenities of existing activities located in the zone and adjacent areas.

While it is recognised that a small range of commercial service activities might be required in the zone, controls have been adopted to ensure that these do not compromise the primary industrial purpose of the zone or conflict with the operational requirements of existing industries.

6.12.3 RESOURCE MANAGEMENT ISSUES

- The establishment of a range of medium industrial activities which potentially have a degree of adverse environmental impact.
- The control of any adverse effects of industrial activities with particular regard to the receiving environment and existing activities established in the zone.
- The maintenance and enhancement of amenity and environmental quality within the zone.
- The protection of amenity and environmental quality in adjacent areas.
- The provision and use of appropriate and satisfactory access.

6.12.4 RESOURCE MANAGEMENT STRATEGY

The resource management strategy for this zone is:

- to enable the establishment of a range of industrial activities which have some associated environmental risk
- to manage selected industrial activities in order to secure appropriate amenity values both within and beyond the zone.

- to manage selected industrial activities in order to avoid adverse effects on industries established within the zone and to secure appropriate amenity values both within and beyond the zone.
- to limit the establishment of non-industrial activities.
- to enable adequate and appropriate access between the zone and other parts of the District.

6.12.5 OUTCOMES

The principal outcome sought by the strategy is the functioning of a central node for medium industry which recognises specific objectives of environmental protection. The environmental controls relating to the Industrial 4 zone will permit a reasonable range of industrial activities while ensuring an appropriate level of amenity and environmental quality, both within and beyond the zone.

6.12.6 OBJECTIVES AND POLICIES

Objective

6.12.6.1 *To enable the establishment of a range of medium industrial activities including those which have a degree of environmental impact.*

Policies

6.12.6.1.1 To enable a range of industrial activities as Permitted and Discretionary Activities.

6.12.6.1.2 To limit the establishment of non-industrial activities which do not have a functional requirement to be located within the zone.

Objective

6.12.6.2 *To protect environmental quality and amenities within the industrial area and the amenities of adjoining activities.*

Policies

6.12.6.2.1 To impose controls which protect the environmental quality and amenities within the zone and the amenity of neighbouring properties.

6.12.6.2.2 To impose amenity controls at site boundaries.

6.12.6.2.3 To adopt controls on noise, vibration, air pollution, glare and soil and water contamination.

6.12.6.2.4 To require the establishment and maintenance of landscaped buffer areas between industrial activities and adjacent activities.

6.12.6.2.5 To impose controls on the development of industrial activities which may adversely affect existing activities within the zone.

6.12.7 RULES

6.12.7.1 Permitted Activities

- Any residential activity that is ancillary to a permitted or discretionary activity where it complies with the requirements of Rule 6.15 and in accordance with the criteria set out in Rule 6.15.2.2 – 5.
- Any industrial activity or service station where it complies with the rules for permitted activities set out below.
- Retail activities ancillary to a permitted activity on the same site provided that retail activities do not occupy more than 30% of the gross floor area of the industry and retail premises combined or 200 square metres, whichever is the lesser.
- Food manufacturing and associated warehouse and distribution activities in Hunua Road on Lot 1 DP 83521 CT 88C/92.
- Land and buildings used for recreation, entertainment and community purposes and ancillary residential accommodation located in Croskery Road on Lot 1 DP 79346.
- Concrete pipe and pre-cast manufacturing activities in Hunua Road on Lot 1 DP 131226, Lot 2 DP 131266 and Lot 1 DP 142775.

1. *General Provisions*

Every activity shall comply with the requirements of Rule 6.15.

2. *Use of Buildings or Lot*

No building or lot shall be used for any activity in Schedule 6A or 6B or employing a process listed in Schedule 6C or 6D.

3. *Hazardous Substances*

No activity shall involve the storage or use of any hazardous substances in quantities exceeding the Level II thresholds in Schedule 6F.

6.12.7.2 Discretionary Activities

- Any industrial activity or service station where it complies with the rules for discretionary activity set out below.
- Commercial activities.

1. *General Provisions*

Application for a resource consent for a Discretionary Activity shall be made where it is proposed to vary the standards for Permitted Activities contained in Rule 6.15. An application for a Discretionary Activity may only be granted to vary those standards to the extent permitted in Table 6.2. All applications will be assessed in terms of the criteria contained in Rule 6.15.2.

2. *Use of Buildings and Lots*

Application for a resource consent for a Discretionary Activity shall be made where any building or lot is to be used for any activity in Schedule 6A or 6B **or** employing a process listed in Schedule 6C or 6D.

3. *Hazardous Substances*

No activity shall involve the storage or use of hazardous substances listed in Schedule 6F in quantities in excess of those specified in Level II in the schedule.

6.12.7.3 Applications

Rule 9.5 of Section One, *General*, of the District Plan and Part 12 of this Section set out the procedure to be followed for all controlled and Discretionary Activity applications.

6.12.7.4 Subdivision

The rules for subdivision are contained in Part 9 of this Section of the Plan.

6.13 QUARRY ZONE

6.13.1 INTRODUCTION

Quarrying is an activity which occurs at two principal locations within the District and the Quarry Zone is applied to these long established areas of aggregate extraction.

6.13.2 OVERVIEW

The provisions of the zone are designed to provide for the continuation of quarrying and associated uses in these areas subject to strict environmental controls on the operation of the quarry and the ultimate use of the lot. This is achieved through the provisions of the General Quarry Rule which requires the preparation of a Quarry Management Plan where any quarrying activity is undertaken.

Further, there is the ongoing possibility that quarrying may occur beyond the boundaries of the present Quarry Zone. Therefore, the General Quarrying Rule will have application throughout the District. Any quarrying activity will be subject to the provisions of the rule to ensure that while operations continue, nuisance elements are minimised and finally that restoration and final levels are co-ordinated through the Quarry Management Plans.

6.13.3 RESOURCE MANAGEMENT ISSUES

- The continuation of quarrying and protection of important resource areas as a significant economic activity in the District.
- The sustainable management of the landscape and landforms of the District.
- The avoidance and mitigation of any adverse effects of quarrying.
- The need to control the effects of particular activities associated with quarrying, such as blasting, vibration and noise.
- The need to ensure that the general environmental impacts and effects on amenity due to quarrying operations are minimised.
- The need to provide for site restoration and preparation for subsequent activities.
- The recognition of the need to minimise any adverse effects on water quality.
- The recognition and protection of cultural and heritage values of sites, buildings, places and areas.

6.13.4 RESOURCE MANAGEMENT STRATEGY

The resource management strategy for this zone is:

- to enable continued quarrying activities within clearly defined management guidelines so that visual and noise amenity and natural environmental values are appropriately managed.
- to ensure that quarried areas are reinstated with vegetation so that the amenities of surrounding areas are maintained and enhanced.
- to place specific controls on those aspects of quarry operations which are likely to lead to detrimental effects.

- to ensure that any quarry operations do not result in the lowering of the water quality or quantity of natural water systems on the land or ultimately surrounding coastal waters.
- to require the production of a Quarry Management Plan showing re-instatement proposals for all areas subject to quarrying activities.

6.13.5 OUTCOMES

The principal outcome sought by the strategy is to ensure that any significant adverse effects of quarrying and mining activities on the surrounding areas are avoided or mitigated to have a minimal impact on surrounding areas.

6.13.6 OBJECTIVES AND POLICIES

Objectives

- 6.13.6.1** *To provide for the careful management and extraction of mineral resources and the restoration of exhausted quarries.*

Policies

- 6.13.6.1.1** To implement a comprehensive set of rules for quarrying and to provide for the establishment and construction of ancillary activities.

- 6.13.6.1.2** To require a Quarry Management Plan for all land within the zone and which outlines operational matters and which gives an indication of the proposed end-state of the land once quarrying has ceased.

- 6.13.6.1.3** To require all new quarry operations to indicate a potential end-use of the land before operations commence.

Objective

- 6.13.6.2** *To impose controls which protect the environmental quality and amenity of the quarry site and of neighbouring properties.*

Policies

- 6.13.6.2.1** To impose amenity controls at site boundaries.

- 6.13.6.2.2** To restrict hours during which explosives may be used in quarry operations.

- 6.13.6.2.3** To adopt controls designed to prevent or reduce vibration, dust, noise and soil and water contamination and degradation.

- 6.13.6.2.4** To require the establishment and maintenance of buffer areas between quarry operations and adjacent activities.

- 6.13.6.2.5** To require significant historic places and areas to be protected from quarry operations.

6.13.7 EXPLANATION

Mineral extraction is a temporary activity and restoration of a quarry is required to prepare the land for the establishment of subsequent activities. To this end, the provisions of this zone include a comprehensive set of rules for quarrying. The purpose of these rules is to ensure that, during the course of quarrying, adverse effects on amenity are minimised and that site restoration and final levels are properly planned and co-ordinated. Such planning is required through the preparation of Quarry Management Plans.

Quarry Management Plans are required to show the proposals for the operation and restoration of quarried areas. In particular, Quarry Management Plans are required to show and describe a number of operational and managerial aspects of a quarrying operation. These include the area to be quarried, the location of buildings and plant, areas for the stockpiling of over-burden and existing and final contour levels.

6.13.8 RULES

6.13.8.1 Permitted Activities

Any quarry activity or industrial activity and any activity ancillary to the Quarry activities shall be regarded as a permitted activity in the Quarry Zone where it complies with the rules for permitted activities set out below.

1. *General Quarrying Rule*

(a) Height of Buildings

No part of any building shall exceed a height equal to 3 metres plus the shortest horizontal distance between that part of the building and the nearest Quarry Zone boundary provided that:

No building shall exceed a height of 24 metres. Any proposals to exceed this limitation shall be subject to assessment as a Discretionary Activity.

(b) Yards

(i) Quarrying Uses

No quarrying shall be carried out within 30 metres of each Quarry Zone boundary unless a resource consent for a Discretionary Activity is obtained. Such distance is to be measured at right angles to the Quarry Zone boundary or boundary to where the quarry is worked on an area within the Quarry Zone except the excavation may be undertaken in this yard where:

- final levels will coincide with existing levels or proposed final levels on adjoining land; and
- the area within the Quarry Zone will be graded or batters formed which will ensure the stability of the land and that on adjoining land for such purposes to which it may be subsequently put.

(ii) Industrial and Commercial Uses Other than Quarrying

The following yards are required for uses other than quarrying.

Front yard – 30 metres provided that:

in the case of any administration building the minimum front yard requirement shall be 12 metres.

Side yard – 15 metres

Rear yard – 15 metres

Notes:

1. Where any yard is affected by a building restriction yard that which has the greater dimension will apply.

(c) Lot Coverage

Lot coverage shall not exceed 30% of lot area.

(d) Quarry Management Plan

The operators and owners of each quarry shall furnish a Quarry Management Plan to the Council for its retention provided that in the case of existing quarries where a quarry plan has been submitted under any provision of an earlier requirement no further plan shall be required except where quarrying is proposed to be extended outside the area shown on that plan and the Council's consent to such an extension is necessary.

Where the Plan requires the Council's consent to quarrying operations the Council may grant or refuse its consent or require any changes to be made to the Quarry Management Plan or impose other conditions as it sees fit.

All quarrying and restoration shall be carried out in accordance with the Quarry Management Plan which shall include the following information in plan form and in explanatory material:

- (i) demarcation of the area to be quarried;
- (ii) existing contours;
- (iii) an indication of final contours and floor levels including the proposals for the co-ordination of final levels of adjoining land;
- (iv) proposed ultimate drainage of quarried lands and include any water consents that it may be necessary to obtain.
- (v) an indication of the period over which quarrying will continue and of staged development;

- (vi) provision for the disposal and/or stockpiling of overburden, waste and quarried material, including the areas to be used for stockpiling;
- (vii) areas for stockpiling topsoil (where applicable);
- (viii) provision for screening unsightly features from public view and fencing dangerous or potentially dangerous features;
- (ix) description of methods to be employed to prevent contamination of air or natural water and to comply with the Noise and Vibration provisions of these rules;
- (x) an indication of the route by which quarried material is to be removed from the lot;
- (xi) provision for the progressive restoration of the lot such that the land will be left in such condition as the Council considers suitable for the establishment of those uses to which that land may subsequently be put; and
- (xii) description of methods to be employed to avoid, remedy or mitigate any adverse effects of quarrying operations on identified significant places and areas.

(e) Noise

Except for the Hunua Quarry, Aggregate Resource Protection Area, the L10 noise level as measured at or within 30 metres from any dwelling shall not exceed the following limits:

Monday to Friday between the hours of 0700 – 1800 and
Saturday between the hours of 0700 – 1600. 55 dBA

At all other times including Sundays and Public Holidays 45dBA.

The noise levels shall be measured and assessed in accordance with the requirements of the New Zealand Standard NZS 6801:1991 Measurement of Sound and NZS 6802:1991 Assessment of Environmental Sound.

The noise shall be measured with a sound level meter complying with the International Standard IEC 651 (1979): Sound Level Meters Type 1.

Should the Council adopt instruments or standards that supersede these, then they will be used in place of the standards above.

(f) Noise – Hunua Quarry Aggregate Resource Protection Area

- (i) The L10 noise level measured at or within 30 metres from any occupied dwelling existing at 1 January 2001 shall not exceed the limits in (e) above.

- (vii) Except for the Hunua Quarry Aggregate Resource Protection Area, when blasting the limit of particle velocity (peak particle velocity) on any foundation of an adjacent building not connected with the quarry site, shall not exceed 20mm/s for commercial buildings (97.5% compliance) or 5mm/s for dwellings and buildings intended for domestic use (97.5% compliance) and a maximum of 10 mm/s (99% compliance).
- (viii) For the Hunua Quarry Aggregate Resource Protection Area, when blasting the limit of particle velocity (peak particle velocity) shall not exceed the following limits:
- when measured on any foundation of an adjacent building not connected with the quarry site existing as at 1 January 2001; 20mm/s for commercial buildings (97.5% compliance) or 5mm/s for dwellings and buildings intended for domestic use (97.5% compliance) and a maximum of 10 mm/s (99% compliance).
 - when measured at any point on the Quarry Effects Line as shown on District Plan Maps F7, F8, F9, G7, G8 and G9, 20 mm/s (97.5% compliance)

Peak particle velocity means the maximum particle velocity in any of three mutually perpendicular directions. The units are millimetres per second (mm/s).

Explanatory Note

Rule 6.13.8.1(f) requires the peak particle velocity on any foundation of an adjacent building outside the Hunua Quarry Aggregate Resource Protection Area meet the compliance level at that point. It is recognised that the person carrying out the monitoring might not have the right of access or the ability to monitor directly on the foundation. Measurement should normally be carried out at a suitable point(s) representative of the adjacent building and demonstrate that ground vibrations are below the levels required in the Rule at the building foundation.

- (ix) Monitoring vibrations and air overpressure (air blast) Instruments to measure vibrations and air overpressure and methods of measurement shall comply with the Australian Standard AS2187.2 1993 applying measurement and assessment in a statistical manner.

Monitoring shall be sufficient to assess compliance with the Rule at all likely affected sites.

- (h) Dust
Quarry owners and operators must ensure that adequate measures are taken to control the emission of dust from all parts of the site.
- (i) Waste Disposal and Water and Soil Pollution

All tailings, overburden, waste and liquid and gaseous effluent shall be disposed of so as to minimise damage to property or disfigurement of the landscape, and to prevent pollution of any watercourse, drain, stream, creek, foreshore or underground water source.

(j) **Removal of Topsoil**

No topsoil shall be disposed of by sale or otherwise permanently removed from the quarry lot except as may be specified in the Quarry Management Plan and thereby approved by the Council.

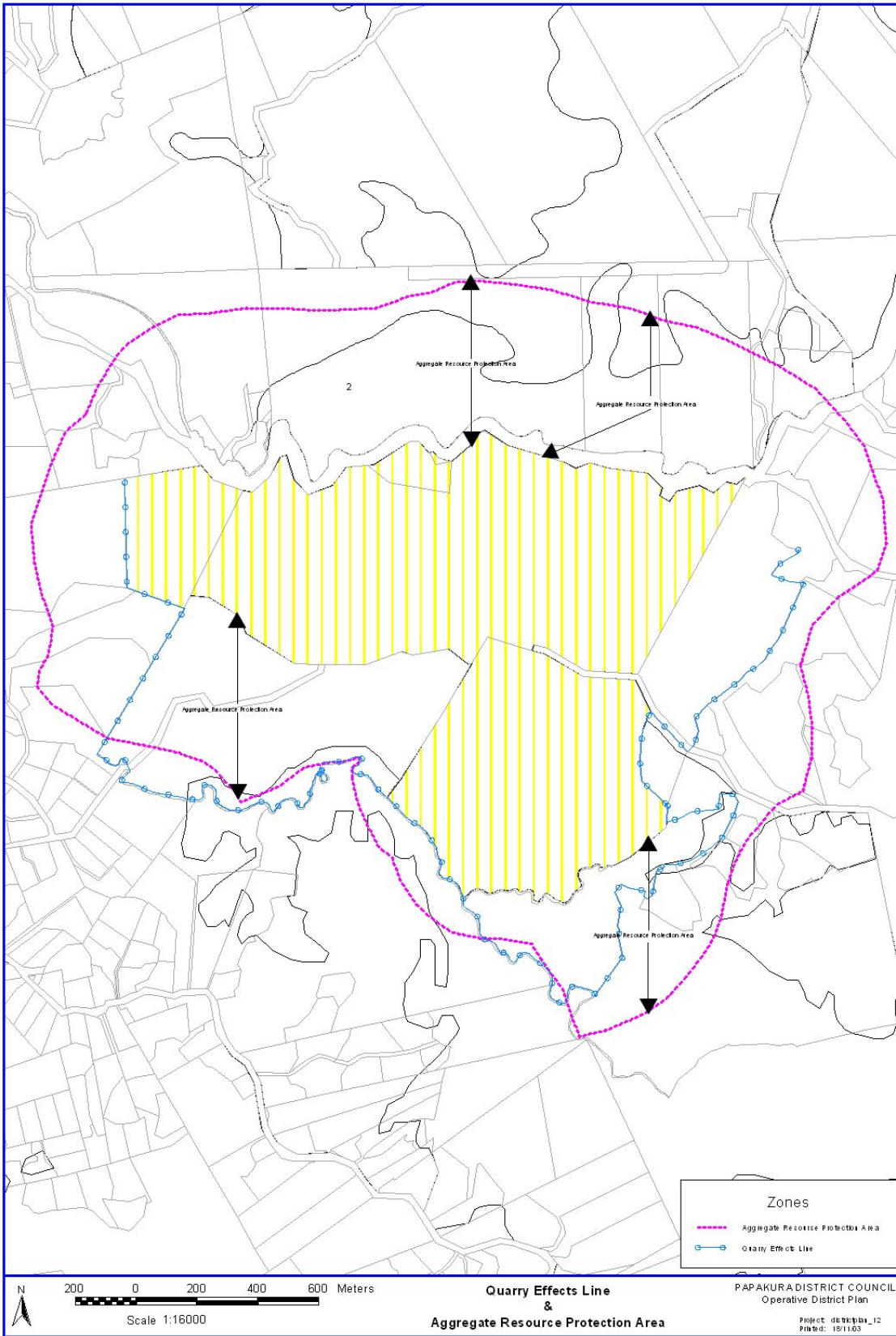
6.13.8.2 Applications

Part Rule 9.5 of Section One, *General*, of the District Plan and Part 13 of this Section set out the procedure to be following for all non-complying activity applications.

6.13.8.3 Subdivision

The rules for subdivision are contained in Part 9 of this Section of the Plan.

6.13.9 Quarry Effects Line (QEL)



6.14 ARDMORE AERODROME ZONE

6.14.1 INTRODUCTION

The Ardmore Aerodrome Zone makes provision for the aviation industry and related activities on the Ardmore Aerodrome site. The site is designated as “Aerodrome” and “Aerodrome Purposes” in the District Plan. These designations are the requirements of the Minister of Transport who also controls the operation of the aerodrome.

6.14.2 OVERVIEW

The establishment of this special zone for the Ardmore Aerodrome results from the need both to enable and protect all aviation activities conducted within the NZS 6805-1992 noise footprints and CAA Rules and to regulate aviation activities which are not part of the public work. Buildings and uses which are not part of the designated public work are subject to the provisions of the zone, including the Ardmore Aerodrome General Plan (Planning Maps District Plan, Section Three – Urban) and to the consent of the Minister in terms of section 176 of the Resource Management Act 1991.

The use of land within the zone by private individuals and organisations is generally conducted in terms of leases secured from the Minister of Transport. The boundaries of these leased areas are not shown on the General Plan which depicts the staged development of areas suitable for future aviation-related expansion.

Subdivision is permitted within the Zone. Recognition of the particular requirements of aircraft hangarage, on-site sewerage reticulation, stormwater disposal and bylaw standards needs to be given in any determination of leasehold or subdivision section size.

6.14.3 RESOURCE MANAGEMENT ISSUES

- The retention of a functioning aviation activity node of local and regional significance.
- The avoidance and mitigation of any adverse effects of activities within the zone.
- The limitation of activities to those directly related to aviation, or providing services associated with aviation activities.
- The maintenance and, where possible, enhancement of amenity and environmental quality within the zone.
- The avoidance and mitigation of any adverse effects of activities on sensitive adjoining activities.
- The maintenance of amenity and environmental quality of the surrounding locality.

6.14.4 RESOURCE MANAGEMENT STRATEGY

The resource management strategy for the Ardmore Aerodrome zone is:

- to establish a framework of controls which secure the on-going operation of Ardmore Aerodrome for aviation and aviation-related activities.
- to establish general environmental controls to secure appropriate amenity within the zone.
- to employ the use of a structure plan for the future development of the aerodrome. The Ardmore Aerodrome General Plan contains agreed management provisions for the future development of activities and sets out specific development precincts for runways, taxiways, aircraft manoeuvring areas, buildings, access roads, infrastructure and related ancillary facilities.

6.14.5 OUTCOMES

The outcome of this strategy will be the operation of a unique activity node which makes a significant contribution to the present well-being and future development of the District. Aviation activities will be conducted in such a way that the potential of the facility is not limited by unnecessary controls. At the same time, Ardmore will function in recognition of NZS6805-1992 aircraft noise footprints and appropriate levels of local amenity and environmental quality. The strategy is aimed at the continuation of those special aviation related activities which have become established within the zone in such a way that the activities are properly managed to secure amenity values both within and beyond the zone.

6.14.6 OBJECTIVES AND POLICIES

Objective

- 6.14.6.1** *To provide for uses related to the aviation function of the Ardmore Aerodrome.*

Policies

- 6.14.6.1.1** To permit a wide range of aviation related activities within the zone including the bulk storage of aviation fuels and other aviation related hazardous substances.
- 6.14.6.1.2** To manage the future establishment of activities in accordance with the agreed General Plan.
- 6.14.6.1.3** To limit the establishment of non-aviation related activities.

Objective

6.14.6.2 *To protect environmental quality and the amenities of sensitive, adjoining rural areas.*

Policies

6.14.6.2.1 To impose controls which protect the environmental quality and amenity of neighbouring properties.

6.14.6.2.2 To impose amenity controls at site boundaries.

6.14.6.2.3 To adopt controls on noise, vibration, air pollution, glare and soil and water contamination.

6.14.6.2.4 To require the establishment and maintenance of buffer areas between industrial activities and adjacent activities.

6.14.6.2.5 To limit the height and location of activities.

6.14.7 EXPLANATION

Ardmore Aerodrome is a significant general aviation facility and comprises a valuable economic and social asset to the District. For this reason, its continued functioning as a regional and national facility should not be unnecessarily constrained.

Of necessity, such facilities are located in rural areas with the result that the activities related to an aerodrome often cause annoyance or disturbance to adjoining, non-aviation activities. The environmental effects of aviation are often in conflict with the expectations of rural amenity.

The objectives and policies for the Ardmore Aerodrome Zone will enable the future functioning of the aerodrome in recognition of the valued amenity characteristics of the locality.

6.14.8 RULES

6.14.8.1 Permitted Activities

Any industrial activity shall be regarded as a permitted activity in the Ardmore Aerodrome zone where it complies with the rules for permitted activities set out below.

1. *Use of Land and Buildings*

Any part of the site and building may be used for Aviation Activities.

2. *General Provisions*

Every activity shall comply with the following:

Part 6, Rules 6.15 – 3 and 6.15 – 4

Part 13, Rule 13.8

Part 15, Rule 15.8

3. *Ardmore Aerodrome General Plan*

All permitted activities shall comply with the provisions of the Ardmore Aerodrome General Plan. This Plan includes the following provisions:

- (a) the delineation of aerodrome and non-aerodrome activities on the site;
- (b) the proposed sequence of development including an outline of development, uses and buildings suitable in particular locations in the site;
- (c) building line restrictions in relation to proximity to aircraft operation and road access;
- (d) the general areas of parking associated with the public work.

For the purposes of implementation of appropriate bylaws and statutory provisions to achieve the objectives of this zone, the Council will consider lease boundaries to be lot boundaries.

6.14.8.2 Discretionary Activities

Any Commercial or Industrial activity which is not an Aviation Activity shall be regarded as a discretionary activity in the Ardmore Aerodrome zone. Further, any such activity must comply with the rules for discretionary activities set out below.

1. General Provisions

Application must be made for a resource consent for a discretionary activity where it is proposed to vary the standards for permitted activities contained in Rule 6.15. An application for a discretionary consent may only be granted to vary those standards to the extent permitted in Table 6.2 and will be assessed in terms of the criteria contained in Rule 6.15.2.2.

2. Use of Buildings and Lots

No building or lot shall be used for any activity in Schedule 6A or 6B **or** shall employ a process listed in Schedule 6C or 6D except as otherwise provided for by way of a resource consent.

3. Hazardous Substances

No activity shall involve the storage or use of hazardous substances listed in Schedule 6F in quantities in excess of those specified in Level II in the schedule **or** in quantities in excess of those specified in Level I of the schedule on lots partly or wholly within 75 metres of a residential zone or other residential activity.

6.14.8.3 Applications

The provisions of the Ardmore Aerodrome General Plan shall be used as a guide in assessing applications. Rule 9.5 of Section One, *General*, of the District Plan and Part 12 of this Section set out the procedure to be followed for all discretionary activity applications.

6.15 GENERAL REQUIREMENTS FOR INDUSTRIAL ZONES

Subject to Rule 6.15.2.2 the following rules shall apply to all permitted and controlled activities in the industrial zones and may be used as a guide in respect of applications for discretionary activities.

- Landscape Design – See Part 13, Rule 13.8
- Parking and Loading – See Part 15, Rule 15.8

1. Noise

- (a) Any use of land or buildings in an industrial zone shall be conducted and buildings shall be designed and laid out so as to ensure that the following noise levels in Tables A and B, measured and assessed in accordance with the standards prescribed in NZS 6801:1991 Measurement of Sound and 6802:1991 Assessment of Environmental Sound, are not exceeded as a result of any activity involved in that use. The noise shall be measured with a sound level meter complying with the International Standard IEC 651 (1979) Sound Level Meters Type 1 or other instruments or standards that the Council considers should supersede these.
- (b) The noise level (L10) shall be measured on the nearest residential boundary and shall not exceed the limits set out in Table A.
- (c) The noise standards in Tables A and B shall not apply to the construction or maintenance of buildings that have been approved by the Council.

Where construction noise is emanating from a site where construction is ancillary to the principal use, it shall meet the limits recommended in, and be measured and assessed in accordance with, New Zealand Standard NZS 6803P:1984 *The Measurement and Assessment of Noise from Construction Maintenance and Demolition Work*, or other instruments or standards that Council considers should supersede these.

- (d) Notwithstanding the noise standards in Tables A and B, the Council may invoke the powers conferred on it under the relevant sections of the Health Act 1956 and the Resource Management Act 1991 or any subsequent legislation replacing this Act, to control any noise which has become an objectionable element or nuisance.
- (e) For all controlled and discretionary activity applications within the Industrial 1 zone and in any other case where doubt arises as to the ability of an industry to comply with these controls, the applicant shall provide the Council with a certificate from a registered engineer with acoustical qualifications confirming that the activity will comply with the foregoing noise controls. In the case of a new activity, this information must be provided before the building is commenced.

- (f) The L10 noise level from the site owned and occupied by Humes Industries (NZ) Ltd at 68 Hunua Road, being Lot 2 DP 131226 and Lot 1 DP 142775 as measured on the boundary of that site on which concrete products are manufactured shall not exceed 70 dBA. The noise level of 70 dBA shall apply to the site only so long as the activity conducted involves the manufacture of concrete products.
- (g) The noise levels in Table A shall not apply to the site owned and occupied by the East Tamaki Co-operative Dairy Co Ltd at 330 Great South Road, Manurewa, being Lot 2 DP 54771 and Lot 1 DP 128342. The Dairy Factory shall comply with the following:

Monday – Sunday between the hours 0700 – 2200	All other times
55dBA	45dBA
or the background noise level (L95) plus 5dBA; whichever is the greater	or the background noise level (L95) whichever is the greater

TABLE A	
The noise level (L10) shall be measured on the nearest residential boundary.	
Monday – Friday between the hours 0700 – 2200	
Saturday 0700 – 1200	
L10*	
Industrial 1	45 dBA
Industrial 2	50 dBA
Industrial 3	55 dBA
Industrial 4	55 dBA
All other times including public holidays	
L10*	
Industrial 1	40dBA
Industrial 2	45 dBA
Industrial 3	50 dBA
Industrial 4	50 dBA

*Noise level

TABLE B	
The noise level (L10) as measured at or within the boundary of a site zoned for an industrial purpose shall not exceed the following limits:	
Industrial 1	50 dBA
Industrial 2	50 dBA
Industrial 3	55 dBA
Industrial 4	55 dBA

(h) With respect to Studio Warehousing only:

In circumstances where the source of the noise complaint is emanating from within the same building as the residential dwelling, the following noise levels shall apply:

Monday to Sunday between the hours of 0700 to 2200 (daytime) L_{eq}
40 dBA

Monday to Sunday between the hours of 2200 – 0700 (night time)
 L_{eq} 30dBA

Indoor measurements are to be undertaken in accordance with section 26.5.1, 26.5.2 and 26.5.3 of NZS 6801: 1999 and shall be undertaken in rooms where the sound under investigation is of interest or causes a disturbance.

2. Glare

(a) At no time between the hours of 0700 and 2200 shall any outdoor lighting be used in a manner that causes an added illuminance in excess of 125 lux measured horizontally or vertically at any point 2 metres within the boundary of any adjoining site which is zoned Residential.

(b) At no time between the hours of 2200 and 0700 shall any outdoor lighting be used in a manner that the use of such lighting causes:

- an added illuminance in excess of 10 lux measured horizontally or vertically at any window of an adjoining building within a Residential Zone;
- an added illuminance in excess of 20 lux measured horizontally or vertically at any point along any adjacent boundary of any adjacent land used for residential purposes, except for those in the Business Zones.

(c) Where measurement of any added illuminance cannot be made because any person refuses to turn off outdoor lighting, measurements may be made in locations of a similar nature which are not affected by such outdoor lighting. These measurements may be used to determine the added illuminance, if any, of such outdoor lighting.

(d) The outdoor lighting on any site adjoining any site zoned Residential or adjacent to land in which there is a residential activity shall be so selected, located, aimed, adjusted and screened as to ensure that glare resulting from the lighting does not cause a significant level of discomfort to any occupants of the residential sites.

(e) No welding activity shall be undertaken on any industrial site unless the activity is screened from residential areas.

3. *Air Pollution and Odour Control*

- (a) Where any doubt arises as to whether an industry is likely to use a process listed in Schedules 6C and 6D and those processes are not permitted or are listed as discretionary activities in the zone in which planning consent is sought, or if the activity is likely to produce odours beyond the site boundaries, then Council will require the applicant to obtain relevant expert evidence as to whether that industry will employ such a process or produce such odours.
- (b) In considering notified applications for industries utilising processes listed in Schedule 6D, the Council will seek advice from the Regional Council.
- (c) Advice Note:
In the event of a discernible odour or dust nuisance from any activity, such action shall be undertaken by the owner and/or occupier as may be necessary to avoid, remedy or mitigate the situation to the satisfaction of Council, in accordance with section 17 of the Resource Management Act 1991 and in any case to ensure that existing activities within the zone do not suffer any adverse effects.

4. *Hazardous Substances*

The aim of these provisions is to prevent pollution of the ground and natural waters including aquifers, stormwater systems, waterways and harbours. Concentrations of hazardous or other polluting substances leaving sites in stormwater or other runoff shall not exceed the levels from time to time permitted, by the water right, for effluent from the Mangere Sewage Purification Works. Users of hazardous substances and other potential contaminants of water may be required to incorporate appropriate design measures.

These would be for all areas where hazardous substances could be spilled or washed off equipment and could include sealing, contouring, bonding, drainage to sealed catchment areas, installation of traps for grease and dirt, installation of separator pits, installation of inspection chambers on stormwater drains to ensure they are not used for waste disposal.

- (a) Before any industrial premises within 75 metres of a residential area or an institution of a residential character receives planning consent as a permitted or controlled activity, the intending developer, owner and occupier(s) of those premises shall be required to certify that they will not store or use, or permit to be stored or used within those premises any hazardous substances as specified in Schedule 6F.
- (b) If the persons mentioned in (a) above are not able to so certify, then they shall provide a statement giving details of the maximum quantities of any hazardous substance (as defined by this Plan) which may be used, produced or stored on the site at any time. This statement shall be used for the purpose of establishing whether the use is permitted and if so whether it is a predominant, controlled or conditional use of the subject site.

- (c) The land user is obliged to ensure that the information supplied is correct and current and that the quantities specified are not exceeded.
- (d) Any land user using, storing, disposing or transporting hazardous substances in quantities greater than Level 1 in Schedule 6F is required to produce a contingency plan at a level and of a type appropriate to the site to mitigate the potential effects of an incident. The following matters are to be included in the plan:
 - (1) A consideration of the site and nature of possible emergency events;
 - (2) Liaison with emergency services, other regulatory authorities and neighbours;
 - (3) Emergency shut-down procedures;
 - (4) The chemical and physical characteristics and hazards associated with products and processes;
 - (5) Procedures to minimise the impact on the environment.

5. *Bulk and Location Controls*

In the case of permitted activities, the following shall be the bulk and location controls for development, activities, and buildings in Industrial zones.

In the case of discretionary activities and subject to Rule 6.15.2, the following shall be used as a guide in respect of the bulk and location controls for development activities and buildings in Industrial zones.

Telecommunications masts, towers and aerials are exempt from the height limit and front yard controls. Satellite dishes are also exempt from height limit controls but not the front yard control.

TABLE 6.1 STANDARDS FOR PERMITTED AND CONTROLLED ACTIVITIES					
	Front Yard	Rear Yard	Side Yard	Coastal Protection	Maximum Height
Industrial 1	7.5 m	5 m	5 m	25 m	9 m
Industrial 2	7.5 m	5 m	5 m	25 m	9 m
Industrial 3	7.5 m	10 m	10 m	25 m	24 m
Industrial 4	7.5 m	10 m	10 m	25 m	24 m

TABLE 6.2 STANDARDS FOR DISCRETIONARY ACTIVITIES							
	NOISE	LANDSCAPING	YARDS				HEIGHT
			Front	Rear	Side	Coastal Protection	
Industrial 1	no discretion	20% of requirement for permitted activities	5	5	5	25	12m
Industrial 2	no discretion	20% of requirement for permitted activities	5	5	5	25	12m
Industrial 3	no discretion	20% of requirement for permitted activities	5	8	8	25	30m
Industrial 4	no discretion	20% of requirement for permitted activities	5	8	8	25	30m

Provided that

- (a) A side and/or rear yard are only required where the side and/or rear boundary of the site adjoins land zoned for residential, reserve or future development purposes or for facilities which do present a fire hazard to meet the requirements of the fire service for fire fighting access and separation from facilities on neighbouring sites.
- (b) A coastal protection yard shall only be required where the site abuts the Mean High Water Spring Tide Mark on the Manukau Harbour.
- (c) No part of any building shall exceed a height equal to 3 metres plus the shortest horizontal distance between that part of the building and the nearest boundary of any residential, reserve or future development zone.

Telecommunications masts, towers, aerials and satellite dishes are exempt from this control.

- (d) Any front yard requirements shall be additional to any building lines specified.

- (e) The height and location of all buildings must comply with:
 - i. The provisions of Planning Map (The Ardmore Airport – height surfaces. District Plan, Section Three – *Urban*)
 - ii. The provisions of Diagram 10A in Section One, *General* of the District Plan.

6. *Landscaping and Visual Amenity Controls*

Upon the construction of, or alteration, or addition to any building, the requirements of this rule shall be complied with. All landscaping required by this rule shall give effect to the provisions in Part 13.

(a) Front Yard Landscaping for all Industrial Zones

Front yards shall be landscaped in the following manner.

- (i) A minimum of 50% of the area of the front yard shall be landscaped provided that for minor additions or alterations, where it is not reasonable or practicable to enforce the 50% requirements, only the general provisions of Part 13 shall be met. For service stations, a 2 metre frontage landscaping strip parallel with and contiguous to the road frontage shall be deemed to comply with this rule.
- (ii) Excluding the area required for vehicular and pedestrian access, a landscaped strip shall be provided adjoining and parallel with the front boundary and having a minimum width of 2 metres. This will be included as part of the 50% landscaping requirement for the front yard.
- (iii) Excluding the area required for vehicular and pedestrian access, all of that part of the front of a site affected by a building line for amenity purposes shall be landscaped.
- (iv) In the case of any service station development, Council will have regard to the visibility and on-site manoeuvring space criteria embodied in Rule 6.15.2.2.
- (v) The front yard landscaping required by this ordinance shall comprise ground cover trees and shrubs and shall incorporate at least one specimen tree for every 5 metres of site frontage, except on service station sites. Where existing trees are retained within the front yard these shall be credited towards these requirements.

(b) Side and Rear Yard Landscaping for all Industrial Zones

- (i) Where a site and/or rear yard is required, a landscaped strip having a minimum width of 5 metres adjoining and parallel to the side and/or rear boundary of the site shall be provided except where this would impede fire fighting access, in which case the access shall be in addition to the landscaped strip provided that where a block wall, fence or screen of not less than 2 metres in height is to be erected on the boundary, the

landscaped strip may be reduced to a minimum width of 3 metres.

- (ii) The landscaping required in (a) shall be designed to provide dense visual screen and a physical barrier between the uses on the industrial site and the boundary of the adjoining land zoned for residential, reserve or future development purposes.

(c) Coastal Protection Yard Landscaping for all Industrial Zones

Where a Coastal Protection Yard is required that yard shall be planted with grass, trees and shrubs.

(d) Visual Amenity Controls for all Industrial Zones

- i. Those parts of any industrial site which are or may be visible from any reserve, foreshore area, public road or from any residential area shall be maintained in as tidy a condition as is reasonably possible.
- ii. No industrial activity or storage of goods, materials, refuse or refuse containers of any kind shall be permitted on any Front, Side, Rear or Coastal Protection Yard.
- iii. Any outdoor storage or rubbish collection area visible from any residential or reserve zone or public road or foreshore area shall be screened from public view by landscaping and/or the erection of a fence, to the satisfaction of the Council.

7. *Conservation of Landscape*

- (a) Subject to Rules 3.8.4 and 3.8.5 which require consent to a non-notified application, no alteration shall be made to any tree or bush or any physical feature which involves:

- i. The destruction of, or irreparable damage to any native or exotic trees specified in Schedule 3E appended to Part 3, standing higher than 6 metres or having a trunk circumference of more than 0.5 metres when measured 0.5 metres from the ground.
- ii. The destruction or irreparable damage to any tree, bush, plant or landscape specified in Schedule 3B to Part 3.

- (b) Rule 3.8 which relates to items listed for preservation and conservation in Schedules 3A and 3C also applies.

8. *Traffic*

The size and location of vehicle crossings shall be controlled according to sound traffic engineering principles particularly with reference to their position in relation to intersections and to available visibility along the roadway.

Vehicle crossings designed in accordance with “*Guidelines for Visibility at Driveways*” (RTS 6) published by Road and Traffic Standard Section, Land Transport Safety Authority, May 1993, will generally satisfy this Rule.

6.15.1 CONTROLLED ACTIVITY ASSESSMENT CRITERIA

In considering any application for a controlled activity, the Council will have regard to the matters set out in Rule 9.5 in Section One, *General*, of the District Plan and Part 12 of this Section and shall be satisfied that the objectives and policies set out in this part of the Plan and the relevant zone statements are met. In addition, the application shall be assessed against the following criteria:

- (a) Whether the design and external appearance of all buildings is sensitive in terms of scale, form and harmony with the amenities of the adjoining neighbourhood.
- (b) Whether the development itself is well-designed in terms of the relationship between building and other site elements such as parking, landscaping and storage areas;
- (c) Whether the degree of visual separation achieved by careful landscape design provides for the protection of privacy on adjoining residential sites;
- (d) Whether the design of industrial buildings ensures that large doors and windows are placed to avoid noise and dust nuisance to adjoining sensitive non-industrial areas; and
- (e) Whether site layout ensures that parking areas, loading docks and access drives are located so as to minimise noise nuisance and visual detracting to adjoining sensitive non-industrial areas.
- (f) The size and location of vehicle crossings shall be controlled according to sound traffic engineering principles, particularly with reference to their position in relation to intersections and to available visibility along the roadway.

Vehicle crossings designed in accordance with “*Guidelines for Visibility at Driveways*” (RTS 6) published by Road and Traffic Standard Section, Land Transport Safety Authority, May 1993, will generally satisfy this Rule.

6.15.2 DISCRETIONARY ACTIVITY ASSESSMENT CRITERIA

In deciding whether to grant or refuse consent to an application for a discretionary activity and in imposing conditions if consent is granted, the Council shall have regard to the matters set out in the Act and be satisfied that the objectives and policies of the District Plan and the relevant Zone Statements are met. In addition, the General Rules listed under each zone may be used as a guide in assessing the extent to which an application meets the following criteria.

6.15.2.1 General Criteria

The Council shall be satisfied that:

- (a) The traffic management implications of the proposed use make it suitable for the proposed site. Factors to be considered may include the volume of traffic likely to be attracted, times of peak traffic generation, potential traffic conflict and proximity to major intersections;
- (b) The proposed activity will not adversely affect adjacent permitted activities or restrict their activities or detract from their amenities.
- (c) The proposed activities will not be hazardous to the health and safety of the occupants and users of adjacent sensitive industrial and non-industrial uses; and
- (d) Any potentially offensive or noxious elements of the proposed use can be satisfactorily controlled by special purpose conditions.
- (e) Any activity proposed for the Industrial 3 Zone at Drury will not generate wastewater quantities in excess of the capacity of the Drury Treatment Plant.
- (f) Any proposed activities which produce air pollution, odours, or dust emissions, can be controlled by special conditions so as to avoid, remedy or mitigate any adverse environmental effects.

6.15.2.2 Specific Activity Criteria

In addition, the following criteria shall be used in assessing the specific activities listed below.

1. *Storage and Use of Hazardous Substances*

In considering discretionary activity applications for the storage and use of hazardous substances, in addition to the above criteria, the following shall be taken into account where they are relevant:

- (a) safety separation distances between a hazardous source and a sensitive activity such as a residential use or an institution of a residential character;
- (b) restrictions on the use of adjoining land which will be imposed by the use of hazardous substances;
- (c) the combined potential impact of a number of hazardous sources;
- (d) the suitability of the site, its accessibility and the design of the installation in terms of possible hazardous occurrences and their consequences;
- (e) the adequacy of precautionary measures and emergency procedures, and the availability of fire fighting services and water supply.

- (f) traffic volume generated by the use and the suitability of routes used to transport the hazardous substance(s) to and from the site; and
- (g) for gases and liquefied gases in pressure storage, the gas dispersion properties of the site and the surrounding locality.
- (h) compliance with the relevant statutory requirements will be required.

2. LPG Installations

In considering notified applications to establish LPG installations, in addition to the above criteria, regard shall be given to the following particular matters:

- (a) the size, design and layout and location of the proposed installation;
- (b) the proximity of residential zones and/or residential areas, particularly schools, hospitals and like institutions;
- (c) the topography of the site and surrounding area;
- (d) the nature of the existing and likely future uses in the surrounding area; and
- (e) the likely route or routes through the District and adjoining districts of road tankers refilling the installation;
- (f) compliance with the relevant statutory requirements will be required.

3. Service Stations

The layout of service stations should allow all vehicles to safely and comfortably manoeuvre onto, from and within, the site, should be designed to permit safe and easy access to the site and should prevent on-street congestion and conflict with pedestrians.

Standards will be applied in a flexible manner to allow for the practical requirements of individual cases. For new stations a higher standard is expected and for existing stations, changes which assist towards attaining the above objectives are encouraged.

On roads with solid central medians or where solid central medians are introduced for traffic safety and traffic management purposes, openings in the median may be permitted only if the effect of such median opening shall be such that safety and the movement of traffic on the road network is not impaired.

Vehicle crossings may be located within the aforementioned zones when it can be demonstrated that traffic safety and the movement of traffic on the road network is not detrimentally impaired.

With respect to intersections, the distance from an intersection is measured from the intersection of two projected kerb lines where a kerb radius is less than 4.5 metres and from the tangent point of the kerb line curve in all other cases.

- (a) For intersections controlled by traffic signals or a roundabout, within 30 metres of an intersection.
- (b) On arterial or principal roads common within 30 metres of an intersection.
- (c) On secondary roads within 9 metres of an intersection.

Special Requirements:

- (d) Service stations shall not be located near curves or crests or at any location where visibility is restricted to less than the following standards.

85 percentile speed (km/hr)	50 or below	60	70	80	90	100	110
Required sight distance (m)		75	100	150	200	250	300

Visibility along the road shall be measured from a point 1.1 metres above the road centre-line opposite each proposed entrance, in both directions, to points 1.1 metres above the road centre-line. Visibility for exiting traffic shall be measured from a point 1.1 metres above each proposed exit, 2.0 metres from the kerbline, to a point 1.1 metres above the road centre-line.

- (e) Vehicle crossings shall cross the footpath at an angle of between 45° and 90°. Vehicle crossings for two-directional traffic shall be between 6 metres and 9 metres in width and crossings for single-direction traffic shall be between 3.5 metres and 6 metres in width, *provided that* crossings for single-direction traffic may be increased to a maximum of 9 metres width if they are required to be used for access to bulk delivery fill points.

All vehicle crossing widths are to be measured at the footpath, *provided that* in instances where there is no footpath, vehicle crossing width shall be measured at the boundary.

- (f) Sites with frontage to one or more arterials shall have not less than 40 metres frontage to each (distances to be measured from projected road boundaries).
- (g) Fuel pumps and other reselling devices shall be located a minimum of 12 metres from the mid-point of the property boundary edge of any vehicle crossing to the site (the property boundary having been adjusted for any proposed road widening).
- (h) Manoeuvre areas to bulk delivery fill points shall comply with the minimum radius tracking curve for the 90 Percentile Semi Trailer (refer Diagram 15D).

- (i) Manoeuvre areas to fuel pumps and other fuel reselling devices shall comply with the minimum radius tracking curve for the 90 percentile car (refer Diagram 15B).
- (j) The minimum width of all two directional manoeuvre aisles on site shall be 6 metres. The minimum for single directional aisles shall be 4.5 metres.
- (k) Vehicles waiting for services at car wash, air hose and other on-site facilities should not obstruct the normal paths of vehicles through the site or project onto the road reserve.
- (l) Underground storage facilities must comply with the Code of Practice for the design, installation and operation of Underground Petroleum Storage Systems.

4. Truckstops

The following requirements shall be used as assessment criteria for Truckstops.

- (a) Truckstops shall not be located near curves or crests where sight distance along the road is restricted or at locations where drivers will not have good vision of approaching traffic when entering or leaving the truckstop. There shall be sufficient visibility along the road to allow a driver entering or leaving to select a gap to cross or join the traffic stream without necessitating a major speed adjustment by the through traffic.

This requirement will be deemed to have been met by compliance with the following table:

85 percentile speed (km/hr)	50 or below	60	70	80	90	100	110
Required sight distance (m)	75	100	150	200	250	300	300+

Visibility along the road shall be measured from a point 1.1 metres above the road centre-line opposite each proposed entrance, in both directions, to points 1.1 metres above the road centre-line. Visibility for exiting traffic shall be measured from a point 1.1 metres above each proposed exit, 2.0 metres from the kerbside, to points 1.1 metres above the road centre-line.

- (b) Vehicle crossings shall cross the footpath at an angle of between 40° and 90° and shall have a minimum width of 12 metres, also measured at the footpath. Where there is no footpath, all angle widths are to be measured at the boundary.

- (c) Each crossing shall be so designed that left-turning vehicles entering and leaving the site can do so within the confines of the nearside traffic lane.
- (d) Each site shall have a minimum frontage of 50 metres to any road that it fronts (distances to be measured from projected road boundaries).
- (e) Fuel pumps shall be located a minimum of 20 metres from the mid-point of the property boundary edge of any vehicle crossing to the site (the property boundary having been adjusted for any proposed road widening).
- (f) Manoeuvre areas to fuel pumps and bulk delivery fill points shall comply with the minimum radius tracking curve for the 90 Percentile Semi-Trailer (refer Diagram 15D).
- (g) Underground storage facilities must comply with the Code of Practice for the design, installation and operation of Underground Petroleum Storage Systems.

5. *Residential Activity Criteria*

Residential accommodation shall be designed in such a manner as to comply with the following internal noise limits:

Ldn	45dBA
Lmax	55dBA

6. *Studio Warehousing*

In considering discretionary activity applications for studio warehousing developments the following shall be taken into account:

- (a) Shape factor and building design
 - (i) The area of the unit to be used for residential purposes should be proportionally less than the warehouse/office component.
 - (ii) The warehouse/office component should be of a size and shape that is adequate for operation, movement and storage functions, and the warehouse component should have a minimum stud height of 3 metres.
 - (iii) Bedrooms, to a maximum of two, shall comply with NZBC Clause G7 Natural Light including visual awareness of the outside environment.
 - (iv) Adequate deck or outdoor living space should be provided in a location that is physically and functionally integrated with the residential component of the unit.
 - (v) Residential storage space of at least 6m² per unit should be provided.
 - (vi) The residential component should be distinct from the warehouse/office component.

- (vii) The exterior of the buildings should be of a design such that a high level of visual amenity is achieved.

(b) Shape Factor – Lot Layout

- (i) The Lot size should be of sufficient size to ensure the development provides the above features.
- (ii) The effects of the development should be contained within the site.
- (iii) Access, loading and manoeuvring should be designed to minimise conflict between heavy vehicle and automobile traffic.
- (iv) Landscaping should include provision for mature trees and should be provided to soften the building and hard surfaces.

SCHEDULE 6A

Industries and Processes Requiring Maximum Segregation from Other Uses because of Offensive, Noxious or Dangerous Elements.

Group 1

Offensive trades based on the Third Schedule of the Health Act 1956 and which may also use a process listed under the former Part A of the Second Schedule to the Clean Air Act 1972.

- *Blood or offal treating*
- *Bone boiling or crushing*
- *Dag crushing*
- *Fellmongering*
- *Seafood cleaning, curing, processing*
- *Flax pulping*
- *Flock manufacturing or teasing of textile materials for any purpose*
- *Gut scraping and treating*
- *Waste and refuse treatment and disposal*
- *Septic tank de-sludging and disposal of sludge*
- *Storage, drying or preserving of bones, hides, hoofs, horns or skins*
- *Tallow melting*
- *Tanning*
- *Wood pulping*

Group 2

Noxious industries which use a process, listed under Part A of the Second Schedule to the Clean Air Act 1972.

- *Abattoirs and slaughterhouses*
- *Alkali-waste works*
- *Animal, bird and fish food manufactured from meat or fish by-products*
- *Arsenic works and production*
- *Asbestos manufacture and asbestos product manufacture*
- *Asphalt or bitumen by-products manufacture, refining, storage or mixing*
- *Briquette manufacture*
- *Celluloid manufacture*
- *Cement manufacture, packaging and bag cleaning*
- *Detergent and bleaching powder manufacture*
- *Fertiliser manufacture and packing*
- *Galvanising plating and anodising of metal*
- *Gas (acetylene, ammonia, coal, chloride, oxygen or sulphur-dioxide) manufacture and/or bulk storage and/or treatment of by-products*
- *Herbicide and insecticide manufacture*
- *Lime manufacture, packing and bag cleaning*
- *Leather tanning*
- *Meat works (killing and freezing of meat for human consumption)*
- *Oil boiling, distillation and refining*
- *Plaster of Paris manufacture*
- *Pulp and paper work*
- *PVC manufacture*
- *Sand, grit and shot blasting of metal*
- *Sulphuric, nitric and hydrochloric acid works*

- *Steel Mills*
- *Stockyards*
- *Turpentine manufacture*
- *Bulk storage (i.e more than 100,000 litres) and associated filling, blending and distribution of any Class 3 flammable liquid listed under the schedule to the Dangerous Goods Act 1974, but excluding the bulk storage and associated use of ethyl alcohol where it is to be used as a beverage. Also excluding petrol and diesel in ground storage up to 150,000 litres.*

Group 3

- *Aeroplane assembly, overhauling, repairing and testing*
- *Candle manufacture*
- *Explosive, ammunition and fireworks manufacture*
- *Fluoride works*
- *Irradiation plant*
- *Lamp black manufacture*
- *Lead manufacture*
- *Plastics manufacture*
- *Quarrying/mining*

SCHEDULE 6B

Industries and Processes Which May Require Some Segregation Because of Possible Objectionable Elements such as Smell, Vibration, Dust or Unsightliness

- *Adhesive manufacture, but not including water based products*
- *Boat building and repairing*
- *Boat and car painting and spraying unless carried out entirely inside a building*
- *Container depots*
- *Dried animal, bird and fish food manufacture*
- *Flour milling*
- *Fibreglass product manufacture*
- *Grain milling, threshing, crushing and storage*
- *Gypsum manufacture, processing and the manufacture of gypsum products*
- *Linoleum manufacture*
- *Metal products manufacture involving moulding and extrusion processes*
- *Outdoor bark product manufacture*
- *Outdoor coal, firewood and solid fuel depots*
- *Paint, varnish, lacquer, stains, sealers and trench polish manufacture*
- *Plywood manufacture*
- *Poultry processing*
- *Railway goods yards*
- *Recovery works for ferrous and non-ferrous metals*
- *Refuse transfer stations*
- *Rolling mills*
- *Saw milling, timber treating plants, timber milling, recutting mills, post splitting and sleeper and prop cutting*
- *Smelting, alloying, refining and casting of ferrous and non-ferrous materials*
- *Stone and shell crushing*
- *Stone cutting or dressing*
- *Tar storage*
- *Veneer manufacture*
- *Wallboard manufacture*
- *Wire and wire products manufacture*
- *Vinegar manufacture*

SCHEDULE 6C

Processes Potentially Capable of Producing a High Degree of Air Pollution (This list is the same as Part A of the Second Schedule to the Clean Air Act 1972, as amended, as at March 1989).

1. *Any combustion processes (not being combustion processes for the drying of grain) involving fuel burning equipment, including flaring or incineration or trade wastes or refuse, which singly or together can be used to burn any combustible matter.*
 - (a) *At a rate of heat release exceeding 50 MW; or*
 - (b) *At a rate exceeding 100 kg an hour where pathological material, garbage, refuse, sewage sludge or trade wastes are incinerated; or*
 - (c) *At a rate of heat release exceeding 500 KW where the products of combustion are used,*
 - To stove enamel, or*
 - (i) *To bake or dry any substance that on heating releases dust or other air pollutants; or*
 - (ii) *To maintain reducing conditions in any manufacturing process,*
or
 - (d) *At a rate, where the combustible matter is a combination of combustible materials which contains sulphur or arsenically treated wood or rubber or oil sludge or pitch or paint residue, that will incinerate in excess of 100 kg an hour of,*
 - (i) *Sulphur, or*
 - (ii) *Arsenically treated wood; or*
 - (iii) *Rubber; or*
 - (iv) *Oil sludge, or*
 - (v) *Pitch; or*
 - (vi) *Paint residues; or*
 - (e) *At a rate, where the combustible matter is a combination of combustible materials which contain chemicals, plastics, or fibre in which fluorine, chlorine, phosphorus, or nitrogen has been chemically combined that will incinerate in excess of 25kg an hour of such chemicals, plastics or fibre.*
2. *Any industrial chemical processes, excluding electro-plating processes, having as a product, or by-product or emission any substance that can cause air pollution, including any processes used in:*
 - (a) *Bodying of natural oils or manufacture or reaction of monomers for production of synthetic resins, varnishes, and plastics; or*
 - (b) *Production of soap, grease, detergents and surface active agents; or*

- (c) *Synthesis or extracting of organic chemicals, including formulation of insecticides, weedicides, plant hormones, and like toxic or offensive organic compounds; or*
 - (d) *Production of inorganic chemicals, including concentration of acids and anhydrides, ammonia and alkalis; or*
 - (e) *Production of phosphatic or nitrogenous synthetic fertilisers, including granulation of single or mixed fertilisers; or*
 - (f) *Any chemical manufacturing processes using or producing chlorine and any industrial processes using chlorine but only for other than water sterilisation and at rates exceeding 5kg an hour, or*
 - (g) *Separation or concentration of any radioactive substance.*
3. *Any animal or plant matter processes having singly or together a raw material capacity in excess of:*
- (a) *A 0.5 of a tonne an hour, and being processes for rendering or reduction or drying through application of heat to animal matter (including leathers, blood, bone, hoof, skin, offal, whole fish and fish heads and guts and like parts, and organic manures); or*
 - (b) *5 tonnes an hour, and being processes for deep fat frying, oil frying, curing by smoking, roasting of berries or grains, or where organic matter including wood is subject to such temperatures or conditions that there is partial distillation or pyrolysis; or*
 - (c) *2 tonnes an hour, and being processes for drying milk or milk products.*
4. *Any processes involving the extraction from the surface of the ground or from an open pit of minerals (including coal, coke and carbon), or the size reduction and screening of such minerals, or the storage outside and above the ground of such minerals, or the drying or heating of minerals that on heating release dust or any air pollutant, being processes which, singly or together*
- (a) *Have or require:*
 - (i) *An open cast extraction capacity in excess of 100 tonnes an hour; or*
 - (ii) *A size reduction and screening capacity in excess of 200 tonnes an hour; or*
 - (iii) *A storage capacity in excess of 10,000 tonnes; or*
 - (iv) *A rate of heat release in excess of 2000 KW, or*
 - (b) *Are part of a manufacturing process for Portland or similar cements and pozzolanic materials; or*

- (c) *Are part of a manufacturing process for sintering, calcining, or roasting of metal ores in preparation for smelting or for burning of calcium or calcium-magnesium carbonates to produce calcium or magnesium oxides or hydroxides, or the expansion or exfoliation of minerals, or the dehydration of gypsum; or*
 - (d) *Are part of a manufacturing process for making hot-mix asphalt paving mixes; or*
 - (e) *Are a part of a manufacturing process for making glass or frit from raw materials or main mineral wool or glass fibre, including application of any surface coating to the fibres.*
- 5. *Any industrial metallurgical process, including associated foundry practices, which involve:*
 - (a) *The extraction, including electro-chemical methods of reduction of any metal or metal alloy from its ore, oxide, or other compound, or*
 - (b) *The making of steel or the refining of any metal or modification of any alloy in the molten state by blowing with air, oxygen or oxygen enriched air, or chlorine or other gases, or by addition of reactive chemicals or volatile fluxes and the use of oxygen lancing in scarfing and similar operations; or*
 - (c) *The manufacture of silicon or ferrosilicon or of metal powders or of alloys rich in any metals specified or described in clauses 1 to 3 of Schedule 6E, or*
 - (d) *The melting of any metal or metal alloy, including secondary melting and the sweating of scrap metal, where the aggregated melting capacity exceeds 1 tonne an hour; or*
 - (e) *Hot dip galvanising or other processes for the protection of surfaces by metal coating using fluxes.*
- 6. *Any industrial carbonizing or gasification processes in which natural gas, petroleum oil, shale, coal, wood, or other carbonaceous material is subject to*
 - (a) *Pyrolysis, carbonization, or destructive distillation, the solid liquid or gaseous products being recovered; or*
 - (b) *Gasification by partial combustion with air or oxygen or reaction with steam.*
- 7. *Any process (not being the purification by distillation of dry-cleaning solvents at retail outlets) for the refining, purification, or reforming of hydrocarbons in or derived from natural gas, petroleum, shale, coal, wood, or other organic substances, and including:*
 - (a) *Hydrocarbon separation or recovery by distillation or absorption and desorption or removal of carbon dioxide or condensable hydrocarbons from natural or manufactured gas; or*

- (b) *Reforming, including viscosity breaking by thermal and catalytic cracking and hydrogenation and alkylation and like processes, including preparation of ethylene or other feed stock for chemical synthesis, or*
 - (c) *Refining to reduce sulphur or to improve other qualities with the aid of any substance specified in Schedule 6E or by air blowing.*
- 8. *Any industrial wood pulp or particle board processes in which:*
 - (a) *Wood or other cellulose material is cooked with chemical solutions to dissolve lignin and the associated processes of bleaching and chemical and by-product recovery; or*
 - (b) *Hardboard or particle board or wood pulp are made by processes involving emission of air pollutants.*
- 9. *Any use of geothermal steam at a rate of heat release exceeding 5MW.*
- 10. *Any industrial or trade processes involving the use of,*
 - (a) *Di-isocyanates at a rate exceeding 100kg an hour; or*
 - (b) *Organic plasticisers at a rate exceeding 100kg an hour.*
- 11. *Any process:*
 - (a) *Which involves the production of compost from raw materials that contain municipal or domestic refuse and which has on the premises at any time a volume of compost and a raw materials capacity exceeding 10 tonnes per day; or*
 - (b) *Which involves the production of compost from raw materials that do not contain municipal or domestic refuse and which has on the premises at any time a volume of compost and raw materials exceeding 750 cubic metres.*
- 12. *Any fellmongery processes involving:*
 - (a) *The use of sulphides; or*
 - (b) *The treatment of fellmongery liquid wastes containing sulphides*

SCHEDULE 6D

Processes Potentially Capable of Producing a Moderate degree of Air Pollution.

(This list is the same as Part B of the Second Schedule to the Clean Air Act 1972, as amended, as at March 1989)

1. *Any combustion processes involving fuel burning equipment, including flaring or incineration of trade wastes or refuse not otherwise specified or described in this Schedule but which singly or together can be used to burn combustible matter:*
 - (a) *For any purposes at a rate of heat release exceeding 5MW; or*
 - (b) *For the purpose of:*
 - (i) *The recovery of metals from insulated cable, motor vehicles, or any other mixture or combinations of metals and combustibles;*
or
 - (ii) *The cleaning of drums or containers; or*
 - (iii) *Frost protection on more than one occasion in any period of 12 months by the use of fire pots*
 - (c) *At a rate not exceeding 100kg an hour where pathological material, garbage, refuse or trade wastes are incinerated; or*
 - (d) *At a rate, where the combustible matter is a combination of combustible materials which contain sulphur or arsenically treated wood or rubber or oil sludge or pitch or paint residues, that will incinerate in excess of 25kg an hour but not in excess of 100kg an hour of:*
 - (i) *Sulphur, or*
 - (ii) *Arsenically treated wood, or*
 - (iii) *Rubber, or*
 - (iv) *Oil sludge, or*
 - (v) *Pitch; or*
 - (vi) *Paint residues; or*
 - (e) *At a rate, where the combustible matter is a combination of combustible materials which contain chemicals, plastics, or fibre in which fluorine, chlorine, phosphorus, or nitrogen has been chemically combined, that will incinerate in excess of 5kg an hour but not in excess of 25kg an hour of such chemicals, plastics or fibre.*
2. *Any industrial or trade processes (not otherwise specified or described in Schedule 6C or 6D) for the blending, packaging or handling of air polluting substances specified in Schedule 6E including grain elevators or seed dressing plant but not processes solely concerned with retail distribution or with distribution of fuels.*
3. *Any industrial or trade animal or plant matter processes:*

- (a) *Described in clause 3(a) of Schedule 6C but having a raw material capacity not in excess of 0.5 of a tonne per hour; or*
 - (b) *Described in clause 3(b) of Schedule 6C but having a raw material capacity in excess of 250kg an hour but not in excess of 5 tonnes an hour; or*
 - (c) *Described in clause 3(c) of Schedule 6C but having a raw material capacity not in excess of 2 tonnes an hour.*
4. *Any industrial or trade mineral processes described in clause 4(a) of Schedule 6C but having or requiring:*
- (a) *An opencast extraction capacity in excess of 5 tonnes an hour but not in excess of 100 tonnes an hour, or*
 - (b) *A size reduction and screening capacity in excess of 5 tonnes an hour but not in excess of 200 tonnes an hour, or*
 - (c) *A storage capacity in excess of 500 tonnes but not in excess of 10,000 tonnes; or*
 - (d) *A rate of heat release less than 2000 kW*
5. *Any industrial or trade processes for manufacture of flock or for the teasing of textiles or shredding of paper or for cleaning sacks or crushing or separating dags from wool.*
6. *Any industrial or trade process which is not otherwise specified or described in this Schedule and which involves any abrasive blasting.*
7. *Any industrial or trade process using Di-isocyanates at a rate not exceeding 100kg an hour.*
8. *Any process of wool scouring.*
9. *Any process:*
- (a) *Which involves the production of compost from raw materials that contain municipal or domestic refuse and which has a raw materials capacity not exceeding 10 tonnes per day, or*
 - (b) *Which involves the production of compost (except silage) from raw materials that do not contain municipal or domestic refuse and which has on the premises a volume of compost and raw materials exceeding 100 cubic metres but not exceeding 750 cubic metres.*
10. *The drying of up to 2 tonnes per hour finished product of dried milk powder (Schedule 6D) is a conditional use in the Industrial 2 zone subject to licensing by the local authority.*

SCHEDULE 6E

Classes of Specified Air Pollutants (This list is the same as the First Schedule to the Clean Air Act 1972, as amended as at March 1989)

1. *Radioactive, carcinogenic, teratogenic or mutagenic substances.*
2. *Antimony, arsenic, beryllium, cadmium, lead, mercury, thallium, selenium, uranium and their compounds.*
3. *Boron, chromium, cobalt, copper, magnesium, manganese, nickel, potassium, sodium, tellurium, tin, vanadium, zinc and their compounds.*
4. *Dust containing asbestos, quartz or other of the pneumoconioses inducing or asthmagenic substances.*
5. *Dusts and fumes containing metallic elements; and dusts and fumes containing organic and inorganic materials including fertilisers, cement, coal, coke, carbon, soot, tars, wood, fibres and pathogenic substances.*
6. *Sulphur, sulphur oxides and sulphur oxyacids, carbon di-sulphide, hydrogen sulphide, di-sulphides, poly-sulphides, mercaptans and other acidic, toxic or odorous sulphur compounds.*
7. *Nitrogen oxides, nitric acid, ammonia and hydrazine and their compounds, volatile amines, cyanides, cyanates, di-isocyanates or other toxic or odorous compounds of nitrogen.*
8. *Fluorine, chlorine, bromine, iodine and their compounds.*
9. *Phosphorus and its oxides, acids and organic compounds.*
10. *Alkyl, carbonyl and other toxic organo-metal compounds.*
11. *Hydrocarbons and their partially oxidised or halogenated derivatives, particularly acrolein, esters of acrylic acid, formaldehyde and volatile carboxylic acids and anhydrides and industrial solvents.*
12. *Ozone, carbon monoxide.*

SCHEDULE 6F

HAZARDOUS SUBSTANCE QUANTITY THRESHOLDS

In terms of amount stored on a lot at any one time

QUANTITY SUBSTANCE	QUANTITY		
	PROPERTIES	LEVEL I	LEVEL II
Acetonecyanohydrin	2,f,l	500kg	5t
Acetylene	3,f,g	1t	10t
Acrolein	2,f,l	500kg	5t
Acrylamide	2,s	200kg	2t
Acrylonitrile	2,l	2t	20t
Aldicarb	1,s	10kg	100kg
Allyl alcohol	2,f,l	2t	20t
Allyl amine	2,f,l	2t	20t
Ammonia	2,l or g	2t	20t
Ammonium nitrate	3,o,s	25t	250t
Arsenic (III) compounds	1,s or l	10kg	100kg
Arsenic (V) compounds	1,s or l	50kg	500kg
Azide (barium or lead)	4,s	100kg	1t
Azinphos ethyl	1,s	10kg	100kg
Azinphos methyl	1,s	10kg	100kg
Azocyclotin	1,s	10kg	100kg
Benzidine	1,s	1kg	1kg
Beryllium (powder, compounds)	1,s,e,d	10kg	10kg
Bromine	2,g	200kg	2t
Cadmium salts	2,s	50kg	500kg
Carbofuran	1,s	10kg	100kg
Carbon disulphide	2,l	100kg	1t
Carbophenothion	1,l	10kg	100kg
Cellulose nitrate (containing > 12.6% N)	4,s	1t	10t
Chlorine	2,g	100kg	1t
Class 3a flammable liquid – petrol in above ground tanks	5	2,000l	20,000l
Class 3b flammable liquid – kerosene – in above ground tanks	5	4,000l	40,000l
Class 3c flammable liquid – diesel – in above ground tanks	5	10,000l	100,000l
CNG	5	2,000l	20,000l (H ² O equiv)
Cobalt (powder, compounds)	1,s	10kg	100kg
Cycloheximide	1,s	10kg	100kg
Dialifos	4,s	10kg	100kg

Section Three, Part 6 – Schedules for Industrial Activities

QUANTITY SUBSTANCE	QUANTITY		
	PROPERTIES	LEVEL I	LEVEL II
Dimethylearbamoyl chloride	1,l	1kg	1kg
Dimethylphosphoramidocyanidic acid	1,l	10kg	100kg
Diphacinone	1,s	10kg	100kg
Disulphoton	1,l	10kg	100kg
Epichlorhydrin	3,t,f,e,g	500kg	5t
EPN (O-ethyl-O-p-nitrophenyl phenyl phosphorothioate)	1,s	10kg	100kg
Ethylene	3,f,g	500kg	5t
Ethyleneimine	2,f,l	200kg	2t
Ethylene oxide	3,t,f,g	500kg	5t
Ethyl nitrate	3,t,l	500kg	5t
Explosives (not listed elsewhere)	4	500kg	5t (TNT equiv)
Fensulphothion	1,l	10kg	100kg
Fluoroacetic acid, salts (1080 poison)	1,s	1kg	1kg
Fluorine	1,g	10kg	100kg
Formaldehyde (> 90% concentration)	2,f,g	200kg	2t
Formaldehyde (> 45% concentration)	2,l	2.5t	25t
Glycolonitrile (Hydroxyacetonitrile)	1,e,l	10kg	100kg
Hexamethylophosphoramidate	1,l	1kg	1kg
Hydrazine	3,t,f,l	500kg	5t
Hydrogen	3,f,g	250kg	2.5t
Hydrogen chloride (liquified)	2,g	1t	10t
Hydrogen cyanide, acid, salts	1,f,g,l or s	50kg	500kg
Hydrogen fluoride	2,g	200kg	2t
Hydrogen peroxide	3,l	500l	5000l
Hydrogen selenide	1,f,g	1kg	10kg
Hydrogen sulphide	2,f,g	200kg	2t
LPG	5,l	4000l (2 tonnes)	16000l (7.5 tonnes)
Mercaptans	2,f,g or l	50kg	500kg
Mercury, salts	2,4,s	50kg	500kg
Methyl bromide (Bromomethane)	2,g	200kg	2t
4,4' –Methylenebis (2-chloroaniline	1,l	10kg	100kg
Methyl isocyanate	1,f,g	5kg	50kg
Mevinphos	1,e or l	10kg	100kg
2-Naphthylamine	1,s	1kg	1kg
Nickel (powders, compounds)	1,s	25kg	250kg
Nitrogen dioxide	2,g	500kg	5t
Organic peroxides (individually or cumulatively)	3,o,f,l	50kg	500kg
Oxygen (liquid)	3,o,g	2,000l	20,000l

QUANTITY SUBSTANCE	QUANTITY		
	PROPERTIES	LEVEL I	LEVEL II
Parathion	1,l	10kg	100kg
Parathion methyl	1,l	10kg	100kg
Pentaborane	1,f,l	10kg	100kg
Phorate	1,l	10kg	100kg
Phosgene	1,g	10kg	100kg
Phosphamidon	1,l	10kg	100kg
Phosphorus	3,f,s	100kg	1t
Promurit	1,s	10kg	10kg
Propylene oxide	3,t,f,g	500kg	5t
Radioactive substances#		100bec/g	(any activity)
Selenium hexafluoride	1,g	10kg	10kg
Sodium chlorate	3,o,s	2.5t	25t
Sodium selenate	2,s	100kg	1t
Sodium selenite	1,s	10kg	100kg
Sulphur dioxide	2,g	1t	10t
Thallium, salts	2,s	50kg	500kg
Tellurium hexafluoride	1,g	10kg	10kg
Terbufos	1,s	10kg	100kg
2,3,7,8 – Tetrachlorodibenzo-p-dioxin (TCDD)	1,s	100g	100g
Tetraethyl lead	1,s	200kg	2t
Tetramethyl lead	1,s	200kg	2t
Tetramethylene disulphotetramine	1,s	1kg	1kg
Toluene disocyanate, 2,4 or 2,6	1,l	50l	
Trichloromethane sulphonyl chloride	1,l	10kg	100kg
Triethylenemelamine	1,s	10kg	10kg
Vanadium, salts	2,s	50kg	500kg
Warfarin	1,s	25kg	250kg

Abbreviations

1. Very toxic
2. Toxic
3. Highly reactive
4. Explosive
5. Highly flammable

- d dust
e explosive
f flammable
g gas
l liquid
o strong oxidiser or support of combustion
s solid
t toxic
* fertiliser grade

Quantities

- g = gram
kg = kilogram
t = tonne
l = litre

Note: # No radioactive material with a level of activity in excess of 1 peta becquerel

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