

54.18 DRURY SOUTH STRUCTURE PLAN AREA
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54.18.1 CONTEXT

The Drury South Structure Plan Area has been identified as a logical location in the southern sector of the Auckland region for addressing part of the region wide shortage of land suitable for “Land Extensive Industrial Activities” (i.e. activities such as manufacturing, construction, wholesale trade, transport and storage, warehousing and distribution). The Auckland Regional Policy Statement states that such activities typically require:

- Large land parcels;
- Relatively low land costs per square metre;
- Preferably vacant land;
- Good transport access, especially road/motorway;
- A guaranteed and consistent energy supply;
- Distance from sensitive land uses; and
- Medium to high broadband capacity.

The Drury South Structure Plan Area has all these attributes and its development for such activities also addresses the need to protect the extraction potential of the regionally important aggregate resource of the Drury Quarry. It will do this by reducing the potential for conflicting land uses around the Quarry and its haul routes to the regional road network. The Drury South Structure Plan Area has been identified as an appropriate location to accommodate Land Extensive Industrial Activities and the projected growth in employees within the southern sector of the Auckland Region.

The development of the structure plan area for such activities is consistent with the Auckland Regional Growth Strategy in that it allows the relocation of Land Extensive Industrial Activities out of the centres and corridors within the Isthmus and the southern sector of the region. These centres and corridors have been identified for urban intensification and regeneration programmes but the presence of Land Extensive Industrial Activities and their associated effects is constraining this potential.

The structure plan area is strategically located to take advantage of its proximity to State Highway 1 and the North Island Main Trunk Railway which jointly provide the surface transport links between the Auckland Region and the rest of New Zealand including the Waikato and Bay of Plenty markets and the increasingly important Port at Tauranga. While not essential to industrial development within the structure plan area, there is the opportunity in the future to develop an inland port facility in the vicinity to service freight from industrial and rural activities in both the Franklin and Manurewa - Papakura Wards. The development of the structure plan area will make better use of the Region’s available transport capacity by encouraging counter peak traffic flows and has the potential to reduce the high number of car-based commuter trips leaving the Manurewa - Papakura and Franklin Wards through the creation of up to 6,900 new jobs locally. The structure plan area is also well located to take advantage of a possible future regional arterial road link between Drury and the Manukau Central / East Tamaki industrial and residential nodes as well as other significant infrastructure such as the 220/110kV Transpower transmission network, the Counties Power high voltage supply network, the Vector high pressure gas pipeline, the Watercare Waikato River bulk water pipeline and the Telecom high speed broadband fibre optic cable.

A structure plan process for the Drury South area has been undertaken to identify the constraints and opportunities of the land and the objectives of the community and development sector and has established an overall framework for the planned growth and development of the area.

The Drury South Structure Plan Area is shown on the Plan in Appendix 54.18A. It is 361 hectares in area and is bounded by State Highway 1 in the west, the Drury Quarry and the

Hunua foothills in the east and the rural areas of Fitzgerald Road in the north and Ararimu Road in the south. Most of the land within the structure plan area has a flat to subdued contour and is traversed by the Hingaia Stream and its tributaries including the Maketu Stream. Land which surrounds and defines the structure plan area has more pronounced topographical contours.

The structure plan area lies between the Drury and Ramarama interchanges on State Highway 1 and local traffic patterns are currently dominated by truck traffic accessing the Drury Quarry. The quarry activity is a key feature of land use activity in the area but there are a range of other rural and semi – urban activities of a reasonably intensive nature undertaken in the area including a chicken processing factory, horticultural glasshouses and pack houses/stores and a major Transpower switching yard.

54.18.2 ISSUES, OBJECTIVES, POLICIES AND EXPECTED ENVIRONMENTAL RESULTS

A number of resource management issues of particular relevance to the Drury South Structure Plan Area have been identified. These are set out below together with the objectives, policies, and a summary of methods that have been adopted to implement the objectives and policies. These methods include the rules of the light industrial and recreation zone used to implement the Drury South Structure Plan.

These issues, objectives and policies (below) should be read in conjunction with one another and those relevant from the Plan.

54.18.2.1 Urban Form and Containment

1. Issue

The development of land for Land Extensive Industrial Activities can lead to further pressure for other forms of urban development including residential development and intensive commercial development such as that found in town centres. This has the potential to undermine regional objectives of achieving a compact and contained urban form and more intensive development in existing urban centres and corridors to support sustainable transport modes and travel patterns.

As the Drury South Structure Plan Area is a node of industrial development adjoining rural activities there is also a risk that the quality, function and integrity of the adjoining rural area could be undermined if defensible boundaries to the structure plan area are not defined and reinforced through physical as well as legal measures.

2. Objective

To achieve the subdivision and development of the Drury South Structure Plan Area in a way which:

- a) Accommodates projected employment growth and demand for land suitable for Land Extensive Industrial Activities in the southern sector of the Auckland region;
- b) Maintains a compact and contained urban form;
- c) Does not undermine the potential for urban intensification in existing urban centres and corridors; and
- d) Maintains the quality, function and integrity of the adjoining rural environment.

3. Policy

Subdivision and development within the Drury South Structure Plan Area shall:

- a) Be designed and managed to accommodate Land Extensive Industrial Activities with limited provision for other commercial services that support those activities;
- b) Be in general accordance with the Drury South Structure Plan (see Figure 54.18A) and be contained within the area shown on that plan; and
- c) Be designed and managed so as to provide a significant permanent public open space buffer and defensible boundary between adjacent rural activity (including rural residential development) and Land Extensive Industrial Activities.

4. Explanation

This objective and policy set is designed to ensure that the Drury South Structure Plan area is developed in a way which reflects its primary function to provide for Land Extensive Industrial Activities in the southern sector of the Auckland Region and to support the regional growth strategy of containment and intensification. It achieves this through restricting commercial services which support Land Extensive Industrial Activities to specific areas within the Structure Plan Area called Commercial Services Precincts rather than allowing them to disperse throughout the Light Industrial Zone. These activities are limited to the commercial services precincts to ensure that the amount of land available for Land Extensive Industrial Activities is maximised.

Land Extensive Industrial Activities require large areas of flat land and the extent of this flat land together with the major infrastructural barrier of the southern motorway defines the structure plan area with surrounding rural land being more elevated and dissected in terms of its topography. As well as these topographic constraints, the defensibility of the northern and southern boundaries of the structure plan area are further reinforced by permanent and substantial public open space buffers which will be required as a part of any subdivision consent.

5. Methods

The following methods have been adopted to implement this policy:

- a) Structure plan implementation Section 54.18.3;
- b) Light Industrial Zone rules and assessment criteria which are specific to the Drury South Structure Plan area;
- c) Recreation Zone rules;
- d) Urban Subdivision objectives, policies and rules contained in Part 26 of the District Plan.

54.18.2.2 Stream Ecology and Natural Vegetation and Habitats

1. Issues

The Drury South Structure Plan Area contains the Hingaia Stream and its tributaries including the Maketu Stream. The main stream stems are ecologically significant and are also flanked by some locally significant vegetation in places although this does not currently provide a continuous corridor.

Urban development has the potential to adversely affect water quality and in-stream ecological values through sediment discharges during the development process, and through pollutant runoff from impervious surfaces arising from development. The loss of indigenous vegetation and habitats can also occur during the development process.

2. Objective

To achieve development which maintains and enhances the stream and the natural vegetation and habitat values of the Hingaia and Maketu Streams.

3. Policy

Subdivision and development shall avoid, remedy or mitigate adverse effects on stream ecology and natural vegetation and habitat values of the Hingaia and Maketu Streams by:

- a) Protecting and enhancing the significant streams and vegetation identified in the Drury South Structure Plan (see Appendix 54.18A) within reserves; and
- b) Enhancing the biodiversity of ecological resources and linkages and restoring degraded ecosystems while reducing stream bank erosion through riparian planting along retained watercourses.

4. Explanation

This objective and policy set is designed to ensure that the Drury South Structure Plan area is developed and operated in a way which reflects the need to avoid, remedy or mitigate adverse effects on water quality and natural vegetation and habitats. The policies address the need to protect significant streams and vegetation so as to provide ecological linkages through the area and improve stream habitat quality through riparian planting programmes.

5. Methods

The following methods have been adopted to implement this policy:

- a) Structure plan implementation Section 54.18.3;
- b) Light Industrial Zone rules and assessment criteria which are specific to the Drury South Structure Plan area;
- c) Recreation Zone rules;
- d) Urban Subdivision rules contained in Part 26 of the District Plan;

54.18.2.3 Cultural Heritage Values

1. Issue

The main watercourses of the Hingaia and the Maketu are culturally significant, for both their intrinsic qualities and as part of the original pathways between hill top pa and the Manukau Harbour.

While there are no known archaeological sites or waahi tapu within the Structure Plan Area, development of the structure plan area for industrial purposes has the potential to

adversely affect the cultural heritage values of the Hingaia and the Maketu Streams if not carefully controlled.

2. Objective

To maintain and enhance the cultural heritage values of the Drury South Structure Plan Area.

3. Policy

The cultural heritage values of the Hingaia and Maketu streams are to be maintained and enhanced through the setting aside of reserve areas alongside the streams and through riparian planting and enhancement programmes designed to reflect the cultural linkages between historical hill top pa and coastal areas in a physical way.

4. Explanation

This objective and policy set is designed to ensure that the Drury South Structure Plan area is developed in a way which recognises the outcomes of the evaluation and consultation undertaken in respect of existing cultural heritage values within the Structure Plan Area. Significant values were identified in relation to the protection and enhancement of the Hingaia and Maketu streams and their surrounds and these values have been recognised in the design of the Structure Plan Area in terms of the areas to be set aside for open space and reserve purposes. The setting aside of open space and reserves and the development of walkways, cycle paths and wetlands within the Structure Plan Area around these watercourses has the potential to re-establish and enhance the cultural linkages between historical hill top and coastal pa in a physical way. Further, there is the opportunity within the wetland and reserve areas that will need to be set aside from development for tangata whenua to exercise their kaitiakitanga responsibilities in relation to the Hingaia and the Maketu and for there to be some tangible recognition of the cultural value of the area to be established. The Council recognises that it is important to work co-operatively with tangata whenua in developing ongoing enhancement and management programmes so as to ensure that tangata whenua can exercise their ongoing kaitiakitanga responsibilities in this area.

5. Methods

The following methods have been adopted to implement this policy:

- a) Structure plan implementation Section 54.18.3;
- b) Recreation Zone rules;
- c) The development and implementation of reserve management plans to enhance the Hingaia and Maketu Streams and their surrounds;
- d) Riparian ecological enhancement programmes to be established and implemented conjunction with tangata whenua.
- e) Ensure any reserve management plans for the Hingaia and Maketu Streams incorporate historic and cultural values and links to the Te Maketu Historic Reserve.

54.18.2.4 Landscape, Air Quality and Visual Amenity Values

1. Issue

Landscape change, air quality, noise, vibration and glare effects of industrial development, unless carefully managed, can have adverse effects on the landscape and visual amenity values of adjacent rural land and strategic roads.

2. Objective

To maintain and enhance landscape and visual amenity values within the structure plan area and to protect the air quality, acoustic and other amenity values of surrounding rural areas.

3. Policy

Landscape air quality and amenity values shall be maintained and, where appropriate, enhanced by:

- a) Maintaining a sense of openness and naturalness on land adjacent to the Southern Motorway;
- b) Maintaining visual and physical links to the rural setting within the Structure Plan Area;
- c) Ensuring complementary, consistent and coherent landscaping themes are utilised throughout the Structure Plan Area;
- d) Designing and constructing attractive wetland areas for stormwater treatment and detention that also provide reserve and visual amenity opportunities;
- e) Providing public open space buffer areas between the land to be developed for business activities and surrounding rural land;
- f) Providing adequate buffer separation distances for industrial activities that have the potential to generate air discharges which could have adverse effects on amenity values in surrounding rural zones;
- g) Requiring resource consent for those activities that have the potential to generate air discharges which could have adverse effects on human health; and
- h) Ensuring that the activities permitted in and performance standards applying to industrial areas adjacent to rural areas provide appropriate protection of amenity values (including noise, vibration and glare).

4. Explanation

This objective and policy set recognises the importance of retaining the perception of openness and naturalness of the Structure Plan Area when viewed from the Southern Motorway through careful design and implementation of the structure plan framework and, at a more detailed level, the control of the design and appearance of buildings, site layout and landscaping particularly in areas alongside the Southern Motorway. The importance of protecting other amenity values of adjacent rural areas is also recognised.

Land within the Drury South Structure Plan Area is close to a large viewing audience using the Southern Motorway and a more dispersed viewing audience in the surrounding rural zones. Land within the structure plan area has relatively low visual and landscape amenity

values as it is affected by electricity transmission lines and nearby existing quarrying activity. However, views to the Hunua foothills across open countryside from the Southern Motorway (State Highway 1) exist and there is a general perception of travelling through a rural area (albeit extensively modified by urban influences) when using the Southern Motorway. Industrial development within the Structure Plan Area, unless carefully managed, could adversely affect this perception and the area's landscape and natural heritage values.

Industrial development, unless carefully managed, can also have adverse effects on other amenity values of surrounding rural lands including noise, vibration and air quality effects from traffic, construction and industrial operations and glare from lighting and large expanses of roofing.

5. Methods

The following methods have been adopted to implement this policy:

- a) Structure plan implementation Section 54.18.3;
- b) Light Industrial Zone rules and assessment criteria which are specific to the Drury South Structure Plan area;
- c) Recreation Zone rules;
- d) Subdivision rules and assessment criteria which are specific to the Drury South Structure Plan area.

54.18.2.5 Quality of the New Urban Environment

1. Issue

Industrial areas, if not carefully designed and managed, can result in low levels of amenity for users.

Industrial areas have, in the past, been characterised by environments which are difficult for pedestrians and cyclists to negotiate, and which exhibit low quality streetscapes. Such areas often lack of conveniently located, essential commercial service activities for employees and businesses such as food and beverage outlets, banks, post offices, childcare and medical centres. These activities are often dispersed throughout industrial areas in poorly chosen locations near incompatible activities and the end result is low levels of amenity for users.

2. Objective

To facilitate the establishment of a convenient and well designed industrial area with good integration between private and public areas and good quality streetscapes and commercial service precincts.

3. Policy

Subdivision and development within the Drury South Structure Plan Area shall:

- a) Result in road and open space networks which exhibit a high degree of connectivity, safety and convenience;
- b) Ensure buildings address and engage the street and public realm;

- c) Provide high quality public open spaces in locations that result in opportunities for passive surveillance; and
- d) Provide compact and contained commercial service precincts designed to exhibit a high standard of amenity and pedestrian safety and convenience, and located so as to be accessible to public transport.

4. Explanation

This objective and policy set recognises that the quality, layout and design of an urban area can strongly influence the amenity, attractiveness and functioning of that area and the safety and wellbeing of people working in that area. The Drury South Structure Plan Area provides an opportunity for establishment of a new industrial area with high amenity values and compact and contained commercial service precincts that provide a high standard of amenity and pedestrian safety and convenience, and contribute to the creation of a positive sense of place and identity.

5. Methods

The following methods have been adopted to implement this policy:

- a) Structure plan implementation Section 54.18.3;
- b) Industrial Zone rules and assessment criteria which are specific to the Drury South Structure Plan area including special controls over the Commercial Services and Motorway Edge precincts; and
- c) Subdivision rules and assessment criteria which are specific to the Drury South Structure Plan area.

54.18.2.6 Transport and Land Use Integration

1. Issue

Land Extensive Business conventionally generate low numbers of employees per hectare which can make the provision of economic passenger transport difficult to achieve. Industrial areas are also rarely designed to facilitate walking and cycling and have often been developed with an exclusive reliance on motor vehicles for employee commuting and freight movement.

2. Objective

To create a pattern of development that provides safe and efficient movement of motor vehicles, cyclists and pedestrians and supports passenger transport modes.

3. Policy

Integration between land use and transportation within the structure plan area shall be achieved by:

- a) Locating higher employee generating activities in commercial services precincts close to potential public transport routes;

- b) Designing the road network to service public transport modes and to enable all traffic to flow freely and safely, including by restricting vehicular access onto the Spine Road;
- c) Making special provision for cyclists on heavy traffic routes and providing off road cycle paths and pedestrian routes that are safe, direct, barrier free have smooth surfaces and which are overlooked by roads or uses where passive surveillance is likely to occur; and
- d) Ensuring subdivision and development is designed and managed to facilitate the provision of public transport and the use of energy efficient transport modes such as cycling, motorcycling and car/van pooling to the extent possible with Land Extensive Industrial Activities.

4. Explanation

This objective and policy set is designed to ensure that the Drury South Structure Plan area is developed in a way which, to the extent possible in an area which caters for Land Extensive Industrial Activities, supports passenger transport and minimises private motor vehicle usage. Higher intensity uses are located close to the primary road network where they will support public transport modes and where, through clustering of like uses, higher amenity standards will be attained and reverse sensitivity effects on industry will be reduced.

5. Methods

The following methods have been adopted to implement this policy:

- a) Structure plan implementation Section 54.18.3;
- b) Light Industrial Zone rules and assessment criteria which are specific to the Drury South Structure Plan area including rule 29C.5.5.3 specifying various multi modal transport requirements; and
- c) Subdivision rules and assessment criteria which are specific to the Drury South Structure Plan area.

54.18.2.7 Infrastructure Provision

1. Issue

Infrastructure networks within the Structure Plan Area such as the road, stormwater, wastewater, water supply and energy and communications networks are either not available or are currently inadequate to service industrial development. New and upgraded infrastructure will be required to be planned and constructed in time to service development within the Structure Plan Area.

Industrial development in the Structure Plan Area could also potentially exacerbate existing capacity and safety problems at specific locations in the external road network such as at the Quarry Road intersection with Great South Road.

2. Objective

To ensure the timely and co-ordinated provision of robust and sustainable road, water, stormwater, wastewater, energy and communications infrastructure networks in the

Structure Plan Area while ensuring any adverse effects on road or other infrastructure networks outside the structure plan area is avoided or mitigated.

3. Policy

A robust and efficient infrastructure network within the Drury South Structure Plan Area shall be achieved by ensuring that:

- a) Stormwater, water, wastewater, communications and energy networks are adequately provided for and are available in a timely and co-ordinated manner to service industrial activity within the structure plan area;
- b) Road network (including the state highway) improvements both within and outside the structure plan area are coordinated with development within the structure plan area;
- c) A stormwater network incorporating streams, primary drainage network and overland flowpaths is implemented; and
- d) Where practical, cost and energy efficient ways of providing infrastructure are utilised including stormwater and grey water reuse in industrial processes.
- e) A stormwater network incorporating streams, primary drainage network, and overland flow paths is implemented at no cost to Council.

4. Explanation

This objective and policy set is designed to ensure that the Drury South Structure Plan area is developed in a way which facilitates the timely and co-ordinated provision of road and other infrastructure which are essential for servicing Land Extensive Industrial Activities.

At the time of preparing this plan change, there is no public water supply or wastewater network serving the Drury South Structure Plan Area. The Drury South Structure Plan Area is able to be serviced with potable water supply via an offtake to the Waikato pipeline. However, further investigations and refinement of design and further refinement of design assumptions are still required. To connect the Drury South Structure Plan area to a wastewater network will require significant wastewater infrastructure upgrades, including the construction of a lengthy wastewater rising main and/or a local wastewater treatment plant. A local wastewater treatment may therefore be the preferred short to medium term option. A network utility operator will need to approve the design and construction of the plant so as to ensure long term compatibility with its treatment network standards.

5. Methods

The following methods have been adopted to implement this policy:

- a) Structure plan implementation Section 54.18.3;
- b) Light Industrial Zone rules and assessment criteria which are specific to the Drury South Structure Plan area including rule 26.4A.2(m) requiring specified road network upgrading projects at certain development thresholds;
- c) Subdivision rules and assessment criteria which are specific to the Drury South Structure Plan area;

- d) A funding agreement between developer(s) and the Council for the provision of infrastructure.

54.18.2.8 Flood Hazards and Stormwater Management

1. Issue

The lower part of the Hingaia Stream catchment has historically been subject to flooding during and after storm events. Part of the Structure Plan area is within the Hingaia Stream 100 year Average Recurrence Interval (ARI) floodplain. Unless mitigated by stormwater management measures, flooding is likely to increase in severity and frequency with increases in impervious surfaces associated with building and infrastructure development and from climate change. Such increased flooding will affect areas downstream of the Structure Plan Area and bank erosion problems may also become more accentuated with increased peak velocities resulting from increased imperviousness.

Additionally, there is a risk to surface and ground water quality unless stormwater runoff from impervious surfaces within industrial areas is managed through the use of on site containment and treatment methods and catchment based stormwater treatment ponds.

2. Objective

1. To ensure that subdivision and development within the Drury South Structure Plan Area:
 - (a) Does not result in increased flood risk to habitable rooms for all flood events from the two year and up to the 100 year ARI flood event downstream and upstream of the Structure Plan Area
 - (b) Manages flood risk within the Structure Plan Area; and
 - (c) Surface and ground water quality are not adversely affected by stormwater runoff from the structure plan area.

3. Policy

Increased flood risk to habitable rooms for all flood events from the two year and up to the 100 year ARI flood event

- i. Upstream and downstream of the Structure Plan Area will be avoided;
- ii. Within the structure plan area will be managed; and
- iii. Surface and ground water quality shall not be adversely affected by stormwater runoff from the structure plan area by ensuring that:
 - a) Adequate provision is made within stormwater management areas in the structure plan area to detain the 100 year Average Recurrence Interval (ARI) event without adverse effect on the extent of flooding of upstream or downstream areas;
 - b) Earthworks to form the modified floodplain are undertaken to ensure flood effects on downstream or upstream areas are not exacerbated;
 - c) Location of buildings within the 100 year ARI floodplain is avoided;
 - d) Location of infrastructure within the 100 year ARI floodplain is avoided unless it can be designed to be resilient to flood related damage and does not exacerbate flood risks for upstream or downstream activities;

- e) Overland flowpaths are identified in a stormwater management plan or network discharge consent and ensuring that that they remain unobstructed and able to convey surface water runoff safely into the reticulated stormwater network;
- f) On site stormwater management and containment and the provision of catchment based stormwater treatment ponds avoids or mitigates any adverse effects on surface or ground water quality.

4. Explanation

This objective and policy set is designed to ensure that the Drury South Structure Plan area is developed in a way which addresses the significant issues of avoiding and mitigating flood hazards and adverse effects on surface and ground water quality within the Structure Plan area both through the provision of infrastructure and through the implementation of district and regional plan controls.

5. Methods

The following methods have been adopted to implement this policy:

- a) Structure plan implementation section 54.18.3;
- b) Subdivision rules and assessment criteria;
- c) Rules relating to discharge of contaminants to water and groundwater and the discharge of contaminants from industrial and trade processes within the Auckland Regional Plan : Air, Land and Water.

54.18.2.9 Earthworks

1. Issue

In the Drury South Structure Plan Area, although the existing terrain is relatively flat, there will need to be a significant volume of earthworks as part of this development process due to the scale of the area and the requirement to produce large flat industrial development sites and avoid flood hazards while avoiding the need for later site specific earthworks and retaining walls. Apart from temporary visual effects, a significant volume of earthworks has the potential to result in adverse effects on water quality in the receiving environment unless appropriate sediment control methodologies are adopted.

The earthworks required to prepare the land for Land Extensive Industrial Activities will necessarily require the diversion and piping of some of the minor watercourses traversing the structure plan area. Many of these have already been substantially modified by previous farming activity and provide only a degraded level of visual amenity and habitat. Nonetheless the diversion or piping of such watercourses will need to be mitigated by the landscape and ecological enhancement of the remaining significant natural watercourses (primarily the Hingaia Stream and the Maketu Stream) as well as those watercourses which have been diverted.

2. Objective

That the adverse effects of earthworks are avoided, remedied or mitigated.

3. Policy

Subdivision and development shall avoid, remedy or mitigate the adverse effects of earthworks by ensuring that:

- a) Any re-contouring, filling or excavation works avoid or mitigate adverse effects on the visual quality of the landscape;
- b) Damage, danger or nuisance to adjacent property is avoided or mitigated;
- c) Sediment discharge to surface water is adequately controlled and its adverse effects on water quality are mitigated in accordance with the Auckland Regional Plan: Sediment Control; and
- d) Any diversion or piping of existing degraded or modified watercourses is mitigated by the ecological enhancement and landscape planting of existing natural and diverted watercourses within and immediately adjacent to the structure plan area.
- e) Suitable earthworks protocols are in place in respect of unrecorded archaeological sites.

4. Explanation

This objective and policy set is designed to recognise that extensive earthworks will be required to ensure that the Drury South Structure Plan area is developed in a way which is appropriate to accommodate the large flat, flood-free and well serviced sites that are required by Land Extensive Industrial Activities.

5. Methods

- a) The following methods have been adopted to implement this policy:
- b) Structure plan implementation section 54.18.3;
- c) Subdivision rules and assessment criteria;
- d) Rules relating to the discharge of sediment from earthworks within the Auckland Regional Plan; Sediment Control;
- e) Rules relating to the diversion and piping of watercourses within the Auckland Regional Plan : Air, Land and Water; and
- f) Recreation Zone rules.
- g) The need to apply for authority from the New Zealand Historic Places Trust to damage, destroy or modify potential archaeological sites within the DSSP.

54.18.2.10 Reverse Sensitivity Effects on Drury Quarry, the Industrial 4 Zone and Surrounding Rural Zones and Significant Electricity, Gas and Telecommunications Infrastructure

1. Issue

Quarrying and aggregate processing activity and the transportation of aggregate material from the existing Drury Quarry can result in adverse environmental effects in terms of noise, vibration and air quality and similar effects may result from the Industrial 4 zone. Similarly, activities in the surrounding rural zones, such as intensive poultry and pig

farming, can result in adverse environmental effects in terms of odour and other pollutants. The location of sensitive land uses such as residential and educational activities within the Structure Plan area will cause reverse sensitivity concerns and could restrict future quarry, industrial or rural operations and activities.

Development and subsequent land use in close proximity to the significant existing electrical, communications and natural gas infrastructure resources which traverse the Structure Plan area could adversely affect the efficient and safe operation of these resources.

2. Objective

To ensure that development and subsequent land use within the Drury South Structure Plan Area does not result in reverse sensitivity effects on the operations of the Drury Quarry, activities within the Industrial 4 Zone or the surrounding rural zone or adverse effects on significant existing high voltage electricity, natural gas and communications infrastructure.

3. Policy

Adverse effects on the Drury Quarry, the Industrial 4 Zone or the surrounding rural zone and significant electricity, gas and communications infrastructure are to be managed within the Drury South Structure Plan Area by:

- a) Avoiding the establishment of sensitive residential land uses within the Structure Plan Area and by locating potentially sensitive commercial services more than 500 metres from the Quarry Zone boundary and more than 100 metres from the Industrial 4 zone or surrounding rural zone boundary;
- b) Controlling activities potentially sensitive to traffic noise on the strategic freight network serving the Drury Quarry; and
- c) Ensuring that development and subsequent land use is undertaken so as to minimise adverse effects on the efficient and safe operation of existing high voltage electrical transmission and distribution lines, fibre optic cables and the Vector natural gas pipeline.

4. Explanation

This objective and policy set is designed to address reverse sensitivity issues that might arise in relation to the Drury Quarry, the Industrial 4 zone or the surrounding rural zone and existing significant infrastructure in the form of the Transpower high voltage electricity lines, Counties Power's two 110kv sub-transmission lines, the NGC/Vector natural gas pipeline and Counties Power and Telecom fibre optic cable that traverses the Structure Plan area.

The Drury Quarry, which is one of the largest remaining aggregate resources in the Auckland Region, is located immediately to the east of the Drury South Structure Plan Area. Heavy transport haul routes from the Quarry to the primary road network traverse the Structure Plan Area. A significant central portion of the Structure Plan Area is designed to accommodate heavy industry. Additionally, the Drury South Structure Plan Area is surrounded by a rural zone which contains existing intensive farming operations and horticultural enterprises which emit contaminants to air. Further such operations could establish in the rural zone in future. The Quarry, industrial and rural activities and the existing high-voltage electricity, high-pressure gas and fibre optic telecommunications infrastructure are important to the future of the Region and it is

critical to ensure that the Drury South Structure Plan area is developed in a way which avoids exposing these existing activities to reverse sensitivity effects.

In the case of the Quarry, the Industrial 4 zone and the rural zones, this is achieved by a structure plan and zoning rules or performance standards designed to separate sensitive activities from the Quarry and the rural zones. Some provision is made for more potentially sensitive business activities in the commercial services precincts within the Structure Plan area but these precincts are separated from the Quarry by over 500 metres and rules relating to those precincts require particularly sensitive business activities (premises selling food and beverages, health professional rooms and childcare centres) to be more than 100 metres from the nearest Industrial 4 or rural zone boundary. Additionally, business activities in the commercial services and motorway edge precincts which may be potentially sensitive to heavy traffic noise are controlled so that any reverse sensitivity effects are mitigated.

In the case of the infrastructure the gas pipeline is protected by an existing designation and the electricity and communications infrastructure is protected by rules within the industrial and subdivision provisions of the District Plan.

In the case of the high voltage electricity transmission lines which are part of the National Electricity Transmission Grid, Policies 10 and 11 of the National Policy Statement on Electricity Transmission seek to manage activities in proximity to transmission line in order to avoid reverse sensitivity effects on the electricity transmission network and to ensure that the operation, maintenance and development of the network is not compromised.

The New Zealand Electrical Code of Practice for Electrical Safe Distances 34:2001 (NZECP 34:2001) is also relevant. The NZECP 34:2001 sets out the minimum safe separation distances to control the interface between overhead electric lines and the wider public environment to ensure public safety and to preserve the reliability of the electrical supply system for all consumers. The Code contains minimum safe distances from towers, poles and conductors for some activities, in particular buildings / structures, operation of mobile plant and earthworks. It is important that consideration is given to the requirements of NZECP 34:2001 at subdivision design stage, to ensure that any development and land use (including the operation of mobile plant, storage of materials and movement of large equipment around a site) on a site can be designed to comply with the mandatory requirements of NZECP:34:2001. The Electricity (Hazards from Trees) Regulations 2003 set out the mandatory requirements for vegetation grown around transmission lines. Any vegetation to be planted within the transmission corridors should be selected and/or managed to ensure that it will not result in that vegetation breaching the Electricity (Hazards from Trees) Regulations 2003.

5. Methods

The following methods have been adopted to implement this policy:

- a) Structure plan implementation Section 54.18.3 and planning map showing the National Grid Electricity Transmission lines;
- b) Light Industrial Zone subdivision and development rules and assessment criteria which are specific to the Drury South Structure Plan area.

54.18.2.11 Expected Environmental Results

The expected environmental results for the Drury South Structure Plan Area are as follows:

1. The establishment of a range of Land Extensive Industrial Activities within the structure plan area;
2. The creation of a significant number of new employment opportunities within the Structure Plan Area;
3. The maintenance and enhancement (as far as is practicable) of water quality and the habitat values of significant streams and permanent watercourses;
4. The establishment and maintenance of business areas with a high standard of amenity especially in the commercial services precincts and at the interface with adjoining rural areas and State Highway 1;
5. The maintenance/re-instatement and enhancement of significant cultural heritage and landscape values such as culturally and historically significant pathways through the area and culturally significant native plant species;
6. The ongoing efficient use of State Highway 1, the Drury Quarry and the strategic freight route serving the Quarry, the Industrial 4 Zone, the surrounding rural zone and existing electricity and gas transmission lines;
7. The avoidance of flood hazards; and
8. The maintenance of the amenity values of surrounding rural areas.

54.18.2.12 Procedures for Monitoring

Part 13 of the Plan applies.

54.18.3 IMPLEMENTATION

The objectives and policies set out above will be implemented through the application of zones within the Structure Plan Area, with rules applying to the zones. Each of the zones contain further objectives and policies which apply in addition to those set out above. The zones within the Structure Plan Area are as follows:

- a) **Light Industrial Zone:** The Light Industrial Zone is applied to all of the industrial land in the Structure Plan Area which lies within the area covered by the Franklin District Plan and is intended to assist in providing a buffer or transition area between the “heavier” Industrial 4 Zone in Papakura District and the rural and rural residential activities to the south and west of the Structure Plan area. In addition, overlay controls and assessment criteria relating to site layout and landscape design and the external appearance of buildings are applied within the parts of the structure plan area which adjoin the Southern Motorway and at the confluence of the Hingaia and Maketu Streams. These areas are identified on the structure plan and the planning maps as the Motorway Edge Precincts. The overlay controls are intended to maintain a sense of openness within the Motorway Edge Precinct.

Overlay controls on site layout and landscape design and the external appearance of buildings are also applied within the parts of the structure plan area which have been identified as Commercial Services Precincts. These are accessible, defined and compact areas within which all commercial services (e.g. banks, post offices, commercial offices, childcare and medical services) designed to support Land Extensive Industrial Activities are to be located rather than dispersing throughout the light industrial area. It is appropriate, due to the likely intensity of activity within those precincts that they be subject to controls to ensure a high amenity outcome.

- b) **Recreation Zone :** The Recreation Zone will be applied to the parts of the Structure Plan Area which are identified in the structure plan to be set aside for public open space and

stormwater management purposes once these areas have been vested as Reserve at the time of subdivision and development or public acquisition of the land. In cases where land has already been vested as esplanade reserve or where road is to be closed and used for reserve purposes the Recreation zone has been applied as part of this Plan Change.

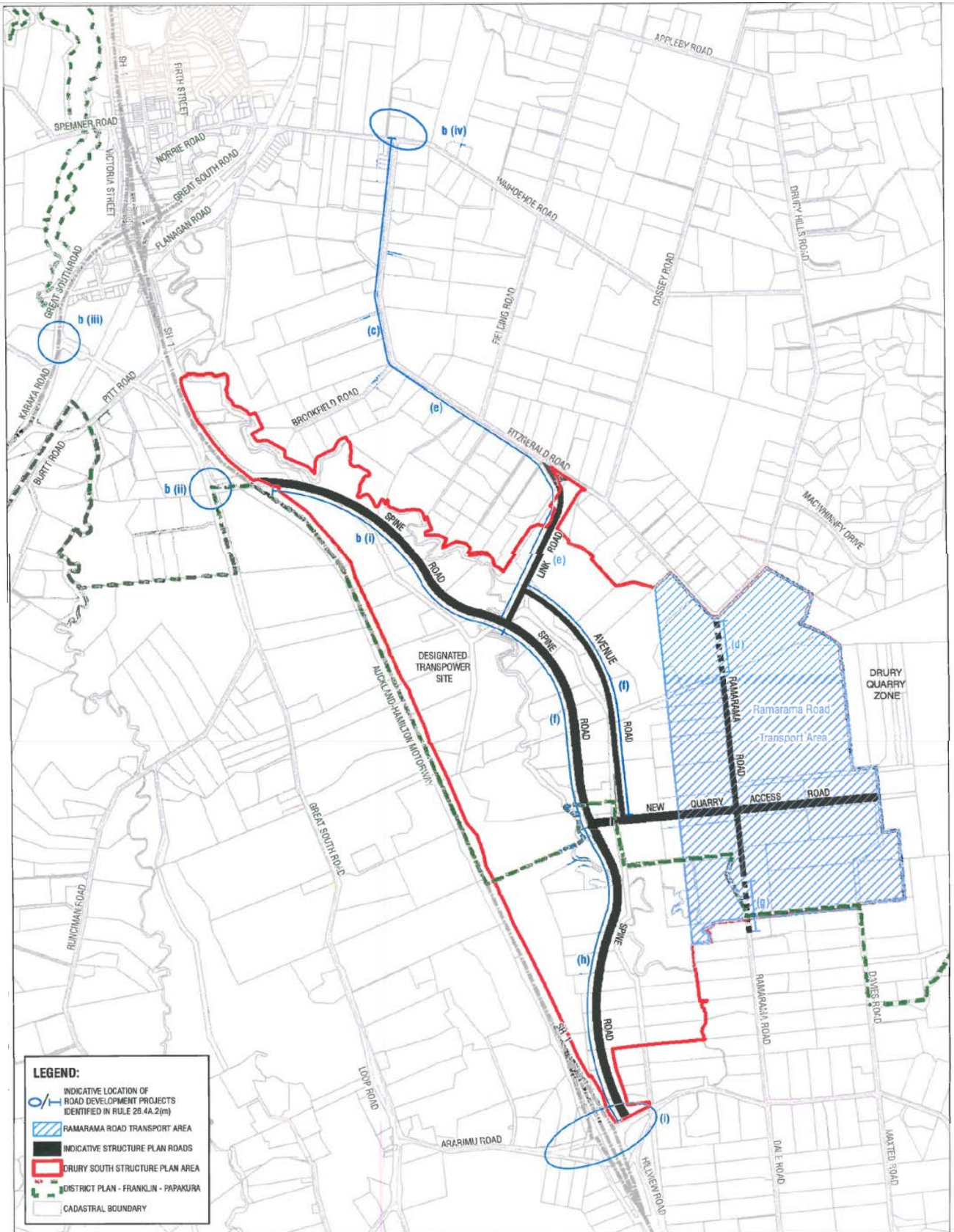
54.18.4 GENERAL RULES

1. The subdivision rules are contained in Part 26 of the Plan.
2. The land use rules for the Light Industrial Zone are contained in Part 29C of the Plan.
3. The land use rules for the Recreation Zone are contained in Part 34 of the Plan.
4. In addition to the relevant RULES specified in Part 54.18, RULES in the following parts of the PLAN apply:
 - Part 7: Natural Hazards
 - Part 8: Cultural Heritage
 - Part 9: Transportation
 - Part 11: Recreation and Reserves
 - Part 12: Designations and Requirements
 - Part 14: General Duty to regarding Adverse Effects
 - Part 15: Activities throughout the District
 - Part 51: RULE 51 – Parking LOADING and Access
 - Part 52: Information Requirements for Resource Consent Applications
 - Part 53: Assessment Criteria for Resource Consent Applications

54.18.5 DESIGN ASSESSMENT CRITERIA

1. Resource consent applications for buildings and development within the Commercial Services Precinct and the Motorway Edge Precinct will be assessed against the relevant design assessment criteria of Appendix 29.C and subdivision consent applications will be assessed against the relevant design assessment criteria of Appendix 54.18B listed below.

APPENDIX 54.18A DRURY SOUTH STRUCTURE PLAN MAP



<p>Scale 1:15,000 at A3 Contains Crown Copyright Data. Crown Copyright Reserved.</p>	<p>N</p>	<p>Drury South Structure Plan Appendix 54.18A Transportation Network Development Requirements</p>	<p>This map contains data derived in part or wholly from sources other than Beca, and therefore, no representations or warranties are made by Beca as to the accuracy or completeness of this information.</p>	
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APPENDIX 54.18B SUBDIVISION DESIGN ASSESSMENT CRITERIA FOR LIGHT INDUSTRIAL ZONE WITHIN THE DRURY SOUTH STRUCTURE PLAN AREA

PURPOSE OF APPENDIX 54.18B

Within the Drury South Structure Plan area, applications for restricted discretionary activity subdivision consent will be assessed in terms of a series of matters to which the Council will restrict the exercise of its discretion. One of the matters which the Council will have regard to as set out in Rule 26.4A.2(c)(i) is:

Whether the subdivision is in general accordance with the relevant subdivision design assessment criteria in Part 54, and/or whether the subdivision gives appropriate consideration to the design and layout of reserves, walkways and cycle ways and street design, including connections to neighbouring properties.

In addition, the criteria will also be used in the consideration of discretionary applications for subdivision, as appropriate.

This appendix sets out assessment criteria under a number of "Design Elements". Accompanying illustrations are intended to support the text and represent good design solutions, but are not intended to represent the only design solution. All illustrations are indicative only.

Each Design Element includes an explanation, which summarises the rationale for the particular Design Element and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

INFORMATION REQUIREMENTS

The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged.

It is recognised that certain proposals will not achieve absolute accordance with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- Whether site constraints inhibit the ability to address the criterion, and/or;
- How the intention of the criterion is met by the proposal, and/or ;
- Whether the proposal represents a better design solution than that suggested by the criterion.

Planting plans and maintenance plans for recreation and esplanade reserves and stormwater management areas will need to be submitted with applications for subdivision consent and approved by the Council.

Design Element 1 – Road, Reserve and Access Networks:

1. Earthworks should be undertaken principally at the initial subdivision stage, and where appropriate the creation of reasonably flat sites should occur at the bulk earthworks stage (in order to avoid creating retaining walls at site development stage).
2. Road patterns should maximise convenient / direct access to the spine road and limit connection to existing rural roads (such as Ararimu Road) except where this relates to the wider essential network.
3. The road pattern should facilitate access to and accessibility within 'commercial service precincts'.
4. Road patterns should be logical and contribute to the legibility of and ease of wayfinding within the area (refer Diagrams 1 and 2 for generic legibility and proposed street hierarchy).
5. Subdivision layout design should achieve protection and enhancement of all significant streams / tributaries to be retained and their riparian corridors (20m minimum either side from edge of stream) and concentrate open space as part of the riparian network (refer Diagram 3).
6. Subdivision layout design should achieve an interconnected open space and movement network.
7. Safe pedestrian and cycle routes through the structure plan area should be integrated with the riparian, reserve and road design.
8. Equestrian bridle trails should be integrated with riparian reserve development and provide access to the large centrally located public open space / stormwater management area.
9. Layouts should retain mature trees within the riparian corridors, particularly those of indigenous species.
10. In Motorway Edge Precinct areas layouts should seek to retain as many existing established trees, particularly those of indigenous species, as possible.
11. In Motorway Edge Precinct areas access to sites off the spine road should be combined wherever practicable.

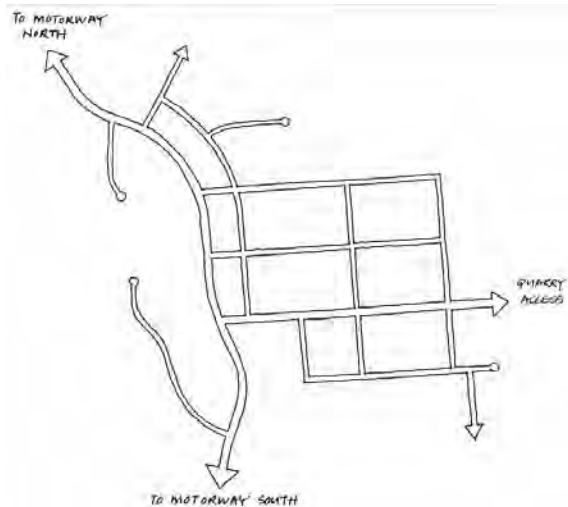


Diagram 1: Legible road hierarchy to assist wayfinding



Diagram 2: Road hierarchy

Explanation:

Design Element 1 pertains to the overall site topography and the general layout of the networks of roads, reserves and other access linkages that make up the public space of the industrial business zone. These should be considered in an integrated fashion together with the development blocks that they create.

The existing site topography within the proposed zone area is relatively flat although bulk earthworks including cut and fill will be required to establish levels for future development above the flood plain and appropriate falls across the land

The riparian corridors of the Hingaia and Maketu Streams and their significant tributaries will remain an important feature of the site topography once the zone is established. Vegetation associated with these corridors is also important to the structuring, screening and ecology of the area and its proposed activities.

The riparian corridors also provide a focus for future recreation and open space development and form part of the enhancement framework for the zone.



Diagram 3: Open space concentrated along Hingaia Maketu, Roslyn and Northern Diversion Stream corridors

The road network and hierarchy (refer Diagrams 1 and 2), as illustrated in the Drury South Structure Plan has been designed to efficiently direct traffic into and out of the zone connecting to the Southern Motorway (SH1) at both the Ramarama (south) and Drury (north) interchanges. The Ramarama interchange and Quarry Road / Great South Road through to the Drury Interchange will be upgraded to improve vehicle access and safety. The proposed spine road link is important to the legibility and traffic efficiency of the proposed zone area; this route will provide the primary connection into and out of the zone with other streets connected to the spine road through corridor.

The proposed street network has also been designed to limit the impact of vehicles destined for the new zoned area on existing rural residential and community roads such as the road accessing and adjacent to the Ramarama School. Implementation of the street network to achieve the beneficial improvements to heavy vehicle (including quarry truck) and other zone related traffic movement is imperative as a part of delivery of the zone.

By their nature the Commercial Services Precinct areas will require a finer grain street network with smaller street blocks, greater walkability, good service access and parking.

A legible road pattern (refer Diagram 1) is one that is easily understandable for the people that use it and that provides cues for first time users as well as those habitual users. Consistent road design and landscape themes can further emphasise the position of each street in the road hierarchy and in the pattern of streets in the wider area. Road patterns that are logical and easy to comprehend and navigate make an area feel more comfortable and help to provide a sense of identity.

Design Element 2 – Block Size, Lot Type and Orientation:

1. Blocks should be of a scale and shape to achieve a permeable street layout suited to the industrial landuse.
2. All lots should front onto and be accessed directly from a legal road. Rear lots are to be avoided (*refer Diagram 4*).
3. Through lots (with dual road frontage) are permissible (*refer Diagram 4*).

Explanation:

Design Element 2 describes the principles for consideration in the layout of blocks and lots within the proposed business zone area.

Blocks within an industrial area can be larger than those within finer grain residential or Commercial Services areas. A good permeable and well connected street network is however still required to facilitate access, provide an appropriate street address and reduce traffic volumes on side streets.

Lots need to be of a size and shape to accommodate large scale, land extensive landuses and flexible to enable reasonable long term growth. At the same time rear lots are considered undesirable with a preference for development to address the street.

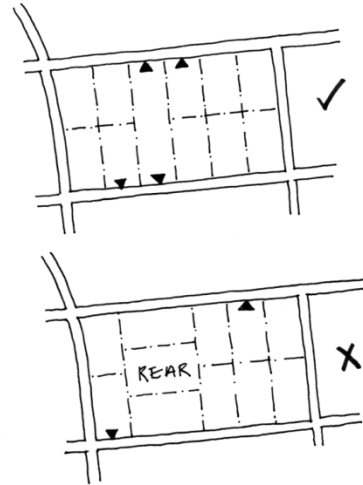


Diagram 4: All lots should front onto a legal road; through lots are permissible

Design Element – Roads and Accessways:

1. In addition to transport engineering and Council's Code of Practice requirements, road cross sections should be appropriate to the nature of the function that they provide and also reflect urban design legibility considerations – i.e. wayfinding. Refer typical cross sections (Appendix 1) for road hierarchy comprising; Arterial (e.g. spine road extension); Link Road, new quarry access road (Parkway Road) (*refer also Diagram 2 for street hierarchy*).
2. Cyclists should be accommodated on the street carriageway or on a shared footpath/cycle route with wider dimension to accommodate both functions.
3. A consistent palette of traffic management tools should be used across the Drury South business zoned land. Traffic management devices such as chicanes, speed humps and other such restrictive management devices are not expected, however the use of thematic planting and measures such as localised narrowing to create thresholds or define changes in the street environment could be used.
4. All streets are required to accommodate strong avenue specimen tree planting. Refer Cross Sections Appendix 1. This planting is required to achieve the breaking up of the overall scale of the development particularly as seen from elevated locations, as well as to establish the enhanced amenity and character of the zone.
5. In addition to the street avenue planting a planted central median is (with and without specimen trees) also required on the roads identified as 'Arterial' (Spine and Link Roads) and 'Parkway' refer Appendix 1 Cross Sections.

Explanation:

Design Element 3 pertains to principles for the design of roads and other access routes within the zone. Road design should be appropriate to function and provide practical widths for vehicular access, including for emergency vehicles, parking, planting and services. Useful minimum dimensions are:

- Traffic lane 3.5m
- Parallel parking lane 2.5m
- Service / utilities strip varies
- Footpath 1.5m to 2.5m
- Cycle path 2.5m

The use of parallel kerbside parking is efficient in using the road as circulation area and reducing the need for onsite visitor parking. Kerbside parking lanes may be defined and delineated with planting bays if desired as illustrated in the road Cross Sections Attachment1.

Pedestrian and cycle paths should generally be integrated with road and reserve design. Paths which are separated from vehicle routes should be designed for safety.

Design Element 4 – Reserves, Stormwater Management Areas and Riparian Planting:

1. Stormwater detention and treatment reserves should be located in general accordance with the locations shown in the Drury South Structure Plan and in accordance with the adopted Catchment Management Plan, the Council's code of practice and relevant regional technical publications. The Cross Sections (Attachment 2) illustrate the Typical Wetland Stormwater Pond and Typical Stream Corridor Cross Sections.
2. Stormwater ponds should be designed to fit in with the surrounding landscape and appear as an integrally designed infrastructural component of the overall setting.
3. Vegetated buffers, not less than 40m in total width for any retained permanent or diverted stream, should be provided on the margins of streams, ponds and wetlands and should:
 - Include native species as identified in Attachment3
 - Include native trees on the lower and upper banks of ponds predominantly to the north and west to provide shade.
 - Provide a minimum of 10m of native planting either side of the stream corridor including shallow water rushes and sedges.
 - Avoid vegetation that will exacerbate flooding and the blockage of water flood flows along the immediate riparian corridor.

The only exception to these requirements is the retained permanent stream in the northwest of the structure plan area (adjacent to the Transpower site) which will be subject to a minimum requirement of 10m of native planting either side of the stream corridor only.

Note: Attachment 5 sets out 'Stream and Wetland Rehabilitation Guidelines (June 2013) for the DSSP area.

4. Walkways / cycleways along riparian corridors and through buffer planting should be designed to minimise any impacts on ecological function and give due consideration to personal safety and CPTED principles (refer Attachment2).
5. Edge buffer reserves should be located in accordance with the Drury South Structure Plan, be a minimum of 30m in width and be planted in generally accordance with Diagram 5 below.



Diagram 5: Typical landscape buffer cross section

6. Suitable mechanisms to ensure the establishment and ongoing maintenance of landscaping of reserves and stormwater management areas until those areas are vested in the Council will be required to ensure the long term success of any landscaping.

Explanation:

Design Element 4 pertains to matters for consideration for locating, sizing and designing reserves stormwater management areas and riparian planting. These areas will be generally located in accordance with the locations shown in the Drury South Structure Plan; regard should also be given to Design Element 5 when designing reserves within the zone area.

The principal reserve network within the zone, as illustrated in the Drury South Structure Plan, is structured around riparian protection and enhancement as well as stormwater management including detention and treatment. The reserve network is however designed for multiple functions and values including passive and active recreation, pedestrian / cycle commuter access, ecological values, visual screening / separation and aesthetic amenity.

The zone also includes buffer reserves the main purpose of which is to physically and visually screen and separate adjacent existing land uses and residents from the zone. These reserves are planted to maintain a robust rural character with a woodlot/ shelter belt form of land management. Whilst providing multiple functions including walking / cycling, biodiversity and aesthetic values their primary function will remain as that of a buffer to landuses outside of the zone.

Design Element 5 – Reserve Interface Design:

1. Reserves intended for public recreation and use should be designed to be bounded by public roads as much as possible given topographical and natural feature constraints. (Note proposed buffer reserves are not intended to be bounded by public roads)
2. Where reserves or riparian buffer areas adjoin lots the boundary should be securely delineated and fenced to avoid encroachment (refer Diagram 5).

Explanation:

Reserves intended for public use that are well fronted by public roads are more secure because of the informal surveillance from the road and activities that interface with the road across the carriageway. Ideally not less than half the total length of legal boundary of any reserve should adjoin a legal road.

Design Element 5a – Earthworks and Retaining Walls

1. Changes of level adjoining streets and open space corridors should be achieved by gently battering and contouring land.
2. Where retaining walls are required, they should be screened from public view. This may be achieved by planting and breaking up the vertical extent of walls through physical stepping.

Additional Overlay Precinct Criteria

In the case of subdivision within the Motorway Edge Precincts and the Commercial Service Precincts the following criteria shall also apply and take precedence over the general assessment criteria for subdivision stated above, where this is inconsistency or conflict.

Additional Design Element 6: Subdivision within Motorway Edge Precinct

1. Earthworks should be designed to retain a more natural, undulating topography and character outside of building platforms and other areas required through function to retain a flat topography.
2. Intersections between public roads serving the precinct and the north south primary road (spine road corridor) should be minimised.

Additional Design Element 7: Subdivision within Commercial Services Precinct

1. Where through lots with dual street frontage are created, these should provide frontage to both street edges (i.e. no rear elevations to the street). The primary frontage should be to the spine road.

APPENDIX 54.18C1 KINGSEAT CONCEPT PLAN



- Key**
- Business/Hotel/Commercial/Residential mixed use (150m²-250m² lots)
 - Kingseat Village Living residential 2 (200m²-250m² lots)
 - Kingseat Village Living residential 1 (200m²-250m² lots)
 - Kingseat Village Living (reserves of existing buildings)
 - Kingseat Adaptive reuse (reserves of existing buildings)
 - Kingseat Residential Living (200m²-250m² lots)
 - Kingseat Residential Living (250m²-300m² lots)
 - open space
 - reserves/residuals reserve
 - wetland area
 - water (No ocean front building footprint for 200m of existing waterway crossing structure for Kingseat Park)
 - district arterial
 - local connections
 - pedestrian connections
 - trunk connections
 - existing building retained

Amended Kingseat Concept Plan Appendix 54.18C1

Scale 1:5000

