

3.1 Natural Values

Introduction and Issues

This policy statement provides the framework to collectively, and comprehensively, manage the city's natural values and significant natural features. Significant natural features include:

- The Waikato River corridor and associated gully systems.
- Peat lakes, wetlands and associated peatland.
- Remnant indigenous vegetation.
- The ecosystems and habitats which depend on these and other natural features.
- Surface and groundwater resources, which are essential to sustaining the city.
- Visually significant ridgelines.

Protection of these natural features and their associated processes are important for the survival of the city's natural values. Potential threats include the reduction or loss of habitats due to contamination, disturbance or destruction. Many threats are associated with ongoing urban development. The plan seeks to recognise and protect these natural values in a way that integrates these values with urban development. To address potential threats the plan contains provisions relating to earthworks, development of structures, impermeable surfaces, vegetation removal, and where necessary other land use practices, to ensure that the natural values of these features are protected.

The Waikato River corridor and associated gully systems are the city's key landscape and natural features. They contain significant pockets of indigenous vegetation and provide important ecological corridors and a wilderness experience within the city. These areas are also important for their scenic value and are used for a wide variety of recreational activities. The river and gully corridors have cultural significance for Waikato iwi and contain heritage sites of historical and cultural importance.

The quality of water within the River and streams is particularly important to amenity values, the health of residents, wildlife, and the food chain. The Council has a key role in managing the effects of land use activities that could adversely impact on water quality. The Waikato Regional Council (Environment Waikato) monitors the water quality and ecology of streams within the city. Hamilton streams display relatively poor water quality and in-stream habitat (as do nearby rural streams). However, it is difficult to quantify the full adverse effect that urbanisation has on stream water quality and in-stream values without further monitoring of upstream water quality (i.e. where the streams enter the city).

In Hamilton's predominantly flat landscape, ridgelines are features which give detail to an area, act as landmarks and provide views. They are significant local landform features which provide amenity value. These features also have cultural significance in identifying whanau, hapu and iwi boundaries, and in some cases they personify ancestors.

Lake Rotoroa, Lake Rotokauri (on the city boundary), Lake Rotokaeo (Forest Lake) and Lake Waiwhakareke (Horseshoe Lake) are important remnants of the extensive lake and wetland ecosystem that existed in pre-European times. The lakes are an environmentally significant habitat, both nationally and internationally, due to their size, rarity and location within an urban area. Wetlands include bogs, swamps (e.g. in the bottom of some gullies) and soakage areas.

Little remains of the indigenous vegetation which once covered the Hamilton Basin, described as "covered with a mixed forest dominated by rimu and tawa (with kahikatea dominant in the wet areas)." At the time of European settlement, the Waikato Basin was largely covered with manuka scrub, though significant patches of the original forest still remained. Very little of the original vegetation cover now remains.

Hamilton City Council's Urban Design Strategy — CityScope provides an umbrella framework which will manage and promote the city's identified natural values and significant natural features based on sound urban design principles, particularly at the time of land subdivision and development for closer urban development. Guidelines, best practice advice notes and other educational materials will be prepared in a coordinated and integrated format.

The principal issues regarding natural values in Hamilton are:

Waikato River Corridor and Gully Systems:

- **The removal of gully and riverbank vegetation can cause increased erosion, the destruction of wildlife habitats and pose a risk to the built environment.** Removal of vegetation along the riverbank and gully systems has increased erosion along the river-gully margins, affecting water quality and destroying local ecosystems. Removal of vegetation and disturbance of soil can also increase the risk to urban developments adjoining river and gully areas particularly in combination with heavy rain or flooding events.
- **Continuing urban development modifies natural waterways, reduces streamside vegetation, and disturbs habitats.** Urban development increases stormwater run-off which can affect the profiles of streams, making them less suitable for plants and animals. The design of stormwater infrastructure can also impact on stormwater run-off and subsequent disturbance of habitats. When natural waterways are disturbed by urban development, and altered for stormwater disposal purposes, they are often piped or channelled. This precludes the ability of streamside vegetation to capture sediment and contaminants. Stormwater discharges, run-off, industrial and agricultural waste discharges, and accidental spills or leaks, all combine to reduce water quality, increase sedimentation of downstream waterways and smother aquatic life.
- **Recreational activities can conflict with the natural values of the river and gully systems.** The River corridor and gully systems are used for a wide variety of recreational activities. However, there can be conflicts between different types of recreational activities and sensitive sites such as waahi tapu, remnant bush, and steep banks vulnerable to erosion.
- **Urban development can cause a loss of landscape and visual values.** The scale and location of urban development within the river corridor and gully systems affects the visual quality and natural

character of this area particularly where industrial/commercial activity adjoins the river and gully corridor.

- **The cumulative effect of incremental gully filling over time has a significant adverse effect on the integrity of the gully system as a whole.** The incremental filling of gullies has caused the progressive loss of the natural landform structure of gully systems in Hamilton. Much of the original gully system has been lost altogether along with its associated natural character and landscape values. Incremental filling of gullies for urban development leads to the cumulative long-term loss of a distinctive and unique natural feature of the Hamilton landscape.

Peat Lakes and Wetlands:

- **Peat lakes and wetlands have been degraded or lost because of a lack of information.** A lack of knowledge about the location or significance of lakes and wetlands has led to their modification or destruction. Significant areas of the city's original wetlands have been drained and subsequently developed for urban purposes and this is likely to continue without adequate assessment and identification.
- **Land use activities undertaken around lake and wetland margins, and within wider peatland catchments can affect the ecological viability of these natural features.** The protection of peat lakes and wetlands is dependent upon managing the effects of activities within the surrounding catchment as well as around the lake margins. Activities within this wider catchment can adversely affect the drainage (lowering of the water table) and water quality of the lakes.
- **Recreation and amenity values can be lost through urban development and subsequent use.** Destruction of lakes or wetlands precludes their use as recreation assets, while degradation of lakes and wetlands affects their visual values and limits their potential as attractive amenity features.

Indigenous Vegetation:

- **The area and condition of Hamilton's remaining indigenous vegetation limits their viability.** Much of Hamilton's remaining indigenous vegetation occurs in small, isolated pockets. A lack of connection between fragments hinders re-colonisation of plants and animals.
- **Indigenous vegetation can be degraded or lost through a lack of information.** There is a lack of information on the location, state, and significance of Hamilton's remnant indigenous vegetation. Without this information base, sites of ecological importance can be lost or degraded through the cumulative effects of urban development.
- **Protected ecological sites such as Claudelands Bush are still vulnerable to the cumulative effects of surrounding development.** The viability of protected sites (e.g. Claudelands Bush) can still be compromised by surrounding development, particularly from a lowering of the watertable, increased edge effects and invasion of plant and animal pests.

Ridgelines:

- **Urban development and construction on ridgelines can impact on landscape and visual values.** The development of building platforms on ridgelines reflects the desirability of these sites for residential development but may conflict with the visual integrity of ridgelines and potential linkages along viewing points from ridgelines.
- **Urban development can modify landscape elements and natural drainage patterns.** Current urban development practices can result in major modification of slopes and ridgelines, particularly through contouring which can also affect natural drainage patterns.
- **Urban development on ridgelines has the potential to disturb cultural sites of significance to Waikato iwi.** Sites of significance to Waikato iwi are still located at high points, but a lack of protection has resulted in physical disturbance to many.

Objective 3.1.1 Waikato River Corridor and Gullies

To protect the natural character, bank stability and water quality of the river corridor and gully system for their visual, wildlife, cultural, historical, and recreational values and enhance these significant natural features and their associated ecological processes.

Policies

- a) Control activities that have significant impacts on physical form, wildlife habitats, water quality and land stability, particularly the clearance of vegetation along the river and the filling of gullies, including the cumulative effects of incremental gully filling.
- b) Ensure that any access, recreational activities and associated infrastructure along the river and gully margins, is undertaken in a manner that is consistent with ecological values and processes and natural hazard management.
- c) Maintain and enhance the ecological functions of waterways by minimising the modification of natural watercourses and riparian margins.
- d) Maintain those aspects of the Waikato River and Gullies that are of significance to Waikato iwi, in particular the spiritual dimension and mauri (life force) of water.
- e) Minimise the adverse effects of development in greenfield areas on the existing natural drainage patterns.
- f) Encourage the multi-functional use, connectivity and accessibility of the City's river corridors and gullies, for cycling, walking, cultural and shared public space, where such activities are compatible with and do not detract from identified ecological and amenity values.

Reasons

Hamilton's gully system is geologically unique (the outcome of a particular geological history unique to this area). The natural shape of the gullies, which comprises steep sides and a flatter, wet floor, has resulted in distinctive plant communities on the sides and bottoms. The remaining native vegetation in the gullies are important as a source of local genetic stock for restoration. This unique gully landform is at risk from incremental filling. The cumulative effect of this filling over time has a significant adverse effect on the landform, and its associated landscape, visual and amenity values.

As the city's major wildlife habitat and landscape feature and key taonga for Waikato iwi, the river corridor and gullies will need to be managed to ensure that any activities do not compromise the natural, landscape and cultural values.

Much of the river and gully banks have been subject to building activity, particularly along the top of slopes. The scale and location of building, and the extent of impervious surfaces provided for access, parking and storage can have major impacts on the viability of natural areas and on land stability. Buffer protection along river and gully margins (including the banks and lip of the bank) together with careful management of activities within these environments will ensure sufficient ability for the impacts of land use activities along their edges to be absorbed.

Similarly, effective management of these areas is important in regard to flood plain functions, waterway vitality and providing access and recreational opportunities. The city's waterways serve as a stormwater disposal system and the quality of stormwater discharges can have considerable effect on receiving waters, particularly the city's lakes and streams. Management of waterways should take account of not only drainage needs, but also the enhancement of ecological and amenity values. Opportunities also exist to promote these 'green corridors' for alternative activities and uses providing they do not detract from the primary management objectives. For example, these areas can be used to enhance linkages, connectivity and accessibility throughout the City. Green corridors may be able to support recreational activities, such as walking, cycling, and ecological promotion.

Objective 3.1.2 Peat Lakes and Wetlands

To protect and enhance the natural character and ecological viability of lakes, wetlands and their margins as visual, cultural, wildlife, and recreational assets.

Policies

- a) Identify and protect the remaining lake and wetland areas within the city from the adverse effects of urban development.
- b) Avoid, remedy or mitigate the adverse effects of urban stormwater to maintain and enhance the water quality of the city's lakes and wetlands as habitats for fish, other aquatic species, and plants.
- c) Control development within identified peatland catchments surrounding lakes and wetlands to maintain and enhance the quantity and quality of groundwater and ecological viability of lakes and wetlands.

- d) Ensure public access around lake and wetland margins and recreational activities on the surface of water are compatible with maintaining ecological values.
- e) Maintain those aspects of the environment that are of significance to Waikato iwi, in particular the spiritual dimension and mauri (life force) of water.

Reasons

Several wetland areas remain in the city, although significant areas of the city's original wetlands have been drained. It is because of this rarity that these areas are of such importance, and they also have significance under Sections 6 and 7 of the RMA. Knowledge about existing sites (particularly wetlands) is limited. Identification and assessment of these sites will be the first step towards their protection.

The fragility of existing lake and wetland habitats within the city is exacerbated by a lack of adequate buffer protection. If land use activities on the surrounding peatland catchment are controlled (particularly in terms of maintaining the water table) this will help to maintain their natural functioning i.e. the ecological services they provide (such as acting as a stormwater sponge). Subsequent effects on infrastructure will also be minimised due to a slowing of differential shrinkage.

The provision of open space and extension of green areas around lakes and wetlands where practicable will enhance their protection and enable public access. This will affect the proximity of structures and impermeable surfaces to lakes and wetlands. It will provide for potential disposal of stormwater to ground in appropriate areas, reducing stormwater discharges, improving surface water quality and maintaining the watertable.

Objective 3.1.3 Indigenous Vegetation Remnants

To maintain and enhance the city's remaining indigenous vegetation ecosystems and associated ecological processes.

Policies

- a) Identify, maintain and enhance significant remnant vegetation and fauna habitat.
- b) Control activities adjoining significant sites of indigenous vegetation to minimise the adverse effects on indigenous vegetation and fauna habitats.
- c) Ensure adjoining activities are compatible with maintaining the identified natural values of significant vegetation and fauna habitats.
- d) Minimise the clearance of indigenous vegetation and subsequent adverse effects on the quality of water, soils, native vegetation and fauna habitat, and the mauri of those resources.
- e) Encourage activities on public and private land that promote and enhance the restoration of linkages between areas of indigenous vegetation and fauna habitats in particular the re-planting of gully and riverbanks with indigenous vegetation.

Reasons

Several areas within the City (particularly along the river and gullies) contain indigenous plant associations, the previous significance of which has not always been appreciated. These will be protected because of their unique natural values, and as examples of the kind of features that existed prior to settlement. Other features such as Claudelands Bush are protected as a forest remnant.

These environments are particularly important but in many cases fragile, being adjacent to or within a large urban area, and potentially threatened by urban development. A significant portion of this land is in public ownership, but long term public management needs to retain their natural values and ensure that any development is compatible with those values.

The fragility of some existing habitats is worsened by isolation and a lack of adequate buffer protection. Protection will be enhanced by controlling activities adjacent to such habitats and by providing open space linkages and extension of 'green' areas where practical.

Methods

The Natural Values objectives and policies will be implemented through the following methods:

District Plan

- **Environmental Protection Overlay** - includes standards governing earthworks, vegetation clearance, filling of land, structures in and adjoining waterways, and density of development. This overlay will also be used to identify and control natural hazards such as flooding, erosion, and land instability.
- **Subdivision and Development Rules** - provide for esplanade reserves and esplanade strips to be taken at the time of subdivision.
- **Reserves Contributions** - provides the ability to acquire natural features and linkages as reserves at the time of subdivision.
- **Establishment of an Ecological Database** - will enable the identification and assessment of ecologically significant sites and management options to be developed. Associated rules may be developed to enable effective management of these sites.
- **Structure Plans** - provide guidance for future development of the greenfields areas of the city. Structure Plans will be used to identify significant ecological and landscape features to be acquired for reserves and provide linkages between these areas.
- **Significant Archaeological, Historic, and Cultural Sites Overlay** - will control activities that have the potential to damage or destroy identified significant sites.
- **Rotokauri Structure Plan** — provides a context for the protection of the existing natural values of the landscape including Lake Waiwhakareke, the Natural Heritage Park, Pikihinau Reserve and ridgelines.

Other Methods

- **CityScope** — Councils new Urban Design Strategy provides an umbrella framework which will manage and promote the City's identified natural values and significant natural features environment, from a design perspective based on sound principles, particularly at the subdivision for close urban development. Specific guidelines, best practice notes and other educational material will be prepared by Council and presented in a coordinated and integrated format.
- **The Green Network Strategy** - is a broad strategy that aims to integrate natural values and urban development through a range of regulatory and non-regulatory methods across Council Units and within the community.
- **Reserves Act Management Plans** - must be developed for ecologically significant sites and key natural features on Council reserves. Planning for Council's reserve network can add another level of detail to district plan rules and also provides for additional public consultation.
- **Hamilton City Council's Recreation and Leisure Plan** - identifies the need to facilitate access to Hamilton's riverside parks and gully areas while protecting environmental values.
- **Council Works Programmes** - particularly those relating to stormwater disposal and drainage, roading construction and sealing programmes can be undertaken in a way which retains and enhances natural values.
- **Hamilton City Development Manual** - will provide for stormwater disposal and treatment standards including increased on-site disposal of stormwater within identified peatland catchments.
- **Guidelines and Other Educational Material** - will be developed to assist landowners, developers, and the wider community, regarding matters such as revegetation and restoration guidelines for gullies, best practice guides for the management of wetlands and peatlands etc.
- **Subdivision Design Guidance** — will be used to provide an interpretation of Assessment Criteria and Performance Outcomes in so far as they relate to the subdivision of land.
- **Stormwater Catchment Management Plans** — will be used to provide a technical evaluation of the effects of land use changes on stormwater, and provide direction on infrastructure needed to mitigate adverse effects on receiving environments. Catchment Management Plans will be prepared for city growth areas as part of the City's comprehensive stormwater discharge consent. The operation aspects of ongoing environmental mitigation are covered in the City's Stormwater Management Plan (education, riparian planting, street cleaning, spill management, etc)
- **Covenants** - such as QE II Covenants and Conservation Covenants can be utilised to protect indigenous vegetation remnants on private land.

Anticipated Environmental Results

The following environmental results are anticipated:

- The natural character of the Waikato River corridor and gully system maintained.

- Natural functions of peat lake/wetlands margins and their surrounding catchments maintained.
- Significant ecological sites identified and protected.
- River and stream margins retained and enhanced as wildlife habitats, natural flood retention basins and amenity assets.
- Surface and groundwater quality within the city improved.
- Improved recognition of Tangata Whenua values.
- A series of linked ecosystems throughout the city.
- Retention of natural features in new developments.