DONNY PARK

OPERATIVE MANAGEMENT PLAN
2004

(First Review)

Donny Park Operative Management Plan

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1.0 INTRODUCTION AND SITE DEFINITION

1.1 Introduction

This management plan provides the framework for the future management of Donny Park (Figure 1). It is the result of a comprehensive review of the Donny Park Management Plan 1983.

The Plan has been prepared in accordance with the requirements of the Reserves Act 1977. There is also a number of other legislative and policy drivers underpinning the plan. These are described in section 3 of this Plan.

The Gully Reserves Management Plan (GRMP) that became operative in May 2001 provides the strategic framework for the management of four major gullies within Hamilton City. It sets out objectives, policies, and key implementation actions for the management of these gullies and also gully zoning concepts and management principles. Whilst the main focus of the GRMP was on four specific gullies, it was anticipated that it would also in due course provide the strategic framework for the management of all gully reserves in the ownership of Hamilton City Council and at the same time provide inspiration and guidance to private owners of gullies. Consequently the GRMP has been used as the strategic framework for the development of the Donny Park Management Plan and care has been taken to ensure consistency with that plan. However as it is based on a single site the Donny Park MP differs from the GRMP in being more specific about management issues and more prescriptive about how issues are to be addressed.

1.2 Site Definition

Donny Park comprises the following legal lots:

Plan	Lot Number	Area (ha)	Gazette Notice	CT No.
DPS 24371	49	.6208	2004 p.703	143741
DPS 24372	48	.0446	2004 p.703	143741
DPS 22070	26	.2773	2004 p.703	143741
DPS 5738	Part 28	1.2203	2004 p.703	143741
DPS 6186	Part 59	1.1488	2004 p.703	143741
DPS 16088	23	.6859	2004 p.703	143741
Allotment 528, Kirikiriroa Parish		.1311	1984 p.4152	143741
DPS 16087	24	.3733	1984 p.4152	143741
DPS 24170	126	7.9662	1984 P. 3173	143741
		12.4683		

These lots are held by Hamilton City Council subject to the Reserves Act 1977 and by virtue of the Gazette Notices cited are classified for Recreation Purposes.

2.0 STRUCTURE OF THE DONNY PARK MANAGEMENT PLAN

The Plan is divided into four parts and a supporting Appendix. The parts are:

Part 1 Overview:
Part 1 defines the location and classification of Donny Park, describes the structure of the Plan, gives an overview of Hamilton's gully reserve network and sets out the purpose and scope of the Plan as this relates to relevant legislation and planning policy.

Part 2 Background information:
Part 2 describes the natural, recreational and cultural characteristics and values of Donny Park.

Part 3 Objectives, policies and key implementation actions:
Part 3 defines the objectives, policies and key implementation actions that will provide the mechanisms for managing the Park.

Part 3 of this Plan focuses on Donny Park's specific management issues and the approach/actions proposed to address them. These issues have been identified from a number of sources; the GRMP, public consultation, and input from Council Officers, professional ecologists, planners, engineers and environmental scientists

The key implementation actions set out in this Plan are not intended to be an exhaustive list of the actions needed to achieve the objectives of the Plan. Others will be identified through the operational life of the Plan.

Part 4 Management zones, principles and priorities:

This part of the Plan defines management zones within Donny Park and sets out the key principles to be followed in their management. Priorities for restoration and management are identified.

Part 4 of the Plan provides specific guidance on the management of Donny Park as well as useful information that can be applied to the management of other parts of the gully system, including those in private ownership.

3.0 LEGISLATION AND PLANNING POLICY FRAMEWORK

3.1 Overview of the Hamilton Gully Reserves Network

A significant proportion of the gullies in Hamilton are protected as reserve. Their purpose can be described as:

> *"to protect the natural character, bank stability and water quality of the river corridor and gully system for their visual, cultural and recreational values and enhance these significant natural features and their associated ecological processes."* (Proposed Hamilton District Plan 3.1.1).

The Waikato River and adjacent gully systems are the major landscape features of Hamilton City and are a significant and positive element of the City's identity and "green" image. Until relatively recently the gully systems have been undervalued and often perceived as "waste land" areas. However, apart from transporting the City's stormwater to the Waikato River, gullies also perform an important amenity function by providing open space and the ability to "escape" the city.

The gullies also serve as a site for urban trees and contain remnants of indigenous vegetation. The vegetation within the gully systems protects their banks from erosion and provides habitats for wildlife. There is also the potential to create walkway/cycleway/wildlife corridors within the City that connect with the Waikato River and other parks.

There are however, negative issues associated with gullies. These include the dumping of garden and other waste, the presence of plant and animal pests and potential security risks to private properties from people using the gullies.

There are also substantial opportunities to improve gullies, including restoration of native vegetation, re-establishment of indigenous fauna, improvement in water quality and the establishment of more and better access and walkways. The gullies also provide opportunities for community involvement in bringing about these improvements and through education and scientific study.

This Management Plan addresses the above matters in relation to Donny Park and sets out how the Park will be developed and managed in the years to come. The mention of a project within this Plan does not mean that it will necessarily be resourced by the HCC. However projects well supported by the public are more likely to be endorsed and resourced through the annual planning process/Long Term Community Plan (LTCCP).

3.2 Legislation and Planning Policy Framework

3.2.1 Introduction

A hierarchy of legislation, planning documents and associated policies sets the framework for this Management Plan. The legislative requirement for management plans to be prepared for reserves is contained in the Reserves Act 1977, so this legislation provides the Plan's dominant purpose and direction.

Other documents that help the Council guide the protection, use and development of reserves in the City include the following:

- Hamilton's Community Plan (2004-14) and Agenda 21 (1992)
- Resource Management Act (1991)
- City of Hamilton Transitional District Plan and Proposed District Plan (1999)
- Hamilton's Recreation and Leisure Plan (1998)
- Parks, Domains and Reserves Bylaw (1999)
- Hamilton's Walkway/Cycleway Strategy (under review)
- Hamilton's Cycle Network Strategy (2000)
- Historic Places Trust Act (1993)
- New Zealand Biodiversity Strategy (2000)
- Proposed Regional Plan (2002)
- Regional Pest Management Strategy (1996)
- Hamilton's Sustainability Indicators (2002)

3.2.2 Reserves Act 1977

The Reserves Act 1977 requires all reserves to have a management plan. Section 41 of the Act describes the general form of management plans and sets out the process of public participation required for their development.

Section 3 of the Reserves Act states the general purpose of the Act as:

"(a) *Providing, for the preservation and management for the benefit and enjoyment of the public, areas of New Zealand possessing:*
(i) Recreational use or potential, whether active or passive; or
(ii) Wildlife; or
(iii) Indigenous flora or fauna; or
(iv) Environmental and landscape amenity or interest; or
(v) Natural, scenic, historic, cultural, archaeological, biological, geological, scientific, educational, community, or other special features or value;

(b) *Ensuring, as far as possible, the survival of all indigenous species of flora and fauna, both rare and commonplace, in their natural communities and habitats, and the preservation of representative samples of all classes of natural ecosystems and landscape which in the aggregate originally gave New Zealand its own recognisable character;*

(c) Ensuring, as far as possible, the preservation of access for the public to and along the sea coast, its bays and inlets and offshore islands, lake shores, and riverbanks, and fostering and promoting the preservation of the natural character of the coastal environment and of the margins of lakes, and rivers and the protection of them from unnecessary subdivision and development".

The Act also requires the classification of all reserves (Part III) to ensure management and development appropriate to their principal purpose. Donny Park is classified for recreation. The main purpose of recreation reserves is to provide areas for recreation and/or the physical welfare and enjoyment of the public whilst protecting the natural environment. Achieving this intention is the overriding purpose of this Management Plan. This intention is also reflected in objectives relating to gully bank stability, natural character, bird and fish populations, access and vegetation management.

The Reserves Act 1977 requires this Management Plan to be reviewed regularly after it becomes operative. Monitoring the effectiveness of measures implemented to meet the objectives of the plan will therefore be important.

3.2.3 Hamilton's Community Plan 2004-14 and Agenda 21

The Community Plan is prepared in consultation with the community, for the community. As the local authority Council is responsible for guiding Hamilton's development to reach the goals identified in the plan. Those goals are based on the principles of sustainable development. The Community Plan is reviewed on a three year cycle.

The Community Plan is a vision for the future of Hamilton and in the area of reserves addresses broad issues rather than specific policy. The Plan contains a number of key goals that are particularly relevant to the development of reserve management plans:

Goal 2 Hamilton's healthy ecosystems display improving biodiversity with a strong indigenous component.
Goal 5 Hamilton is a compact city with a well distributed mix of residential, employment and service activities, interconnected through a safe, effective and sustainable transport system.
Goal 14 All people are enabled and encouraged to participate in the development of Hamilton.
Goal 15 Hamilton provides a full range of recreational land, facilities and services to meet the community's passive and active leisure needs.

The Community Plan recognises the protection and enhancement of the city's biodiversity as being a significant challenge:

"As the city grows, new development needs to protect and enhance the gully networks and areas of indigenous flora and fauna. Replanting existing gullies and reserve areas, and establishing linked greenspace corridors will help restore the ecological balance of the city. These areas also provide Hamilton with a valuable recreational resource that contributes positively to the city's overall amenity."

Through its policy documents Council also recognises Agenda 21, which was produced by the 1992 Rio Earth Summit. Agenda 21 is a global plan for sustainable development in the 21st century. Sustainable development is defined as:

"*development which meets the needs of the present without compromising the ability of future generations to meet their needs*".

Agenda 21 recognises that global issues need to be addressed at the local level — i.e. "*think globally, act locally*". Hamilton's Strategic Plan is also its Local Agenda 21 plan for achieving sustainable development, and Reserves Act management plans are a method by which the principles of Agenda 21 can be implemented at a local level.

3.2.4 Resource Management Act 1991 (RMA)

The purpose of this Act (Section 5) is to promote the sustainable management of natural and physical resources, by managing the use, development and protection of natural and physical resources in a way, or at a rate which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety, while satisfying the matters set out in paragraphs (a), (b) and (c) which are:

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

Section 6 (Matters of National Importance), Section 7 (Other Matters) and Section 8 (Treaty of Waitangi), set out matters that are complementary to the purpose of the Reserves Act 1977. Some of these relationships are highlighted below:

the preservation of the natural character of ... rivers and their margins ... and their protection from inappropriate subdivision, use and development (Section 6 (a) RMA and Section 3 (a) and (c) Reserves Act).
the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna (Section 6 (c) RMA and section 3 (b) Reserves Act).
the maintenance and enhancement of public access to and along ... rivers ... (section 6 (d) RMA and Section 3 (c) Reserves Act.
the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga (Section 6 (e) RMA).
the efficient use and development of natural and physical resources (Section 7 (b) RMA).
the maintenance and enhancement of amenity value (Section 7 (c) RMA).
the intrinsic values of ecosystems (Section 7 (d) RMA).
the maintenance and enhancement of the quality of the environment (Section 7 (f) RMA).

3.2.5 Hamilton's Recreation and Leisure Plan 2002 - 12

Hamilton's Recreation and Leisure Plan is the Council's Action Plan for recreation and leisure. The Plan identifies strategic goals for recreation and leisure in the City and these are supported by key objectives and strategies. Objectives 1.2 and 1.3 are particularly pertinent to this management plan:

1.2 *To work in partnership with other organisations to enhance existing Council recreation and leisure facilities with relevant and complementary activities.*

Its outcomes include:

1.2 (d) *Existing parks and pathways in parks are enhanced in ways that better meet the needs of the community.*

1.3 *To work in partnership with other organisations to create new recreation and leisure opportunities to meet the current and future needs of Hamilton's community and visitors.*

Outcomes for this objective include:

1.3 (e) *Management of open spaces to satisfy the recreation and leisure needs of the people of Hamilton and its visitors.*

1.3 (f) *walkway linkages between Hamilton's residential and commercial nodes, open spaces and the river corridor are provided.*

3.2.6 City of Hamilton Transitional District Plan and Proposed District Plan

The Transitional District Plan was prepared under the provisions of the now repealed Town and Country Planning Act 1977 and became operative in 1992. The City of Hamilton Transitional District Plan also contains specific objectives relating to walkways:

- *"To achieve a continuous public walkway along the riverbanks within the City boundary as part of the City's walkway system" (1.2.3);*
- *"To achieve a pleasant and safe walkway system…. where possible linking reserves, open spaces, community uses, shopping centres, and emphasising the City's natural features including the river, gullies and areas of natural beauty" (1.2.13).*
- *"To require walkways in the development of new areas on the City fringe to be established at the time of subdivision" (1.2.13).*

On 31 October 1999 the Hamilton City Council publicly notified its Proposed District Plan. A wide range of submissions were received to the Plan. Council completed hearing these submissions in 2001 and publicly notified its decisions on the submissions on 27 October 2001. A number of submitters have now referred matters to the Environment Court. Due to the change of emphasis in preparing the Proposed District Plan (under the auspices of the Resource Management Act 1991) the new plan does not contain specific provisions for walkways. A separate Walkway/Cycleway Strategy is another method of implementing the objectives and policies of the Proposed District Plan.

The Proposed District Plan has zoned Donny Park as "Recreation Environment". This zone covers parks that have actual or potential environmental value and recognises their value in terms of providing amenity, open space, buffering incompatible activities and their contribution to defining city form. Accordingly, there is an emphasis on the protection of conservation values and activities provided for in the Recreation Environment Zone are generally informal or passive. In addition to the Recreation Environment zoning most of the gully area is also subject to the Environmental Protection Overlay which recognises the fragile nature of these areas and provides for limited development only.

The zoning of the reserves relates to their classifications under the Reserve Act 1977. There are three main purposes to the zoning of the reserves in the Proposed District Plan:

(a) They act as a "quasi - management plan" if a Reserves Act 1977 management plan has not yet been prepared..

(b) The zone prescribes permitted activities in the reserve and defines the circumstances under which a resource consent must be sought. The consent application process provides for public consultation in the situation where activities or buildings are likely to have adverse effects outside the boundaries of the reserve (e.g. noise, hours of use, height of buildings). This is one of the functions of the Resource Management Act 1991.

(c) They are a method of achieving the goals and objectives of the Proposed District Plan (Policy 5.2 & Objective 5.2.4).

3.2.7 New Zealand's Biodiversity Strategy

The decline of New Zealand's indigenous biodiversity is described in the State of New Zealand's Environment report as "our most pervasive environmental issue". In order to "turn the tide" in favour of indigenous flora and fauna New Zealand's Biodiversity Strategy establishes a framework for action, to conserve biodiversity and manage it

sustainably. Halting the decline in New Zealand's biodiversity and involving the community and individuals in its management are central key goals of the Strategy. The restoration of indigenous flora and fauna to the gully system in the City is a major opportunity for the people of Hamilton to play their parts in fulfilling these goals.

3.2.8 Other Relevant Documents

The legislation and policy outlined above have set the framework, the philosophy and the process for this Management Plan including its policy for the future use, development and maintenance of Donny Park. The plan also seeks to be compatible with other policy documents as it will in turn influence other policy, bylaws, Annual Plan priorities and service delivery agreements and standards. Other policy documents needing mention are:

3.2.8.1 Parks, Domains and Reserves Bylaw 1999

The Parks, Domains and Reserves Bylaw 1999 is designed to assist with the administration and operation of reserve land controlled by the HCC or the Hamilton Domain Board.

3.2.8.2 Hamilton's Walkway/Cycleway Strategy

Hamilton's Walkway Strategy was initially established under the Hamilton City Comprehensive Development Plan (HCCDP) 1974. Its review (as a walkway/cycleway strategy) is identified as an outcome of Hamilton's Recreation and Leisure Plan 1998.

The focus of the walkway/cycleway strategy is to define and foster the role that walkways play in enhancing the city's open space network by encouraging use, creating linkages and protecting environmental values. Walkways/cycleways provide opportunities for people to have free access to more active lifestyles without direct charges and many neighbourhoods can access existing walkways/cycleways without having to use a car to get there. Walkways/cycleways can link open space areas and extend the perceived size and remoteness of open space areas without requiring the acquisition of large areas of land. Given the lineal nature of gully reserves they lend themselves well to the development of walkways/cycleways.

The polices of the HCCDP identified the desirability of establishing walkways/cycleways separate from streets and of providing continuity/linkages between neighbourhoods, rural areas, the city centre and other facilities. Furthermore, paths should provide for both pedestrians and cyclists unless safety factors make this impracticable. Paths should emphasise major physical features within Hamilton, particularly the Waikato River and gullies. Donny Park provides an opportunity to link the Waikato River walkway to its local area.

3.2.8.3 Hamilton Cycle Network Strategy

HCC's cycling policy and strategy is contained in "Cycling in Hamilton 2000" (CiH 2000) which was approved in March 2000 and became operative in April 2000. A key background document to CiH 2000 is the Cycle Network Strategy Study Report (Opus, March 1999). The proposed cycle network contained in this document has been informally adopted by HCC. The network proposals identify a network of potential off-road cycle routes. This network includes a number of paths or potential paths through Donny Park. The proposed Walkway/Cycleway Strategy will particularly address

cycleway/walkways on reserves.

3.2.8.4 Historic Places Trust Act 1993

The Historic Places Trust Act 1993 overrides any of the provisions of this Management Plan or the Reserves Act 1977, with respect to the protection and preservation of waahi tapu and archaeological sites. Users of this management plan should refer to Hamilton City Council planning staff regarding consultation with tangata whenua prior to carrying out works on a pa or waahi tapu site. A Pa (the site of the battle of Kukutaruhe), located on the south side of Donny Park adjacent to Conway Place, is scheduled in the Proposed District Plan.

3.2.8.5 Regional Pest Management Strategy

The Regional Pest Management Strategy (2002-2007) identifies plant and animal pests within the Waikato Region. It explains why they are pests and how they are to be controlled within the region. A number of plant pests listed in the currently operational Strategy are found within the gullies. Landowners, including councils, are required to control plant and animal pests on land that they occupy as set out in any strategy rules prescribed in Part Two of the Strategy. This Management Plan provides a framework within which HCC can fulfil its responsibilities for Donny Park in accordance with the Strategy.

3.2.8.6 Proposed Regional Plan

The Proposed Regional Plan (1998) is intended to provide direction on the use, development and protection of natural and physical resources within the Region. It covers key components of the environment for which the Waikato Regional Council has responsibility under s30 of the RMA, including water, river and lake beds, land and soil, air and geothermal resources. Gully restoration and management activities must comply with the Regional Plan and some activities may require resource consents before they can proceed.

3.2.8.7 Hamilton Sustainability Indicators

Sustainability Indicators provide a way in which we can measure, directly or indirectly, changes to the environment, society and economy over a period of time. They provide a picture of what is going on around us that can be used to guide future planning as well as assess performance against objectives and policies. The following indicators are pertinent to reserve management:

7 Urban Trees

The protection of urban trees, the promotion of native tree planting projects and street tree plantings, and the vegetation of public and private land are important steps to meeting the goals of maintaining a healthy ecosystem and improving biodiversity in Hamilton. Sustainability indicators relating to the number of trees planted and the number of individuals and organisations undertaking native tree restorations in Hamilton are used to assess progress in this respect.

15 Community and Recreational Facilities

Greenscape areas within the city help protect and enhance ecosystems, mitigate

the effects of urbanisation and provide residents with a range of recreational activities and opportunities. Greenspace also helps maintain a sense of community within the city. Accessible greenspace gives Hamilton residents the opportunity to enjoy natural surroundings within the city, play sports and walk dogs etc. Sustainability indicators relating to greenspaces include a measure of the total area of greenspace in the city.

Part 2: Background Information

4.0 DONNY PARK: KEY CHARACTERISTICS AND VALUES

4.1 Physical

Except for a few fringe areas most of Donny Park is gully, and its physical character reflects the processes by which gullies form in Hamilton. The gullies can be grouped into about six systems each of which has an outlet to the Waikato River (McCraw, 2000). The formation and general characteristics of these gullies is described in the GRMP.

Located between River Road to the west and Bankwood Road to the east, Donny Park is one of the larger gully parks in Hamilton. It is orientated along a north-west to south-east axis and is narrowly separated from direct connection to the Waikato River corridor by River Road. To the north and south the gully is enclosed by residential development, whilst its southern extremity is next to Fairfield College's grounds. The southern extremity of the park connects with another arm of the gully system to the east that fringes the northern boundary of Fairfield College (Figure 1).

In common with other Hamilton gullies Donny Park has steep sides and retains its depth through much of its length. The floor of the gully is wider than many and this has allowed the development of fairly extensive areas of waterlogged peaty soils in the base of the gully. These wet soils contrast with the gully slopes that are in general free draining soils formed from fine tephra (ash).

4.2 Drainage and Water Quality

The main drainage channel in the gully is the Kukutaruhe Stream that flows west along the length of Donny Park. For the most part it takes a natural meandering course through the gully and appears largely unmodified. However, sections of the bank have been reinforced locally to prevent erosion, most notably at the bridge connecting the Perindale Drive/Wymer Terrace path, where old rubber tyres have been used to protect the bank. The stream discharges into the Waikato River via a culvert under River Road.

Another drainage channel flows into this main channel from Emerald Place. The channel is essentially straight and approximately 0.7m wide. It is situated in a steep sided cutting approximately 2m deep. Attempts to stabilise the banks have been made in the past using concrete and weirs. The weirs are still in place but the concrete reinforcing has largely broken up. Water flows into this channel from stormwater drains close to the park boundary. However, there is also overland drainage and seepage from gully slopes on the east bank. Lack of vegetation cover is leading to erosion in this area and further instability. Herbicides have been used to control weeds both along the stream channel and also the gully slope to the east, leading to substantial areas of ground without vegetation cover. Restoration attempts have had low success. The result is a stream/gully environment that is both unstable and unsightly.

The gully streams are an essential part of Hamilton's drainage network. This land drainage function is a natural feature of the gullies. However, catchment modification through urbanisation has changed the flow regime and the quality of water entering the gullies. Although the effects of these changes on Hamilton's streams have not been fully assessed, it is highly likely that their biology has been modified as a consequence. Furthermore, direct modification of the gullies has also created conditions that are

unfavourable to many forms of aquatic life. The streams in Donny Park in common with other Hamilton streams have been modified both in terms of flow regime and water quality. However, visual inspection of the stream finds a stream that has reasonable water clarity and abundant aquatic weed growth. It can be reasonably assumed that even in its modified state the stream will support a variety of aquatic fauna including populations of fish. The stream is shaded in parts, notably at the western end of the gully. However substantial sections lack tree cover, which will contribute to increased water temperatures with consequent effects on fish populations. The culvert under River Road represents a barrier to the passage of many fish species.

4.3 Ecology

Donny Park in the context of the Hamilton Ecological District

The ecological context for Hamilton's gullies is described in the GRMP. In common with other gullies, the flora and fauna of Donny Park is dominated by species typical of highly modified environments. However, it still retains some pockets of indigenous vegetation and provides habitat for a range of native and exotic fauna. Like other gullies Donny Park is of high potential ecological value in the context of the Hamilton City and the Waikato Basin and represents a significant opportunity to contribute to the restoration of native flora and fauna to the City and the wider Waikato area.

Vegetation

The vegetation of Donny Park is mainly dominated by exotic species with indigenous flora occurring as local remnants and in some areas recently replanted with native species. Three broad habitats can be defined:

- Grassland
- Exotic forest
- Wetland

Grassland

A significant proportion of the park is managed as amenity grassland. These areas have low species diversity comprising a few common grass species and associated broad-leaved weeds. The primary function of such areas is to provide opportunities for recreation.

Exotic forest

Exotic forest is a dominant feature of steep gully slopes and also some sections of the gully floor along the riparian margin. Exotic trees, shrubs and weeds form by far the largest component of this vegetation. Crack willow *Salix fragilis,* including some large trees, is a significant constituent of the riparian vegetation, as is alder *Alnus sp.* Alder has been planted extensively along the riparian margins of the stream and lower gully slopes and is one of the most abundant tree species in the park. Other species including grey willow *Salix cinerea* and poplar *Populus sp* are also found on the lower gully slopes. Below Wymer Terrace is a number of large Lombardy poplars, which are valued by some residents as a local landmark. Along the gully fringes to the north of Chelsea Avenue and Donny Avenue are a number of Banksia trees that provide feeding for native birds such as Tui.

The drier steeper slopes and slope crests support blackwood, eucalypts and pine. Most of these are mature trees but in some locations the eucalypts are still relatively young and there is an opportunity to remove them before they get too large.

A weedy understorey is present to varying degrees throughout most of the exotic forest, though locally some areas beneath the forest canopy have a complete absence of ground cover. *Tradescantia fluminensis* is locally dominant with a range of other weed species present including honeysuckle, privet, three-cornered garlic, convolvulus and blackberry *Rubus fruticosus agg*.

Indigenous vegetation is present locally, representing both remnants of previous native forest cover and more recent planting. Pockets of tree fern including mamaku *Cyathea medullaris,* wheki *Dicksonia squarrosa* and silver fern *Cyathea dealbata* occur in many locations under the exotic canopy together with other natives such as cabbage tree and mahoe. There are also small stands of other mixed natives including lemonwood, *Hoheria populnea and Coprosoma tenuicaulis* that represent planted habitat. The park also boasts a reasonably large kahikatea specimen.

Wetland

The broad floor of the gully, notably at its south-east end, has allowed the development of fairly extensive areas of waterlogged peaty soils. Previously these areas had been invaded and become dominated by exotic species such as grey willow. However, in recent years various attempts have been made to restore indigenous wetland and swamp forest habitat to the area. Overall these attempts have only enjoyed very modest success. This is thought to be due to poor species selection for specific site conditions coupled with inadequate attention to planting and aftercare.

The vegetation of this low lying wetland is currently a patchwork of bare ground, weed communities, native sedge (principally *Carex secta),* recently established swamp forest trees such as kahikatea and small patches of grey willow. A variety of young indigenous trees that have mainly been established on drier ground and small stands of naturally established Raupo reedland are also present. The Raupo reedland has been identified as the best example of its kind within a gully wetland in Hamilton (Downs *et. al.,* 2000).

Fauna

Birds

The gully supports a number of native bird species including silvereye, fantail, New Zealand kingfisher, harrier, pukeko and morepork. All these species appear to survive well in highly modified environments dominated by exotic vegetation. White-faced heron breed in the gully and there was a number of reports of Tui feeding in the gully during 2003. Provision of more native forest and food bearing trees would help to increase the frequency of occurrence of this species. The gully also supports various introduced species that add to the diversity of the bird life found. These include blackbird, song thrush, goldfinch, chaffinch, greenfinch and pheasant.

A key objective of the plan will be to maintain and enhance the gullies for birds with particular emphasis on enhancing habitats to encourage a greater range of native bird species.

Fish

Detailed quantitative data are not available on the fish communities in Hamilton's streams. However, from the information available it would appear that eels dominate the fish fauna with a low incidence of other species. An electric fishing survey of Hamilton's streams conducted in January 1997 found a number of fish species. Shortfinned eel occurred in all the main streams and longfinned in some. This is probably the result of a number of factors including poor access to the Waikato River due to man made barriers such as culverts, lack of shading of watercourses leading to high water temperatures, lack of habitat structure and poor water quality. The predominance of eels is probably the result of them being a relatively robust species, tolerant of high water temperatures and able to negotiate significant obstacles (Hicks pers. com.).

The stream in Donny Park is likely to support eels and possibly other species. Surveys of the upper reaches of the nearby Kirikiriroa system by Environment Waikato found banded and giant kokupu (DoC submission). The stream through Donny Park has both shaded sections and overhanging banks. The habitat is therefore available for these species to occur. If the access from the Waikato River is unrestricted the stream is likely to support a range of native fish species.

Invertebrates

Little is known about terrestrial invertebrates within the gullies and there are no known studies of this group. Downs et. al. (2000) found no studies relating to this fauna group for Hamilton's gullies. Somewhat more is known about aquatic macroinvertebrates. Wilding (1998), based on sampling conducted in December 1996 and January 1997, concludes that the macroinvertebrate communities in Hamilton's streams are dominated by pollution tolerant taxa.

4.4 Recreation and Community

Donny Park is used for a variety of recreational activities. Walking, often with a dog, is likely to be the predominant activity. Some users have particular knowledge and appreciation for the wildlife within the gully and therefore the natural content of the gully is important to their enjoyment. For other users it is likely to be more general aesthetic qualities of space, vegetation and the presence of the stream that are foremost in their experience.

Children use the park for informal play with the wooded areas and stream providing a semi-natural adventure play ground. Swings are provided in two locations around the park periphery. Other than these, formal play facilities are not provided. The presence of a disused swimming pool that is accessible from the park is a potential hazard to children.

The park is accessible from many locations and access can generally be described as good. In addition to those who enter the park for passive recreation it is used by commuters either cycling or on foot. Within the park there is a number of concrete paths. Most are in reasonable repair although there has been some subsidence in places. The concrete paths do not link all access points and are too narrow to be considered dual purpose i.e. able to accommodate pedestrians and cyclists. Notably there is no continuous link through from River Road to Fairfield College.

In addition to the concrete paths there is a number of informal desire lines. Notably

these occur along the stream between the two main bridges. On the north side of the stream use by heavy vehicles has cause severe rutting.

4.5 Landscape and Aesthetics

Gullies are a major topographic feature of the City and an important part of the landscape. Typically the visual qualities of Donny Park cannot be appreciated from a distance because of the topographic nature of gullies. The visual qualities of the Park are therefore most likely to be appreciated by those occupying adjacent properties that have views into the gully and those entering the gully to commute or for recreational purposes. Vistas into the gully are available to the public from a number of locations around the park perimeter. However the most extensive views are to be found within the gully itself, where the broad base of the gully and extensive areas of grassland create the greatest sense of open space.

The aesthetic qualities of the gully are not only visual but relate to a range of user experiences such as "contact with nature" and the quiet ambience found in such areas. Nevertheless the visual experience is a very important sensation for most users. At the present time a number of features and actions result in loss of visual quality in some parts of the gully and require attention.

4.6 Historical and Cultural

Historically the gullies were an important resource for Maori providing medicinal herbs, plant products and areas to catch fish, particularly eel. Traditionally these were also important areas for growing crops. Gullies therefore have a variety of values to Maori and are important both spiritually and culturally.

In pre-European times, Donny Park and the surrounding lands was known to Maori as Kukutaruhe (pigeon flight). The land, and particularly the gully system, had considerable significance to Ngati Wairere as it was an important tribal landmark steeped in tradition. Kukutaruhe was renowned as an area for snaring and hunting native pigeons that fed on the red Koroi berries of the kahikatea and the berries of the miro and tawa. Waituhi (wooden troughs with snares) were set in the trees to lure thirsty pigeons to drink the water and hence the birds were snared as they drank (Nga Mana Toopu, submission).

There was a number of significant Pa and Papakainga settlements overlooking the gully. The largest Pa was Te Tupari. The great warrior and warlord Hanui lived at this Pa sometime during the 1700s. Te Tupari also overlooked the Waikato River and was situated near what is now the Waikato Diocesan School for Girls. The cultivations associated with the Pa extended throughout the area (Nga Mana Toopu, submission). The Proposed District Plan identifies a pa site (Kukutaruhe) in the area adjacent to Donny Ave and Conway Drive that includes areas of Donny Park (Figure 4). While no surface features remain, it is possible that artefacts may be present below the ground surface; hence it is listed as a Group 2 'significant site'.

A number of significant artefacts associated with the pre-European Maori habitation of this locality have been recovered from Donny Park and the surrounding area.

4.7 Education and Research

Hamilton's gullies provide an important potential education and scientific resource and Donny Park is no exception. Some Hamilton schools are already involved in gully

restoration and it is an excellent way of introducing children to ecological principles and giving a sense of ownership of gullies. Donny Park with its potential for habitat restoration provides considerable scope for education. However, whilst the opportunity for education exists it is also true the schools sometimes have difficulty taking advantage of this opportunity within the constraints of their curriculum and teaching resource.

Similarly, whilst gullies have already been the subject of scientific study there is still a great deal to learn about their ecology, history and cultural values for Maori. Donny Park therefore represents a significant resource for research.

4.8 Summary of Current Values

The values of Donny Park are many and varied and mean different things to different people. They can be summarised as follows:

- An important part of Hamilton's drainage network;
- A refuge for native flora and fauna;
- An opportunity to further restore and enhance biodiversity within Hamilton City and the Waikato;
- A place for informal recreation including walking, appreciation of nature, children's play;
- A unique feature of the landscape with important aesthetic qualities that are becoming increasingly valued by the public;
- A route for commuters;
- An opportunity to further enhance pedestrian and cycle linkages within Hamilton;
- A place of historical and cultural significance for Maori;
- An opportunity for education and research;
- An opportunity to foster community interaction;
- Part of a unique network of gullies that provides an opportunity to enhance Hamilton's identity.

PART 3: Objectives, Policies and Key Implementation Actions

Goal of the Donny Park Management Plan

The overall goal of this management plan is:

"To provide a framework for the management of Donny Park to conserve and enhance its natural, recreational, educational and cultural value for the benefit of the community, to support Hamilton City Council's commitment to sustainable development as defined by Agenda 21 and required under the RMA, and to provide for walkways and cycleways."

5.0 GULLY SLOPE AND STREAM STABILITY

5.1 Objective

- To maintain and enhance gully slope and stream bank stability whilst enhancing natural and aesthetic values and maintaining public safety.

5.2 Policies

- Bank stability will be preserved or enhanced through the maintenance of existing vegetative cover along streams where it meets the goals of this plan or, if it does not, through its progressive replacement using native trees, shrubs, tree ferns and wetland plants.
- Natural and man-made debris will be removed from streams provided removal does not compromise stability or jeopardise people or property.
- Exposed gully slopes will be stabilised as soon as practical using predominantly native trees and shrubs.
- Over mature trees that threaten gully slope stability will be removed.
- Young trees such as eucalypts that are likely to threaten gully slope stability when mature will be removed.
- Where practicable bare slopes beneath mature tree canopies will be stabilised by planting an understorey.
- Use of herbicides along streams will be discontinued to avoid excessive exposure of bare ground.
- Use of herbicides along gully slopes will be minimised to avoid excessive exposure of bare ground.
- "Hard" engineering solutions will be considered for maintaining stream bank stability if vegetation alone is likely to prove insufficient. However, the adopted solution will take account of the aesthetics of the location and will be integrated into the Park setting.
- Timber and other debris from maintenance operations will be promptly removed from the Park so that it does not become a hazard for the public or become deposited in the watercourses.

- The stream crossing currently used by maintenance vehicles will be replaced by a permanent crossing structure, if practicable.
- Engineered structures will be made, designed or modified to ensure public safety and allow for passage for fish and other invertebrates.

5.3 Discussion

Stream stability

The Kukuratuhe Stream through the park is reasonably stable and well vegetated. It is intended that this stability should be maintained, though the species forming the riparian margin will change over time. Some less desirable species such as large crack willow will be progressively removed and replaced with suitable native species such as kowhai, kahikatea and flax. Furthermore some currently open sections of stream will be planted with native trees to provide shading and extend the native vegetation cover in the park.

There is a number of problems associated with the drainage channel that flows from Emerald Place to the main stream. The stream channel itself looks artificial. Its banks are sparsely vegetated as a result of extensive herbicide application and consequently there is an increased potential for erosion. In the upper reaches of this channel there is a significant amount of broken concrete, as well as timber in the stream bed. This material is unsightly and has the potential to cause blockages and further erosion.

There is a need to undertake works on this watercourse that will stabilise it and improve its aesthetics. Vegetating the channel and adjacent gully slope to the south-east will help stabilisation and improve aesthetic appeal. Use of native species will contribute to restoration of both indigenous vegetation and associated fauna. However, the work needs to be carefully planned and implemented since the straight, steep banked channel make establishment of vegetation difficult, particularly if access for maintenance is to be maintained. "Hard" engineering solutions may need to form at least part of the final solution.

At least some of the broken concrete appears to be the result of previous attempts to stabilise the channel. Whilst in its current state it does not function as originally intended, it does provide some stability to the stream bed and banks. It detracts from the aesthetics of the watercourse, but attempts to remove it may result in further erosion. Further, removal of concrete may require a resource consent to authorise the required excavations. Any removal of the concrete would need to be part of an overall plan to improve and stabilise this channel. In the absence of this, the unsightly aspects of the concrete would be reduced if more vegetation was established along the stream banks, and such vegetation could also contribute to improving stability. In contrast to the concrete, the felled timber that is in the watercourse could be removed relatively easily and it is desirable to do so.

Gully slope stability

Lack of vegetation cover on gully slopes leads to instability and erosion. There are denuded slopes in the Park where vegetation needs to be re-established, including bare ground beneath more recent plantings and mature tree cover. Those areas with substantial areas completely devoid of vegetation, particularly the wet slopes in the Special Treatment Area within the Forest Sub-zone, are the highest priority for re-vegetation. In addition, certain management practices such as weed control using

herbicide can, if over applied, lead to excessive vegetation loss, promoting erosion. Such management practices need to be modified to ensure that application of herbicide does not lead to such problems.

Some large mature trees, particularly at the top of gully slopes, potentially threaten gully slope stability. These trees contribute to the overall gully environment, but must be managed carefully and should removed if necessary to ensure that stability is unaffected. Species such as eucalyptus that are known to have a high risk of being wind thrown when mature are best removed when young, if possible.

Maintenance vehicle stream crossing

Currently maintenance vehicles regularly cross the Kukutaruhe Stream at a particular point. This has resulted in localised erosion of the stream bank and also impacts on the aesthetics of the stream environment. Upgrading this crossing place to a permanent crossing structure such as a ford or bridge would therefore be desirable.

Reinforcing structure at Perindale Drive/Wymer Terrace path bridge

Old rubber tyres have been used to reinforce the stream banks upstream of the bridge connecting the Perindale Drive/Wymer Terrace path. Iron rods have been used to assist fixing the tyres. These presently protrude and are a hazard. They need to be made safe as a matter of priority. The tyres are also somewhat unsightly but perform an important erosion prevention function. If removed they may need to be replaced by another structure. Encouraging vegetation cover may be the best solution to this problem.

5.4 Key Implementation Actions

- Maintain vegetation cover along stream banks with progressive replacement of exotic species, particularly large crack willow, with suitable native trees, shrubs, tree ferns and riparian species.
- Plant exposed gully slopes with appropriate native species and under plant mature trees with native species to create a native under story.
- Train Council field staff to ensure that herbicide use and other control measures are selective and that restoration and vegetation management methods maintain gully slope stability.
- Remove any debris from creeks that jeopardises people or property.
- Investigate feasibility and best options for providing a permanent structure for maintenance vehicles to cross the stream
- Remove protruding ironworks from Perindale Drive/Wymer Terrace path bridge and encourage vegetation cover of tyres.
- Remove over mature trees that threaten gully slope stability.
- Remove young specimens of trees such as Eucalypts that are known to be susceptible to wind throw when mature.
- Assess options to stabilise watercourse flowing from Emerald Place to the main stream and adjacent gully slopes.
- Remove felled timber from Park only where it jeopardises people or property.

6.0 CONSERVATION AND ENHANCEMENT OF GULLY VEGETATION

6.1 Objective

- To restore appropriate indigenous vegetation communities to those areas of the Park defined as Natural Zone as far as this is practicable.

6.2 Policies

- The Natural Zone will be divided into two sub-zones to reflect the different management requirements of distinct areas within the Park.
- The Wetland/Swamp Forest Sub-zone will be progressively vegetated with indigenous wetland and swamp forest vegetation.
- A balance between swamp forest and more open wetland communities will be maintained as far as this is practicable.
- Emphasis in the Forest Sub-zone will be on weed containment and encouraging natural regeneration of the under-storey until other restoration priorities have been achieved. In the longer term a progressive replacement of exotic vegetation with native forest species will be undertaken.
- Selective planting will be undertaken in the Forest Sub-zone in areas currently devoid of tree and shrub cover and along riparian margins. In the medium to long-term this may include establishment of a kahikatea grove around the isolated tree in the centre of the Park.
- Emphasis in the Special Treatment Area within the Forest Sub-zone will be on achieving stabilisation and aesthetic improvement as soon as possible.
- Native plant material of local provenance will be used in restoration, as far as practicable.
- Additional land may be acquired in the future where it provides opportunities for more comprehensive and integrated management of the habitat resource.
- Public safety will be taken into account when designing new plantings.

6.3 Discussion

Division into sub-zones

Division of the Natural Zone into two sub-zones reflects the distinct differences between the management approach required in the wet peatland areas and the generally drier gully slopes. There are however localised variations within the two sub-zones. The Forest Sub-zone, for example, includes riparian areas as well as some wetter areas at the base of the gully slopes. Similarly the Special Treatment Area has been identified as a result of its particular problems of gully slope/watercourse instability and poor aesthetic quality. These variations will need to be taken into account when developing planting design briefs.

Wetland/Swamp Forest Sub-zone

The existence of large areas of wet peatland along the gully floor provides an opportunity to restore wetland and swamp forest vegetation to Donny Park. The natural climax vegetation for most of these areas would be swamp forest. However, retention of more open wetland communities, particularly the existing stands of raupo, would

provide diversity and interest. It would also have educational values. The retention of some wetland communities is therefore desirable as far as this is practicable.

Forest Sub-zone

The Forest Sub-zone is the part of the Park that generally requires least attention at present. The vegetation in this Sub-zone is generally relatively stable, though in many areas there is an abundance of plant pests. The exception to this is the Special Treatment Area that has significant stability problems. Given that resources for vegetation restoration will be limited, it makes sense to focus restoration efforts on areas where the need is greatest, i.e. the Wetland/Swamp Forest Sub-zone and the Special Treatment Area, leaving the greater part of the Forest Sub-zone until satisfactory progress in these areas has been achieved. Hence, management in the Forest Sub-zone will generally be relatively low key with emphasis on containment of plant pests and encouragement of regeneration of native under-storey. However, it is envisaged that some selective planting will be undertaken along riparian margins and on slopes where tree and shrub cover is currently absent. The creation of a kahikatea grove centred on the large mature kahikatea is a potential project for the medium-term.

Eco-sourcing

Plant materials of local provenance will be used for restoration where practicable. Whilst there is a strong case for using eco-sourced materials it is not always possible to obtain suitable material. Hence there is a need for some flexibility in this matter.

Purchase of neighbouring properties

Additional land may be acquired in the future where it provides opportunities for more comprehensive and integrated management and restoration of the gully.

Planting and public safety

Trees and shrubbery can represent actual or perceived security risks for park users. In designing new planting account will be taken of the principles of CPTED (Crime Prevention Through Environmental Design) and through the Council's own safety audit process.

6.4 Key Implementation Actions

- Progressively restore wetland and swamp forest vegetation communities in the Wetland/Swamp Forest Sub-zone.
- Contain weeds and encourage regeneration of native under-storey in the Forest Sub-zone.
- Plant slopes in the Forest Sub-zone currently devoid of tree and shrub cover.
- Plant selected sections of open stream channel with kowhai and/or other suitable native species.
- Prepare a planting plan for the Special Treatment Area as an outcome of a feasibility study on achieving stabilisation and aesthetic improvement in this area.

- Recognise the potential for the wetland zone to be used in the natural filtration of water and incorporate it into the selection and management of plants.
- Designate a coordinator with responsibility for developing planting plans and overseeing all planting and restoration work, including that of community groups.
- Provide training for Council parks staff in best practice for the establishment and maintenance of gully vegetation and weed control methods.
- Investigate alternatives regarding land acquisition or joint weed control initiatives with adjoining landowners, particularly in respect of private sections crossing the stream from Wymer Terrace.

7.0 ENHANCEMENT OF GULLIES FOR NATIVE FAUNA

7.1 Objectives

- To create a favourable environment for native birds, particularly the indicator species such as tui and New Zealand pigeon.
- To create favourable conditions for the protection and return of invertebrates and appropriate native fish species.

7.2 Policies

- Fruit and nectar bearing trees and shrubs will be included in restoration planting to provide food for native birds.
- So far as practicable mammalian pests will be controlled in order to reduce predation of birds.
- Tree planting design will allow for shading sections of streams in order to lower stream temperatures and provide habitat for fish.
- Where practicable obstacles to fish passage in streams will be removed or modified to allow for fish passage.
- Fish species and macro-invertebrate communities will be monitored to gather baseline information that can be used to assess the effectiveness of policies in achieving improved fauna and in stream habitat values.
- Any new structures crossing the stream will provide for fish passage.

7.3 Discussion

Native birds

Restoration of native vegetation to the Park will provide new feeding habitat for key bird species such as tui and New Zealand pigeon. In selecting species for planting, attention will be paid to providing suitable nectar and fruit bearing species. It is hoped that in providing suitable feeding habitat visits from tui will increase and the potential for pigeon to frequent the Park will also be enhanced. Provision of food bearing trees could include use of exotic species such as *Banksia*, which are known to have value for species such as tui.

Control of pests

The status of mammalian pests in the park is not known though rats at least are likely to be present. Mammals represent a significant threat to many native birds and some species such as possum also damage native vegetation. A mammal control programme will be initiated if the need is demonstrated and as resources allow.

Enhancement of stream habitats

The stream environment could be improved to encourage native fish and invertebrate species. There are significant lengths of stream banks that currently lack shading. This can result in elevated water temperatures reducing habitat quality for certain fish species. Planting more trees along the riparian margin will help to improve fish habitat.

Obstacles to fish movement

The Kukutaruhe Stream appears to have no significant obstacles to fish passage. However, the suitability of the culvert linking the stream to the Waikato River requires assessment. The maintenance of free passage for migratory fish is essential if fish populations in the stream are to be optimised. Any future structures across the stream will take this into account.

7.4 Key Implementation Actions

- Include fruit and nectar bearing trees and shrubs in restoration planting.
- Provide shade trees along currently open sections of stream recognising park user safety concerns.
- Assess the culvert linking the stream to the Waikato River for suitability for fish passage and undertake any necessary remedial work to rectify any problems, if practicable.

8.0 MAINTAINING AND IMPROVING WATER QUALITY

8.1 Objective

- To improve water quality within the streams.

8.2 Policies

- Gully slopes and watercourses will be stabilised in line with policies set out in section 5.2.
- In accordance with policies identified in the GRMP the Council will encourage implementation of measures to improve water quality before runoff from the urban environment enters the gullies.

8.3 Discussion

Gully slope and watercourse stability

Within gullies sources of stream contamination are mainly sediments eroded from unstable gully slopes and watercourse banks. The policies and key implementation actions set out in section 5 to provide a more stable gully environment should therefore help to achieve improved water quality.

External sources of contaminants

The control of external sources of contamination that enters the gully via stormwater or upstream sources is much more difficult. In many respects it is beyond the scope of this Plan and requires a more generic City wide approach. The Council does however have policies and implementation actions in the GRMP aimed at seeking improvements to quality of waters entering gullies.

8.4 Key Implementation Actions

- Refer to Section 5.2 of this Plan for measures proposed to reduce erosion of sediments within the Park.
- Review existing stormwater treatment practices on a Citywide basis and identify options for improving the quality of stormwater discharged into gully streams in the light of current and ongoing research.

9.0 CONSERVING TANGATA WHENUA VALUES

9.1 Objective

- To identify, preserve and where appropriate enhance Tangata Whenua values within the gully system.

9.2 Policies

- Restore native vegetation to the Park.
- A Rahui will be observed during planting of native trees for periods long enough to allow the plants to establish themselves.
- Actions leading to the drying or draining of remaining peatlands will be avoided.
- Tangata Whenua will be consulted regarding any activities that could result in draining or excavation of remaining peatlands.
- Archaeological finds (e.g. Koiwi) within the gullies will be dealt with in consultation with Tangata Whenua.
- Tangata Whenua will be consulted in advance regarding any earthworks in the vicinity of the Scheduled pa site
- Interpretation panels will include details of Maori history of the gully and surrounding area.
- Opportunities to enhance Maori profile within the Park will be investigated.

9.3 Discussion

Restoration of native vegetation

Native flora and fauna have a particular cultural significance for Maori; the restoration of native vegetation to the Park is therefore an important step towards enhancing Maori values. It is hoped that with the establishment of native vegetation some species of fauna such as tui and possibly New Zealand pigeon (Donny Park was historically known as Kukutaruhe, pigeon flight) may frequent the Park on a more regular basis. Policies and key implementation actions in sections 6 and 7 are aimed at achieving this. The observance of Rahui provides an opportunity for plants to become established before any disturbance occurs.

Maori history and artefacts

Maori have had a long association with the Park and surrounding area. As a consequence there are sub-surface remains of settlement and also likely to be buried artefacts, particularly in the peatland areas. A number of the policies are therefore aimed at minimising adverse effects on these remains and involving Tangata Whenua in consultation regarding activities that may impact upon them.

Enhancement of Maori profile

Opportunities exist to educate the public regarding Maori conservation concepts and historical occupation of the area and to raise the profile of Maori culture. The inclusion of relevant information on interpretive panels is one means of achieving this. Other opportunities such as creation of Maori cultural features such as Pouwhakamahara would also help further this aim.

9.4 Key Implementation Actions

- Include information on historic Maori occupation of the gully and surrounding area and also Maori conservation concepts and values on interpretive panels.
- Rahui to be observed during planting of native trees to protect them from disturbance for a period long enough to allow the plants to establish themselves.
- Consult Tangata Whenua regarding any activities in park maintenance that could result in any archaeological finds (e.g. Koiwi) and in advance of any earthworks in the vicinity of the scheduled pa site.
- Invite proposals from the local iwi regarding opportunities for promoting Maori cultural awareness within the Park.

10.0 ENHANCING RECREATIONAL VALUES

10.1 Objective

- To enhance and promote recreational use of Donny Park for passive recreation in a way that maintains the special ambience and aesthetic qualities of the gully experience.

10.2 Policies

- Interpretive panels will be provided that include information on natural, conservation, historic and Maori values.
- Removal or making safe of the disused swimming pool on a neighbouring property will be sought through the most appropriate means available.
- Sight lines around vegetation will be maintained and enhanced.
- Seating will be provided at appropriate locations.
- At least 20% of the Park will be maintained as open space.
- Existing play equipment scattered around Donny Park will be incorporated at one site located in consultation with local residents and taking account of CPTED principles. Existing equipment will be upgraded and new equipment provided.

Please note that matters relating to public access and pathways are dealt with in section 11.

10.3 Discussion

Interpretive panels

Interpretive panels provide an opportunity to enhance user enjoyment and educate them about the various natural, conservation, historical and Maori values of the Park. They will therefore be provided at appropriate locations within the Park.

Disused swimming pool

There is a disused swimming pool accessible by users of the Park on a neighbouring property. It is a potential hazard to Park users, particularly children, although they may also value it as a play area. Given the risks associated with such a structure it is proposed to secure it by whatever appropriate means are available. Options could include land purchase by the Council.

Maintaining sight lines

Dense vegetation poses a potential threat to pedestrians. The principal concern is that such vegetation may conceal an attacker. The problem can be reduced by avoiding planting dense vegetation near main pathways and raising the canopy of existing vegetation, thereby maintaining lines of sight.

Seating

It is intended to provide seating in the Park. The Council will seek public donations for commemorative seating to assist with this.

Retention of open space

It is intended to retain most of the existing open space within the proposed Parkland Zone. Some areas of grassland of limited extent will be included in the Natural Zone and eventually be vegetated with trees and shrubs. However, this is a small proportion of the total grassland area and the open space remaining should significantly exceed the 20% target.

Children's play areas

There are some old swings currently in the Park. One set is located on the gully floor. Its location is unlikely to meet current Council safety requirements. Sub-standard equipment will be relocated and upgraded and new facilities will be constructed in the open area off Bankwood Road (Figure 3), where higher usage is likely and in accordance with Council Policy ("Play in Hamilton", 25th September). This location would provide higher visibility and a safer play environment, better serving the community.

Boardwalks

Boardwalks through the wetlands can provide access for the public in a manner that minimises damage to the vegetation. They also provide a useful means of increasing enjoyment and appreciation of such environments.

10.4 Key Implementation Actions

- Provide interpretive panels that include information on natural, conservation, historic and Maori values.
- Investigate options for removal or making safe the disused swimming pool.
- Maintain and enhance sight lines around vegetation.
- Provide seating at appropriate locations.
- Seek donations for seating.
- Relocate and upgrade sub-standard play facilities and provide new facilities in the open area off Bankwood Road.
- Investigate the feasibility and value of providing boardwalks through the wetland area in the light of its subsequent restoration and likely benefits to the community.

11.0 PROMOTING ACCESS, COMMUTER USE AND LINKS TO OTHER PARKS

11.1 Objectives

- To provide suitable access to the Park and a network of all-weather paths within the Park to promote optimal use by pedestrians and cyclists for purposes of passive recreation and commuting.
- To promote links to other parts of the reserves network and in particular the riverside reserves.

11.2 Policies

- Establish all-weather paths linking the main access points to the Park, including River Road.
- Upgrade nominated paths to shared-use (cyclists & pedestrians) standards in line with the Hamilton's Walkway/Cycleway Strategy.
- Maintain paths to the highest practicable standard.
- Promote user safety on shared use tracks.
- Assess and implement where practicable measures to address perceived and actual increased security risks as a result of greater public access.

- Investigate the merits of an all-weather link between the Fairfield College access to Donny Park and McNicol Street.

11.3 Discussion

Path network

Concrete paths already link a significant number of access points, particularly in the eastern part of the Park. However, there is a need to provide a link from these pathways to River Road. Such a pathway would effectively link the whole network along the full length of the park. Importantly it would reinforce the link to the Waikato River walkway, fulfilling the objective of providing linkages to other parts of the reserves network. Concrete is likely to continue to be the preferred base as it is low maintenance and provides all-weather access.

Shared-use paths

The Cycle Network Strategy Report (Opus, 1999) identifies several potential off-road cycle routes within Donny Park. Where feasible, and where this does not conflict with the need to protect the natural and cultural values of the gullies, the Council will seek to develop these routes. In developing combined cycle/pedestrian routes, allowing a sufficient width and an all weather surface will be important design considerations. User safety on shared use tracks will be encouraged through signage and education. The path proposed from River Road to link with the existing path to Fairfield College, the path from Wymer Terrace to the new River Road path and the path from Donny Avenue to Emerald Place and onto Amethyst Place will be shared use walkway/cycleway (see figure 3). Upgrades will occur to bring the existing parts of the above network to New Zealand Walkway/Cycleway Standard (including widening in some areas).

Path maintenance

Paths in the park are frequently covered with dirt and grass clippings. Concrete is broken in a number of areas. Improved maintenance standards are desirable.

Security

Provision of easier access and encouragement of greater public use of the gullies raises concerns about personal and property security amongst some adjoining landowners. However, it needs to be recognised that individuals with criminal intentions already have or could easily gain access to many parts of the gully system covered by the Plan. Restoration offers an opportunity to address security issues e.g. mutually acceptable fencing can be erected and costs shared under the provisions of the Fencing Act (1978) with equal contributions from the Council and neighbour. Planting patterns and path locations can also be used to improve security.

11.4 Key Implementation Actions

- Conduct an audit of existing path condition and areas of poor drainage, and compile a prioritised list for remedial action.
- Repair existing paths where these have failed.
- Extend path network to connect to River Road with a shared standard link.

- Develop remaining path network in line with Hamilton's Walkway/Cycleway Strategy.
- Maintain paths to the highest practicable standard.
- Investigate the merits of an all-weather link between the Fairfield College access to Donny Park and McNicol Street.

12.0 PRESERVING AND ENHANCING LANDSCAPE AND AESTHETIC QUALITIES

12.1 Objectives

- To preserve and enhance the landscape and aesthetic qualities of Donny Park.

12.2 Policies

- Undertake prompt removal of maintenance wastes from the park.
- Discourage tipping of waste materials from adjacent properties and littering.
- Maintain streams free of any debris that jeopardises people or property.
- Screen visually intrusive fencing in consultation with adjacent property owners.
- Design and construct future drainage structures to minimise their visual impact.
- So far as practicable, treat existing drainage structures that are visually intrusive so that that they blend into their surroundings.
- Maintain views into the gully from adjacent properties so far as this is practicable.
- Retain trees that are considered to be local landmarks.

12.3 Discussion

Maintenance wastes

Leaving maintenance wastes in the Park, impacts on the visual qualities of the Park. It also provides opportunities for such material to be thrown in the streams by vandals. Prompt removal will prevent such problems.

Tipping of wastes and littering

Tipping of wastes including household refuse and garden materials from the rear of properties is a problem in some parts of the Park. Use of dense screen planting can help to discourage this and minimise impact.

Littering is also a problem. Provision of waste bins around entrances would help to reduce this.

Stream debris

Waste materials of various kinds find their way into the streams. In some cases this enters from sources upstream of the park including stormwater inputs. In other situations

it is from sources within the park. Removal of sources within the park such as maintenance wastes will help to reduce the amounts entering the streams. Other materials that have already entered the streams will be removed only where they impact on people or property.

Fence lines

Fence lines intrude on the aesthetic quality of some areas of the Park. Screen planting can help to soften this effect. Correct choice of species will ensure that planting does not impact upon views into the gully from neighbouring properties. Such planting would require consultation with the neighbours.

Drainage structures

Drainage structures and structures used to prevent stream bank erosion can be visually intrusive and impact upon the aesthetic qualities of the stream environment. A particular example occurs at the bridge connecting the Perindale Drive/Wymer Terrace path. Here tyres, concrete and steel reinforcing rods have been used to stabilise the bank. The result is visually intrusive. Furthermore, the protruding steel rods present health and safety issues. Such existing structures need to be treated to reduce their visual impact.

Any future structures will need to be designed to minimise visual impact. Riparian planting should be the preferred method for stream bank erosion control.

Views into the gully

Views into the gully are enjoyed by some adjacent property owners. These views into the gully will be maintained where practicable.

Local landmarks

Certain large trees in the Park such as some of the Poplars are considered by residents to be local landmarks. Future restoration plans that may include felling of existing trees will need to take account of this.

12.4 Key Implementation Actions

- Require maintenance crews to undertake prompt removal of wastes
- Use planting to discourage tipping of waste materials from adjacent properties
- Provide litter bins around entrances
- Remove stream debris where it jeopardises people or property.
- Screen plant visually intrusive fencing in consultation with adjacent property owners.

13.0 EDUCATION AND RESEARCH

13.1 Objectives

- To promote Donny Park as an educational resource.
- To encourage the use of Donny Park as a research resource.

13.2 Policies

- Promote the educational values and opportunities provided by Donny Park to local schools and educational institutions.
- Encourage and support participation in the restoration of Donny Park by local schools and community groups.
- Promote active research into the ecology, cultural and recreational characteristics and values of Donny Park.
- Educate the public on the values of Donny Park.

13.3 Discussion

Donny Park represents an outstanding educational resource and an opportunity for the community to get involved in gully management and restoration. Involving children in restoration is an important means of educating them about natural ecosystems. Not only do they learn about the ecology and values of gullies through this process but by participating they take some ownership of the park. Some schools have already expressed an interest in Donny Park restoration.

The park also represents an opportunity for local education institutes to carry out research projects with high relevance to betterment of the local environment. Furthermore, research does not necessarily have to be limited to higher education institutions as there is plenty of scope for school project based research.

The park also represents an opportunity to educate the public on the values of gullies, including their ecological and cultural importance. Interpretive panels and guided walks are but two examples of how this might be achieved.

13.4 Key Implementation Actions

- Liase with local schools to promote educational values.
- Provide literature to local schools on the values of Donny Park.
- Encourage local schools to participate in restoration planting.
- Promote research potential to local education institutes and schools.
- Provide interpretive panels for public education.

14.0 ENCOURAGING COMMUNITY PARTICIPATION IN GULLY MANAGEMENT AND RESTORATION

14.1 Objectives

- To encourage public participation in the management and restoration of Donny Park.

14.2 Policies

- Encourage involvement of the community in the restoration and management of the park, including adjacent areas in private ownership.

- Establish partnerships with community groups and local schools in the management and restoration of the park.
- Provide support, information and incentives to private owners within the gully to assist restoration.
- Encourage corporate sponsorship of the park restoration and management initiatives.
- Provide information to the local community on the values of the gullies and how they may participate in their management and restoration.

14.3 Discussion

There is a substantial opportunity for the local community to be involved in the implementation of the Park Management Plan. A variety of initiatives will be needed to facilitate public participation in management and restoration. This is likely to involve individuals, schools and community groups. Importantly, this will need to include private owners of land bordering the park.

Such initiatives could include providing:

- information on best practice techniques for restoration and management,
- providing native plant stock to private owners involved in restoration of properties adjoining the park,
- providing information to the local community on the values of the park and how they might get involved in management and restoration.

Part of the information provided will be directed towards encouraging the local community to refrain from tipping waste materials, including garden waste, into the gullies.

HCC has run a number of initiatives in recent years to promote and support gully restoration initiatives including schemes to provide eco-sourced plants to private gully owners, community plantings in gullies, the Gully Restoration Suggestion Service (subsidised 1 hr consultation service); various gully management workshops open to the public; Gully Restoration Programme Newsletter and the Gully Restoration Guide. Such initiatives could be promoted in the local area.

Resourcing the restoration of the gullies represents a significant challenge. Corporate sponsorship may be one means by which some of the capital required could be raised.

14.4 Key Implementation Actions

- Distribute information to the local community on the values of gullies and how they can assist preserving and enhancing these values.
- Seek partnerships with local schools and community groups for restoration initiatives.
- Make suitable plants available from nursery stock or by other means (e.g. partnership with community organisations) to adjoining landowners.
- Provide best practice advice on restoration to adjacent landowners.
- Seek corporate sponsorship to support restoration work.

Part 4: Management zones, principles and priorities

15.0 MANAGEMENT ZONES

15.1 Zoning in Donny Park

The GRMP defines three main management zones for Hamilton's gullies:

- Natural Zone;
- Parkland Zone; and
- Pasture Zone.

Consistent with the zoning approach in the GRMP, Natural and Parkland are the two main management zones proposed for Donny Park. Pasture Zoning is not considered suitable for Donny Park.

To assist in defining the management approach and priorities for areas with distinct characteristics, the Natural Zone will be divided into two sub-zones:

- Forest Sub-zone
- Wetland/Swamp Forest Sub-zone

Figure 2 shows the extent of the proposed zoning in Donny Park. Section 16 describes the key management principles by which these areas will be managed and gives an indication of management priorities.

15.2 Natural Zone

General purpose

Natural Zones are those parts of the gully currently dominated by native vegetation or where domination by native bush is ultimately desirable. The purpose of such zones is to provide for the protection and enhancement of native vegetation and in so doing provide habitat for native fauna. An important function of natural zones will be to provide for protection and enhancement of Key Ecological Sites that occur in the gullies (Downs *et. al.,* 2000). Such zones will also include riparian margins of streams, where native trees, shrubs and tree ferns will be used to create shading and provide habitat for fish. As well as providing for protection and enhancement of the City's biodiversity, these zones will improve the natural ambience of the gullies for users.

In encouraging the dominance of native vegetation, and in particular native evergreens, it is intended to create an environment that is generally hostile to undesirable weed species. It is hoped that over time the management effort needed to control weed cover will be substantially reduced, though it is recognised that some weed control will always be necessary.

Where practical access to or adjacent to sensitive natural gully zones will be provided via paths or boardwalks in sensitive areas. Management of natural gully areas will be undertaken in such a way as to avoid stands of dense vegetation adjacent to paths.

Raising the canopy of trees to improve visibility will be used where appropriate to give greater user comfort.

Forest Sub-zone

This sub-zone mainly covers the dry forest areas that occupy the slopes of the gully. This zone is currently dominated by exotic vegetation and to varying extents the zone supports invasive plant pest species. The ultimate objective for this zone is to achieve a dominance of native plant species. It should however be recognised that the objective of having a predominance of native vegetation may take several decades to achieve. Restoration of this zone is not the highest priority for habitat restoration. As a consequence, many parts of the dry forest zone are likely to remain dominated by exotic species for some time to come until other restoration priorities have been achieved and resources become available. Furthermore, it will be desirable to retain some exotic species such as *Banksia* as a source of food for native birds.

Although mainly confined to parts of the gully currently occupied by exotic scrub and forest, this sub-zone also extends over some parts of the gully currently occupied by mown grassland. This is mainly to the south of the stream where development of riparian tree cover and a kahikatea grove are the desired outcomes (Figure 2).

Within the Forest Sub-zone an area has been identified as the Special Treatment Area (Figure 2) due to the range of unique problems it currently faces. The sides of the drainage channel located immediately adjacent to the concrete path that runs from Emerald Place to the bridge over the main stream have little vegetation cover and are both unsightly and unstable. Similarly, the slope to the south-east of the channel has much bare ground and is unstable. The slope has a number of small drainage channels, seepage areas and areas of wet ground. The main objective for this area is to stabilise it, where possible using suitable native plants. However, some engineering solutions may also need to be considered to achieve the necessary stability.

Wetland/Swamp Forest Sub-zone

This sub-zone covers the wet peatlands along the gully floor, where development of wetland and swamp forest habitats is the desired objective. The focus of the restoration here is to achieve a dominance of wetland and swamp forest plant communities whilst protecting the existing stands of raupo reedland.

15.3 Grassland Zone

Consistent with the GRMP, in the Parkland Zone a more formal character is the desired outcome. These areas will consist principally of mown grass and plantings of stands and or individual trees. New planting will be of native species although existing exotic trees considered to be of value will be retained. The emphasis will be on providing public open space and passive recreation. Overall it is envisaged that the final outcome will be a formal mown and landscaped area, providing safe public access, with a "natural" bush backdrop.

16.0 MANAGEMENT PRINCIPLES

16.1 General

This section sets out some of the key principles for gully restoration and management to be used in the management of Donny Park. It is not a comprehensive "how to" guide. Such information is provided in other documents such as the "Gully Restoration Guide" published by HCC. The reader should also refer to section 17 of the GRMP that contains more general principles.

Management principles to be adopted for Donny Park are:

- A design brief will be prepared for each Zone/Sub-zone that will provide details of the overall restoration objective, key design principles for the zone/sub-zone, plant communities to be established, existing vegetation to be retained, weed species to be removed and removal method, phasing of restoration work and details of any structures to be built including boardwalks and engineering works required for stabilisation purposes;
- Planting designs will take account of the need to preserve and enhance key views into, out of and from within the gullies;
- Planting designs and subsequent management will take account of the need for public safety. Where necessary, design and subsequent development will be carried out in consultation with adjoining residents to take account of security issues;
- A suitably qualified person with a sound knowledge of gully restoration principles will be nominated to take overall responsibility for development of the design brief and implementation on the ground in order to promote ownership of the restoration;
- A progressive approach will be taken to restoration ensuring establishment and adequate maintenance of one area before moving to the next;
- Use of herbicide sprays will be minimised;
- native species will be eco-sourced where practicable.

16.2 Natural: Forest Sub-zone

- For the foreseeable future management will generally be low key with emphasis on containment of plant pests and encouragement of regeneration of native under-storey.
- Progression to more active restoration will proceed when other restoration priorities have been achieved e.g. Wetland/Swamp Forest Sub-zone. The exceptions to this will be the Special Treatment Area and sections of slope where tree and shrub cover is currently absent.
- Species selection will be based on the notes set out in Appendix 1.
- Large Eucalypts and Pines will be removed when they become unstable.
- Planting of slopes will include good proportions of kanuka, tanekaha and rewarewa. Manuka of the dry slope variety should also be used.
- Overuse of *Pittosporum* will be avoided.
- Large crack willows adjacent to the stream will be progressively removed and replaced by suitable native species.
- Young eucalypts will be removed.

- Proposed riparian tree cover (Figure 2) will include a predominance of kowhai.
- Dead trees will be left in-situ unless they would compromise public safety.
- The Special Treatment Area will be re-vegetated as a matter of priority to achieve stabilisation, using native species such as *Carex secta* and Flax in mass plantings.

16.3 Natural: Wetland/Swamp Forest Sub-zone

- The emphasis will be on the restoration of swamp forest together with more open wetland communities.
- Existing stands of raupo will be retained.
- Species selection will be based on the notes set out in Appendix 1.
- Planting will be in massed groupings.
- First establishments in wet areas will be mass planting of species tolerant of wet ground e.g. *Carex secta* and flax.
- Planting will be undertaken in succession, ensuring the success of one area before moving to another.
- Direct planting into "slush" will be avoided.
- Existing inappropriate or failing plants will be removed selectively.
- Species characteristic of the major Waikato peat bogs such as *Baumea tenax, Schoenus pauciflorus, Empodisma minus* and *Sporadanthus ferrugineus* will be re-introduced on a trial basis, using a few plants of each species. If the plants succeed larger numbers will be introduced.

16.4 Parkland Zone

- Mown grassland will be the principal treatment within this zone.
- Native shade trees may also be introduced into this area.

17.0 REFERENCES

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Appendix 1 - Native Vegetation Planting Notes (Bruce Clarkson)

Donny Park has at least five distinct habitats (planting sites) that demand considerable care in the selection and planting of suitable native species.

Hillslope and Crest

The soils are mainly fine tephra (ash) commonly referred to as sand. They are well drained (sometimes excessively so) and species planted here need to be able to withstand summer droughts especially in the early years of planting. Kanuka, the hillslope race of manuka, *Olearia fururacea,* totara and tanekaha are suitable. Depending on whether the aim is to restore only local native vegetation, other native species such as kauri, tainui (*Pomaderris apetala*) and karo (*Pittosporum crassifolium*) could be used. In areas where there is less sand or towards the hillcrests karamu and kohuhu (*Pittosporum tenuifolium)* and even other broadleaved species such as wineberry (*Aristotelia serrata)* mahoe, lacebark (*Hoheria sexstylosa)* and tarata (*Pittosporum eugenioides)* could be added. Note that the young eucalypts present in one area could be removed now while this is still a manageable task as establishing other vegetation under them or in close proximity to them is not a prospect because of their litter characteristics.

Colluvial Footslope

This narrow zone (sometimes no more than 10m wide) has rather fertile soils. It is reasonably well drained at its upper limit where it meets the hillslope, and conversely is poorly drained at its lower limit where it adjoins the terrace peatland. A good range of species including kahikatea, matai, lacebark, mahoe, kowhai, swamp maire, cabbage tree, kaikomako, putaputaweta and karamu will succeed here as long as care is taken in the precise placement within the zone. For example, mahoe, lacebark and kowhai should be planted at the upper end of the zone whereas cabbage tree, swamp maire and kahikatea will tolerate the poorly drained portion.

Backswamp and seepage

This habitat includes very wet sites where only real swamp plants are likely to succeed. Purei or *Carex secta* should be planted en masse in these sites. *Carex secta* is in fact naturally occurring here and so seed could be collected from the local form. Also naturally present are raupo and harakeke (flax); *Carex virgata* and cabbage tree can be added. More *Baumea articulata* could be added later if desired. *Baumea rubiginosa* and *Elocharis acuta* are naturally occurring here.

Levee

This slightly raised and better drained habitat adjoining the stream will support, kowhai, lacebark, mahoe, putaputaweta, kaikomako, *Coprosma propinqua, Coprosma X cunninghamii,* cabbage tree, ribbonwood (*Plagianthus regius),* matai and totara.

Terrace Peatland

This may be the most difficult site as the peat soil has been impacted by removal of the covering vegetation leading to decomposition of the surface layers and problems with rewetting. However, the bog race of manuka would be the best option. It could be

established en masse by any combination of laying of manuka slash, scattering seed or planting of seedlings. Note that the bog race of manuka only should be used, as it is best suited to the peat soils. Other species suitable for the wetter parts of the peatland where it grades into backswamp or seepage are purei, harakeke, *Coprosma tenuicaulis* and cabbage tree. Note that many of the species previously planted in this peatland such as lacebark, kohuhu and totara are not tolerant of peat soils and will not survive. The considerable depths of peat present in some parts of this habitat suggest it might be possible to introduce some species characteristic of the major Waikato peat bogs such as *Baumea tenax, Schoenus pauciflorus, Empodisma minus* and *Sporadanthus ferrugineus.* But this is only an untrialed suggestion. To test whether this is indeed a prospect, it would be worth conducting a small trial with a few plants of each.

Figure 1 — Location of Donny Park

Figure 2 — Zoning

Figure 3 — Proposed & existing pathways and proposed recreational equipment

Figure 4 — Location of Kukutaruhe Pa