HOBART
CITY COUNCIL

SOUTH HOBART LOCAL AREA PLAN

Volume 2

Draft

Outline Development Plan

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Figures

Tables

1. A LOCAL RESOURCE MANAGEMENT AND PLANNING SYSTEM FOR SOUTH HOBART

The Brief for this project requires the preparation of an Outline Development Plan (ODP) and a Local Area Plan (LAP). There has been very limited investigations into such plans with Tasmania and the status, content and role of these documents is not clearly spelt out in any legislation, planning or policy document.

Accordingly, we have set out an approach which places the ODP and the LAP within the context of a local Resource Management and Planning System (RMPS). This system is outlined in Figure 1.1.

The ODP is a means of bringing together background information and analysis and identifying the strategic directions for the Study Area. The LAP will provide the statutory basis for implementing the ODP. It has been prepared in the context of:

a) background documentation on the Study Area;

b) legislative and policy frameworks; and

c) the regional context.

This provides a context for the definition of values and associated objectives for the Study Area. By incorporating the results of public consultation into the analysis of the above matters a number of issues have emerged. These issues can be spelt out as a series of strategies covering:

1. environmental protection;
2. infrastructure;
3. visual landscape management;
4. community facilities and services;
5. open space and recreation;
6. access; and
7. settlement.

A specification of these strategies provides a means of identifying broad areas with similar use / management priorities. In South Hobart there are three such priority areas:

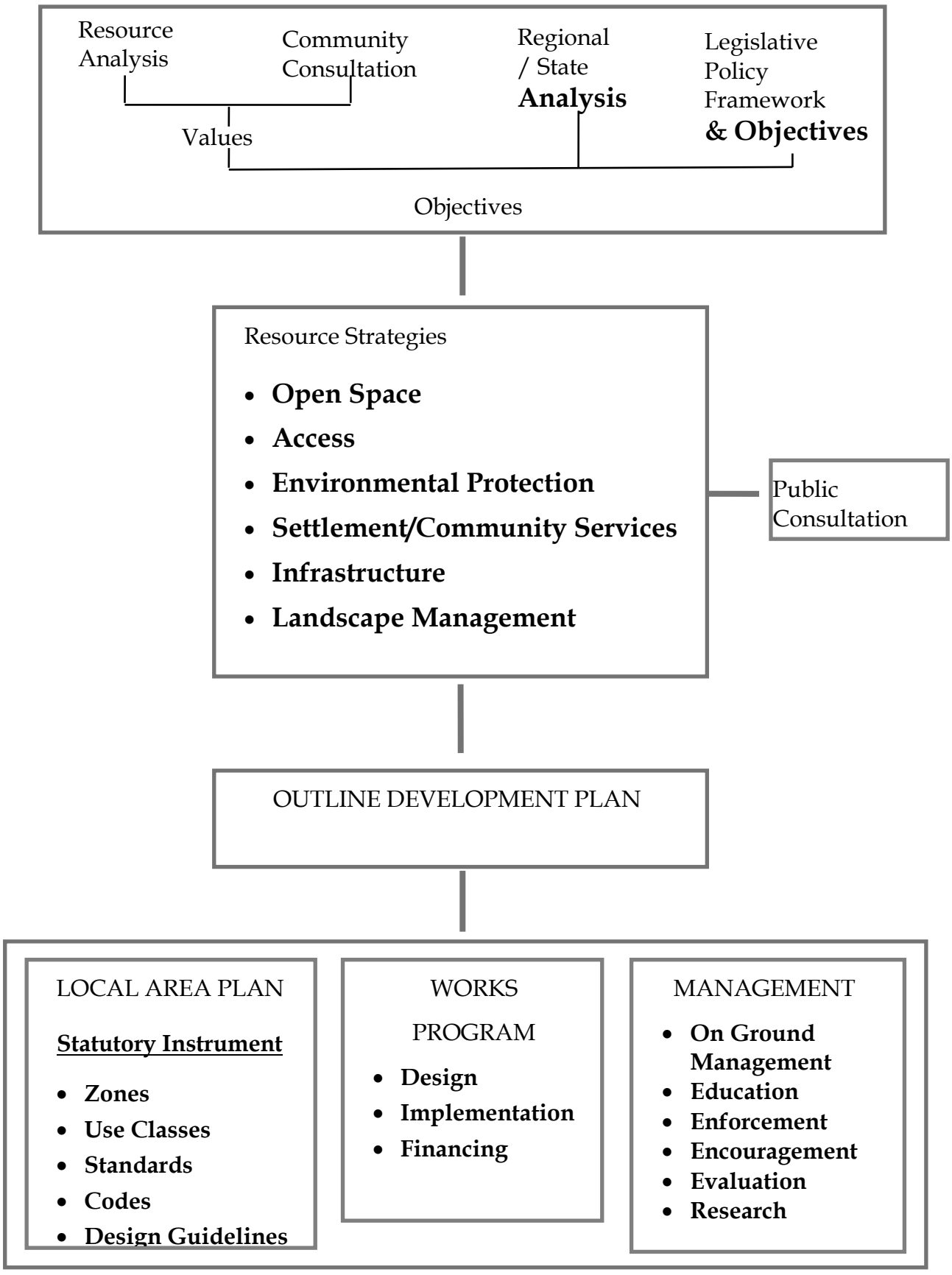
- Environmental Protection
- Residential Development
- Industrial

These are shown in the Settlement Strategy map (Section 9, Fig.9.1). This map together with the resource strategies comprises the ODP.

Within the Study Area there are many sites capable of use or development. A number of these sites have been investigated in detail in order to identify the key criteria for use in planning and management decision making. These criteria will form the basis of standards to be included in the LAP.

The LAP is one of three components to be derived from the ODP. The others are a works program and a management strategy. These three components will be the means of implementing the strategic directions identified in the ODP. The latter two components have to be further developed by Council and the community to ensure that all decision making supports the identified strategic directions

Fig.1.1 A Local Resource Management And Planning System For South Hobart



2. LEGISLATIVE AND POLICY FRAMEWORK

2.1 THE RESOURCE MANAGEMENT AND PLANNING SYSTEM

In 1993 the Tasmanian Government introduced a suite of legislation called the Resource Management and Planning System (RMPS). This system provides the context for all resource management and planning in Tasmania.

The legislation includes:

- The Land Use Planning and Approval Act 1993;
- The Environmental Management and Pollution Act 1994;
- The State Policies and Projects Act 1993;
- The Historic Cultural Heritage Act 1995; and
- The Resource Management and Planning Appeal Tribunal Act 1993.

All landowners (both public and private) in the Study Area are bound by this legislation.

The overall purpose of this system is to achieve sustainable development through the implementation of a series of objectives. These objectives are set out in Section 1.2 of the Background Documentation (volume 1).

The system also has a series of objective for the planning process. These objectives provide guidance on the preparation and implementation of the South Hobart LAP. The objectives are:

a) *to require sound strategic planning and co-ordinated action by State and local government; and*

b) *to establish a system of planning instruments to be the principal way of setting objectives, policies and controls for the use, development and protection of land; and*

c) *to ensure that the effects on the environment are considered and provide for explicit consideration of social and economic effects when decisions are made about the use and development of land; and*

d) to require land use and development planning and policy to be easily integrated with environmental, social, economic, conservation and resource management policies at State, regional and municipal levels; and

e) to provide for the consolidation of approvals for land use or development and related matters, and to co-ordinate planning approvals with related approvals; and

f) to secure a pleasant, efficient and safe working, living and recreational environment for all Tasmanians and visitors to Tasmania; and

g) to conserve those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value; and

h) to protect public infrastructure and other assets and enable the orderly provision and co-ordination of public utilities and other facilities for the benefit of the community; and

i) to provide a planning framework which fully considers land capability.

The RMPS also requires the State Government to prepare State Policies which are to be implemented through local planning schemes. The only State policies developed so far are the State Coastal Policy and State Policy on Water Quality Management.

The State Government is also preparing a Model Planning Scheme to provide a framework for all planning schemes in the State. This framework will be required for the LAP.

These matters will guide the format and content of the LAP. Council will be required to prepare a plan that produces outcomes that are in accordance with the requirements of the legislation and the RMPS.

2.2 TREATIES AND OBLIGATIONS

Tasmania, at both State and local government level, is a signatory to a number of international and national treaties and agreements. These treaties deal with common issues that arise at regional or international levels. The provisions of any treaty or agreement are legally binding only to the extent that they are contained in legislation. The LAP will be an instrument for implementation of relevant aspects of these treaties.

The most relevant agreement is the Convention on Biological Diversity. This agreement was signed in 1992 by all State Governments and the Australian Local Government Association (ALGA).

Its objectives are the conservation of biological diversity, the sustainable use of the earth's components and the fair and equitable sharing of benefits arising out of the utilisation of genetic resources.

The Apia Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (1986) may also be relevant. It lists sources of pollution that require control and identifies environmental management issues requiring regional co-operation.

2.3 ECOLOGICALLY SUSTAINABLE DEVELOPMENT STRATEGY (ESD)

The content of many agreements has been incorporated into the Ecologically Sustainable Development (ESD) strategy. The content of this strategy was developed and negotiated as the Intergovernment Agreement on the Environment (IGAE) (1992), to which ALGA on behalf of all local government in Australia is a signatory. The IGAE also embodied elements relating to approvals reform and economic and social developments.

The objectives of the ESD strategy provide an over arching framework for objectives for local planning in Tasmania. This is reflected in the objectives for the RMPS. The goals, objectives and principles for ESD are set out below.

GOAL

- Development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

CORE OBJECTIVES

- To enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations.
- To provide for equity within and between generations.
- To protect biological diversity and maintain essential ecological processes and life support systems.

GUIDING PRINCIPLES

- Decision making processes should effectively integrate both long and short term economic, environmental, social and equity considerations.
- Where there are threats of serious or irreversible environmental damage, lack of full scientific ___certainty should not be used as a reason for postponing measures to prevent environmental degradation.
- The global dimension of environmental impacts of actions and polices should be recognised and considered.
- The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised.
- Cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms.
- Decisions and actions should provide for broad community involvement on issues which affect them.

2.4 OBJECTIVES FOR THE SOUTH HOBART LOCAL AREA PLAN.

The South Hobart LAP will be required to deliver outcomes which support the objectives for sustainable development embodied in the objectives for the State RMPS. These objectives and the matters referred to above have been used to develop a set of objectives for the plan. These objectives have been developed under four headings:

a) Biological Diversity

b) Equity

c) Sustainable Development

d) Responsible Management

2.4.1 Objectives for Biological Diversity

To ensure that the use and development of resources contribute to:

a) the retention of biological diversity and the maintenance of ecological processes and life-support systems,

b) the maintenance of natural bushland, grasslands, wetlands, heathlands, waterways and the ecological processes on which life depends,

c) the protection of important fauna habitats from so as to maintain their role as habitats,

d) the maintenance and enhancement of the physical and biological quality of surface and ground water, and

e) the restoration of damaged or degraded physical environments.

2.4.2 Objectives for Equity

To ensure that:

a) approvals are given for use and development that improve the total quality of life, both now and in the future,

b) opportunities are provided for people of all ages, social and economic groups to benefit from the availability and sustainable use and development of resources,

c) access is a available to resources and opportunities in a fair and equitable manner,

d) in decision making all individual or groups are treated equitably, and

e) short term and narrowly based considerations do not over ride the broader and longer term interests of the present day community or future generations.

2.4.3 Objectives for Sustainable Development

To ensure that use and development:

a) provides for a strong, growing and diversified economy which can enhance the capacity for environmental protection,

b) provides for a range of sustainable development opportunities which incorporate innovation and quality design and development outcomes,

c) is based on decision making processes which effectively integrate long and short term economic, environmental, social and equity considerations and recognise the global dimension of environmental impacts, and

d) is of high quality and contributes to the quality of life and amenity of existing and future residents.

2.4.4 Responsible Management Objectives

To ensure that:

a) where there are threats of serious or irreversible environmental damage, lack of full scientific certainty is not used as a reason for allowing environmental degradation,

b) the responsibilities for meeting community standards for use and development are clearly identified, and

c) that decision making and enforcement procedures provide for integrated decision making.

3. ENVIRONMENTAL STRATEGY

3.1 INTRODUCTION

This section is intended to provide a framework for an environmental management strategy for the Outline development Plan (ODP). The strategy is based on the background information collected, documented and analysed in the initial stages of the project, the outcomes from public consultation, and a land use framework within which the Plan is to be developed.

The matters to be addressed are:

a) environmental performance;

b) environmental values;

c) hazard identification; and

d) settlement capability.

3.2 ENVIRONMENTAL PERFORMANCE CRITERIA

Environmental performance criteria are required to assess the physical impact of a range of development types. These criteria, together with work done on land inventory mapping, provide the basis for identifying the capability for different forms of development within the Study Area.

The task here is to identify and document the environmental performance criteria against which a range of development types can be assessed. The identified criteria are:

- slopes
- soil types
- critical vegetation communities
- rare and threatened species
- vegetation cover (aesthetic value)
- fauna habitats
- recharge basins

- streams and watercourses
- flood prone areas
- fire hazard
- landslip areas

Traditionally it has been the approach to map these elements and to regard them as constraints to development. Thus if land is too steep or is prone to landslip in accordance with some numerical (and often arbitrary) criteria, then it is considered unsuitable for development. This approach has a number of problems:

a) The criteria used are often arbitrary and do not recognise the capacity to manage potential problems through appropriate techniques - for example construction techniques can be used to overcome problems associated with steep sites.

b) The criteria will have different effects in different localities and at different times - for example bushfire hazards depend on the time of year, fuel load, local conditions, aspect and wind speed and it is almost impossible to accurately measure the level of hazard.

c) Criteria often interact with one another to either increase or decrease the potential for environmental harm. For example, steep, heavily vegetated, north westerly facing slopes in southern Tasmania are more prone to fire hazards. However, the same slopes are drier and may be less prone to landslip.

d) Natural boundaries cannot be used for detailed planning decision making as they do not coincide with cadastral boundaries upon which planning decisions must be made.

e) Most mapping assessments lack sufficient detail to be used at the individual site level. For example contours at the 10 metre interval on a 1:25 000 map are unsuitable for site planning at a scale of 1:100.

f) Natural boundaries are notoriously uncertain. This is because of the lack of detailed information on some aspects available to identify those boundaries, and the fact that they are subject to constant change. For example a flood prone area is identified on the basis of past information (which is usually for short historical time periods), and rarely takes account of changing conditions in the catchment such as vegetation removal.

What all of this suggests is that background environmental criteria information will provide guidance on the management and planning issues in an area, they are unsuitable for detailed decision making, particularly at the level of individual sites.

It is our view that the criteria have to be used in an alternative manner to traditional approaches if they are to serve the needs of the RMPS. The proposed approach involves the following steps:

1. Identification of the values associated with environmental parameters - e.g. clean water, protection of habitats, protection of visual quality, etc.
2. Specification of the level at which those values would be irreversibly impaired - e.g. the angle and soil type at which a landslip will occur.
3. Specification of the levels at which there is a likelihood of adverse effects but for which there may be effective means of managing those effects, e.g. use of fire retardant building materials in a fire prone area.

For the identified values there are three levels at which parameters might be specified in order to maintain the values associated with the particular criteria:

1. No effects,
2. Manageable effects, and
3. Unavoidable effects

Table 3.1 summarises the criteria listed above and the potential levels of effect for a range of environmental elements likely to be found in the Study Area. This table also identifies the relationship between environmental criteria and development that involves the erection of buildings or structures, the carrying out of works that involves changes to the natural surface of the land, or the removal of vegetation. Many of these effects will be

development type specific. For example a habitable building would need to be assessed against the criteria for fire hazards whereas a masonry pumping station would not be subject to the same criteria.

Table 3.1 Environmental Criteria And Effect Levels

CRITERIA	NO EFFECTS WILL OCCUR[1]	EFFECTS ARE POTENTIALLY MANAGEABLE[2]	EFFECTS ARE UNAVOIDABLE[3]
Soil Erosion	Loams or clay/loams Sufficient depth for effluent disposal	Sands Clays	Skeletal soils
Slope stability	<6°	>6°-10°	>10°
Habitats/Critical vegetation communities	No disturbance	Selective removal of non habitat species	Removal of habitat species
Tree cover (visual/ aesthetic protection /Landscape amenity	No removal of any trees or shrubs that contribute to landscape	Selective removal provided overall visual amenity not jeopardised	Removal of trees that reduce visual amenity
Fire hazard	No development in area of high fire hazard	Fire protection measures - site management or building specifications	No protection in high fire hazard areas
Recharge Basin/ disturbance	No development within boundaries + buffer	Development in buffer only if no effect on water quality	Development within boundaries of basin
Streams and watercourse/ protection	No development in riparian zone	Development within riparian zone if no effect on erosion, water quality or hydrology	Removal of vegetation and development in riparian zone
Flood prone areas	No development in 1:100 year flood limit	Measures to protect buildings or structures	No protection
Landslip	No development in identified landslip areas	Specific building types and structures - based on geotechnical report	Buildings and structures in landslip areas

[1] *If the criteria in this column are used there will be no or minimal effect.*

[2] *If the criteria in this column are used the effects of development may be able to be managed.*

[3] *If the criteria in this column are used adverse effects will be unavoidable.*

Table 3.2 indicates that numerical values can be assigned for each criterion in relation to different forms of development, as an example of how the criteria can be used. These values indicate whether each of the criteria will be a major, moderate or minor consideration in assessing development proposals. The Table is only a first level assessment guide and will provide indication of the matters to be incorporated in scheme standards.

As Table 3.2 indicates the level of importance of each criterion varies between development types. This makes it even more difficult to use broadly based criteria that are mapped over a large area. As well as being development specific, criteria can be assessed and applied at the individual site level.

Table 3.2 Environmental Criteria In Relation To Development Forms

Criteria

Development type	**Soils**	**Slope Stability**	**Habitat /Veg**	**Visual**	**Fire**	**Rech basins**	**Strms**	**Flood**	**Slip**
Res Bldgs (small)	1	2	3	2	2	3	2	2	2
Res Bldgs(large)	2	3	3	2	3	3	2	2	3
Industrial bldg	1	3	3	2	2	3	3	1	3
Comm'y bldgs	2	3	3	2	3	3	3	3	3
Commercial bldgs	2	3	3	3	2	3	3	2	3
Roads	1	2	3	2	1	3	2	1	2
Footpaths	1	1	2	1	1	3	1	1	1
Bridges	2	3	3	1	1	3	2	2	3
Paved areas	1	3	3	2	1	3	3	1	3
Open space	1	1	2	1	1	2	2	1	1
Ag/rural	1	2	3	2	1	2	2	1	1
Rec'n	1	2	3	1	1	2	2	1	1
Infrastructure (u/grd)	1	1	2	1	1	2	2	1	2
Infrastructure(ab grd)	1	1	3	3	2	2	1	1	1

Key 1 = *Minor consideration*

2 = *Major* consideration

3 = *Critical* consideration

3.3 URBAN SETTLEMENT SUITABILITY

The suitability of different areas to accommodate urban settlement is based on the capacity of the resources of any area to be used in a sustainable manner and on an assessment of other non environmental resource issues such as access, land tenure, infrastructure, etc.

Establishing the suitability of different areas for urban settlement over broad areas is difficult as there are many aspects that can define urban settlement. For that reason it is necessary to spell out some guidelines which allow suitability to be identified.

For the Study Area these are:

a) Urban development incorporates:

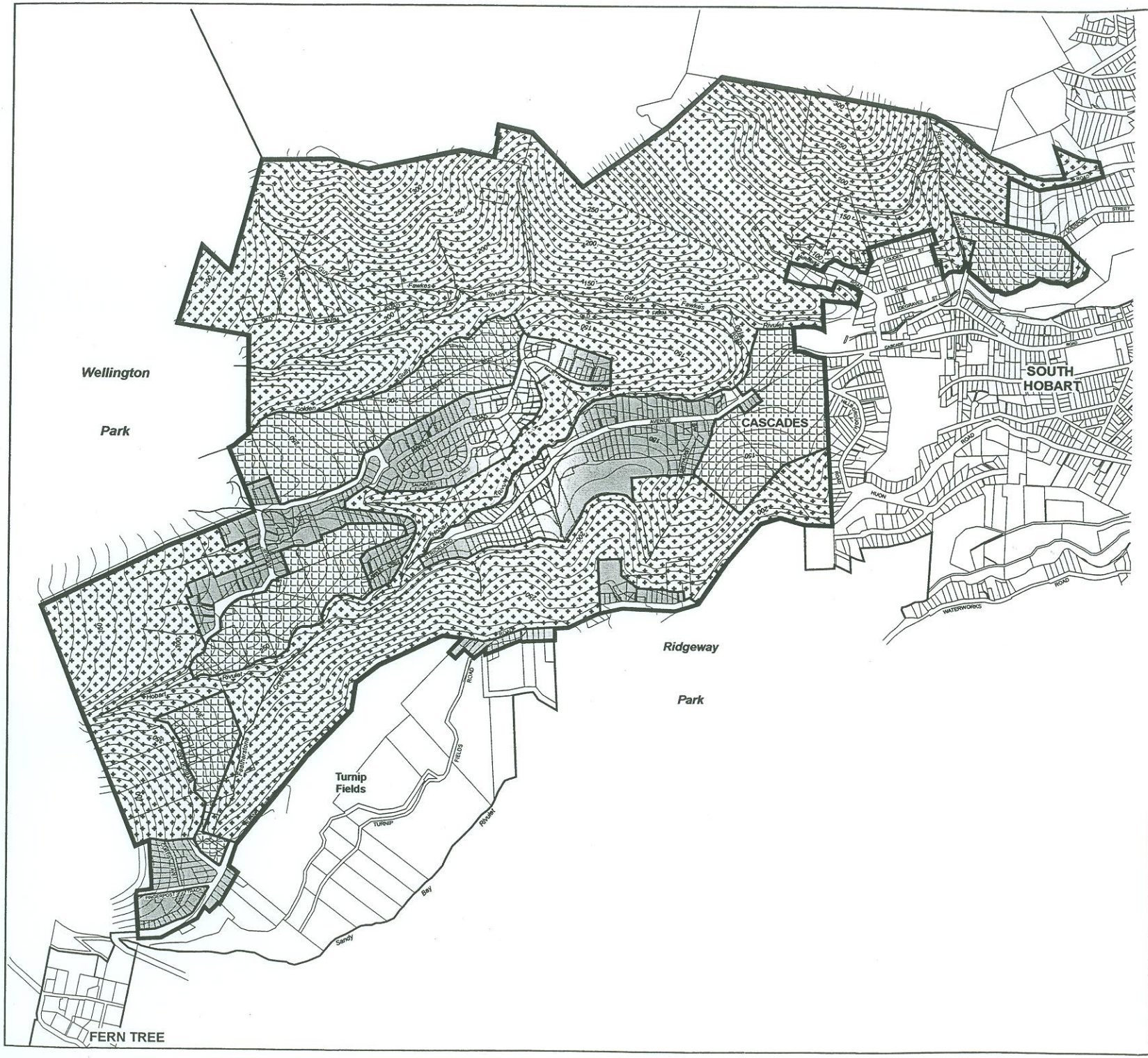
- primarily residential development at densities of between 12 and 20 dwellings per hectare,
- roads, footpaths and access ways,
- water, sewerage and stormwater connected to centralised systems,
- some commercial and small scale industrial development, and
- open space of three types - broad acre undeveloped areas, sports grounds and small local open spaces with facilities.

b) Areas with capability for urban settlement are taken to be those areas which can accommodate these forms of development within either the no or manageable effects categories spelt out in Table 1.

Using these parameters and on the basis of work done in the land inventory mapping, three levels of capability have been identified (Figure 3.1).

1. Severely Limited

Areas with severe limitations on development and with limited capacity for further development. These are predominantly areas where the values associated with the natural and physical environment are high, where infrastructure provision is both costly and difficult and visual amenity would be severely compromised by intensive development. These areas are shown on the attached map (Figure 3.1).



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Severely limited

Limited

Generally suitable

N

0 200 400 600 800

metres

Contour interval: 10 metres

Figure 3.1

URBAN SETTLEMENT CAPABILITY

2. Limited

Areas with some capacity for development but in which there are environmental limitations associated with slope and hydrology, there are some habitat and vegetation management values, there are infrastructure limitations and in which visual amenity could be compromised. These areas are capable of development but in undertaking development considerable caution is needed to address potential problems. These areas are shown on the attached map (Figure 3.1). Of particular importance will be preparation of comprehensive site analyses and the identification of means to address any problems.

3. Generally suitable

Areas with some limitations but which generally suitable for urban settlement. These areas have few significant environmental constraints but there are still infrastructure (particularly social and community) cultural and visual amenity issues to be addressed in undertaking development. They are shown on the attached map (Figure 3.1).

3.4 OPPORTUNITIES FOR PRESERVATION OF VALUES

Using the approach set out above highlights a number of opportunities to protect the values embodied in the environmental criteria listed in Table 3.1.

Their opportunities are:

a) Firstly, the identification of areas in which development would be severely limited in extent and type sets an initial 'filter' for development assessment. Only development types and forms which did not compromise the underlying values would be considered.

b) Secondly, the specification of performance criteria to protect values and their application to particular forms of development provides an opportunity to assess individual developments against site specific criteria.

c) Thirdly, the identification of areas in which development can happen only if it does not compromise the identified values provides a planning authority with a powerful tool to negotiate and facilitate outcomes which allow development whilst protecting values.

These opportunities will only be realised if appropriate criteria are developed, planning decision making procedures are put in place to apply those criteria and each development is assessed against the criteria.

Critical to achieving opportunities for particular developments will be an analysis of development against the stated criteria. This can only be done through an appropriate site analysis which takes into account all relevant criteria and applies them in relation to the development site and considers the form, type and intensity of development proposed.

3.5 CONSTRAINTS TO PRESERVATION OF VALUES

The above approach may achieve desired outcomes but there are constraints to achieving it.

These include:

a) Much of the Study Area has already been subdivided into lots legally suitable for building and on which many of the values have been severely diminished. This is the case even in some areas where development could be severely limited.

b) The data on which decision making will depend is crude and uneven. There is better information on some matters than on others. Many of the areas identified as having particular values have only been broadly defined and there is an inadequate information base on many matters.

c) It is difficult to link decision making about the use and development of land to its on going management. Many of the values could be compromised by practices over which planning decision making has no control. This is a reflection of the lack of a comprehensive resource management and planning system in Tasmania despite the existence of legislation that enables the development of such a system.

d) There are only limited resources to manage and operate a system which requires in-depth assessment of development against a range of criteria. This is a particular problem for Local Government, both because of financial constraints and a deficiency in the level of expertise available.

These constraints will limit the capacity of decision makers to preserve biological, cultural and physical values in the Study Area. However, there is considerable scope to improve on existing performance which in some areas has produced a severe degradation of values.

4. INFRASTRUCTURE STRATEGY

4.1 WATER

Water supply is a critical limiting factor for closer settlement in the Study Area. The characteristics of the existing supply are spelt out in Chapter 4 of the Background report. The issues that need to be addressed in any strategy area are:

a) extent of provision,

b) areas to be provided, and

c) management of pressure.

4.1.1 Extent of Provision

South Hobart is supplied by high level reservoirs outside the Study Area at Summerleas and Knocklofty. Potentially, all areas are capable of being supplied, but provision of water to areas north of Golden Gully and west of McRobies Gully is difficult and costly (Figure 4.1). This makes these areas unsuitable for settlement unless an independent supply is provided.

4.1.2 Areas to be Provided

Most areas are already supplied with water. Areas off Old Farm Road are not connected to the mains supply. The number of properties affected is small. In these areas there is an issue of adequate supply for fire fighting purposes.

On the basis of existing development potential water supply is adequate to meet current needs. However, large scale development (a further 500 - 750 dwellings) would require augmentation of the existing supply.

The construction of new reservoirs to supply isolated pockets of development is not recommended.

In some of the lower areas, high water pressure is a problem - particularly in the vicinity of Cascade Brewery. Pressure reducing valves are being installed to minimise this problem. This process is best dealt with as it arises and there is little need for a more strategic approach.

4.2 SEWERAGE

The provision of sewerage to residential areas in the Study Area has been in response to demand from new development. This has been an incremental process. In terms of capacity the system has sufficient ability to meet future and projected needs. The most significant issues to be addressed are:

a) increasing overall capacity of the system to ensure that dry weather flows are less than wet weather flows,

b) the level of infiltration from the stormwater system into the sewerage system, and

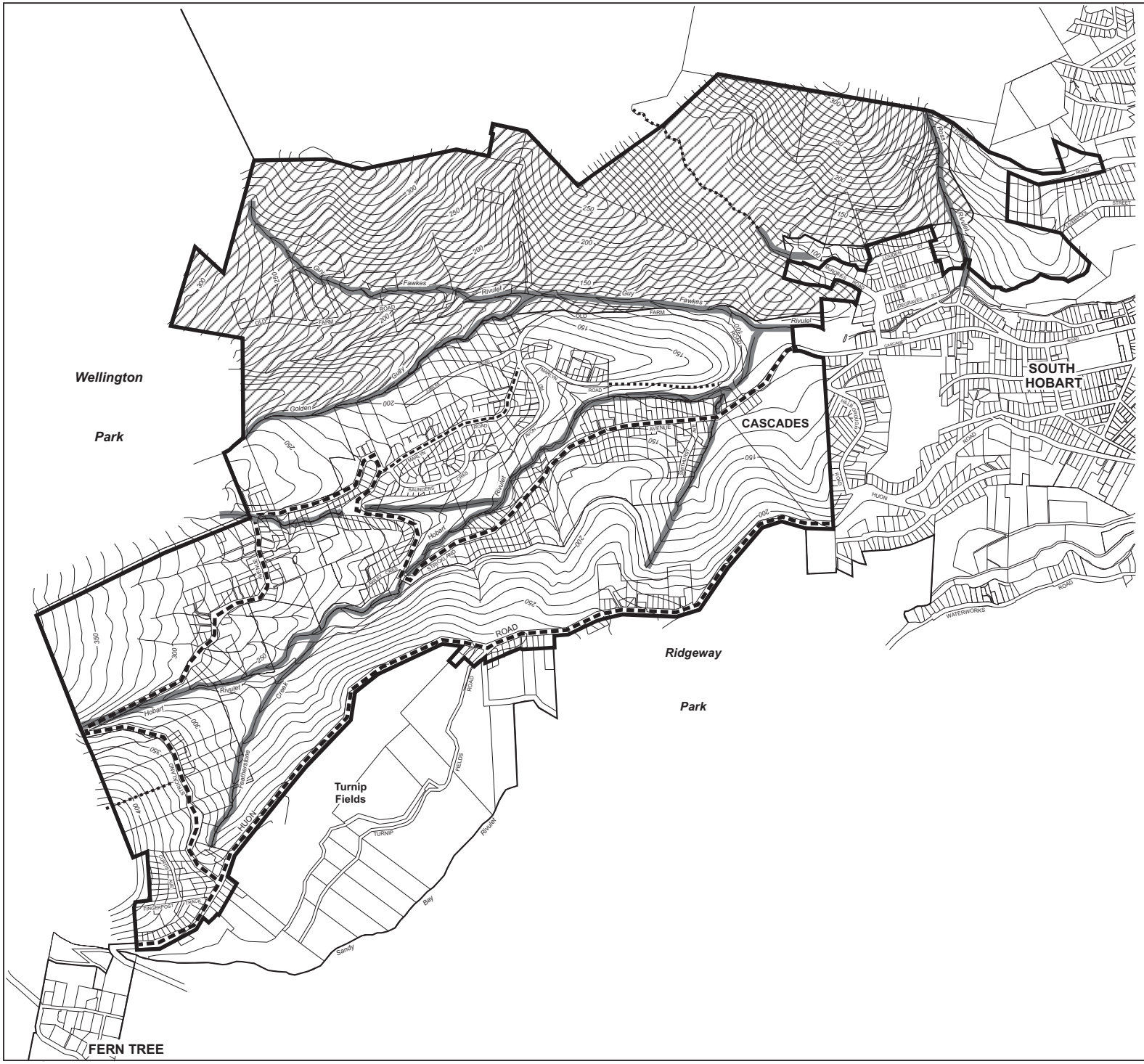
c) increasing treatment capacity

The first two issues are closely related as stormwater infiltration reduces the overall capacity of the system. This is particularly so in the lower parts of Hobart Rivulet. Reduction in infiltration will increase the capacity of the system and achieve a better balance between wet and dry weather flows. The major problems are broken pipes, surface infiltration and illegal connections. These have to be addressed as ongoing issues and are subject to the availability of resources from Council's budget. Reduction in the stormwater flows will also assist in reducing infiltration from surface flows.

Increasing the capacity of treatment has a lower priority. There are no alternatives to increasing the capacity of the existing plant at Macquarie Point. Other options such as inland water distribution or on-site disposal are inappropriate in the Study Area because of cost, health and environmental management considerations.

For areas not connected to Council's system there are some problems. Lack of proper maintenance of septic tanks is a problem throughout Tasmania and can result in sullage finding its way into watercourses. There is some evidence of this in the Old Farm Road area. Council does not currently have a policy or set of management guidelines for on-site systems. Because of problems with septic tanks it would be appropriate for alternatives to be assessed (e.g. dry composting toilets) and a policy developed to manage their installation and maintenance.

For larger self contained developments beyond the extent of the system the best method is on-site maceration and disposal through a connection to the system.



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Areas of difficult water supply

Major routes

Minor routes

Potential bushfire escape route

Power lines

Stormwater protection areas

N

0 200 400 600 800

metres

Contour interval: 10 metres

Figure 4.1

INFRASTRUCTURE STRATEGY

Cascade Brewery and the Beverage factory are major users of the sewerage system. They currently contribute about 30 % of the organic load to the overall system. Any major increases in waste from these plants will reduce even further the gap between wet and dry weather flows which will further reduce the overall capacity of the Macquarie Point plant to handle large volumes of waste. This problem is compounded by the limited space at Macquarie Point for expansion. This is a critical strategic issue to be resolved by Council.

4.3 SUSTAINABLE STORMWATER MANAGEMENT

The Brief calls for an in depth look at stormwater management. The following section sets out some of the issues to be addressed in developing an appropriate strategy. It is the area of infrastructure that has received the least attention in the past and with its recognition as a major environmental and engineering management issue, there is a need to fill this gap.

The traditional focus of stormwater management in Australia has been on disposal through the most hydraulically efficient means. This approach has been driven by a primary concern for flood mitigation which in turn is partly related to the legal liability of Councils for stormwater flood damage to properties.

In recent years there has been a growing recognition of the costs associated with an emphasis on efficient disposal as opposed to treating stormwater as a resource to be managed. This recognition has led to closer examination of urban stormwater management issues. This section reviews the opportunities within the Study Area for sustainable stormwater management. It must be emphasised that a Local Area Plan is only one of an array of mechanisms with which to address stormwater management issues - firstly, because of its limited role in day to day management of resources, and secondly, because many stormwater management issues can only be addressed over a wider area than the defined Study Area, and finally, many of the problems already exist.

4.3.1 The Nature of Urban Stormwater

Australia developed initially as an agricultural and more recently as an urban industrial nation. Consequently there have been dramatic changes to the land surface. The most significant of these has been the clearance of the original vegetation cover and its replacement by introduced grasses and pastures, roads, houses, factories, shopping centres, car parks, open spaces and urban gardens.

These changes have had wide and far reaching impacts on natural runoff patterns. There have been major and irreversible impacts on the water cycle, and patterns of water entry to the soil mantle, evaporation by vegetation, retention in the root zone, sub-surface drainage to groundwater and streamflows have all been changed. The most severe effects have been in urban areas. The level of change increases with the proportion of a catchment converted from forest and grassland to impervious surfaces.

Table 4.1 Percentage of Stormwater Runoff on a Variety of Surfaces

NATURE OF SURFACE COVER	DESCRIPTION OF SURFACE COVER	% SURFACE RUNOFF
Good ground cover	Undisturbed forest with good understorey and ground cover	2
Fair ground cover	Open forest with some ground and understorey cover .	14
Poor ground cover	Occasional trees, limited understorey vegetation, poor ground cover	73
Bare ground cover	Cleared land	85
Impervious surfaces	Concrete, bitumen, roofs	98-100

Source: CEPA (1993) *Urban Stormwater: A resource too valuable to waste.* Commonwealth Environment Protection Agency, Canberra

Urban development results in increased stormwater runoff. There are many consequences of this increased runoff and all of them are evident in South Hobart. The effects include:

- Less rainwater enters the soil and the natural water cycle through evapotranspiration from vegetation. A higher proportion of rainfall runs

off as storm flow. This results in more water reaching drains, water courses, estuaries and coastal systems.

- Peak flow rates are reached more quickly and are more intense. In Canberra for example (A city that has similar rainfall regimes to Hobart) it has been found that flows from urbanised areas can increase by as much as 20 times over the pre-urban state.

- Dry weather flows in streams and watercourses have been altered in their timing, quality and quantity. These are now sustained mainly from drainage already used for garden watering, open space maintenance and other daily water usage. Together with intense flushing associated with storm flows, these changes to dry weather flows have had severe effects on aquatic and coastal ecosystems.

- Substantially increased amounts of solid material are carried at times of high flow. The 1995/96 floods in New Town Creek provided evidence of the capacity of storm flows to carry large amounts of solid materials including large rocks. The solid material also includes litter, soil and dust particles that collect on streets and on and around buildings in any periods.

- Faster flows associated with storm flow changes scour and erode natural channels. This effect often evokes a response to "train" these channels to the altered stormwater flows - eg Glenorchy City Council's response to Humphrey Rivulet after the 1995/96 floods. Training works further eliminate natural values and destroy aquatic ecosystems.

- Faster downstream flows can also alter the long profile of a channel leading to upstream erosion and overall lowering of the profile. This occurred in New Town Creek after the 1995/96 floods.

_ Urbanisation produces a greater range and volume of contaminants and many of these enter the stormwater system at times of peak flow. The accumulated volume and mass of these materials profoundly affects the quality of receiving waters. Water quality in the Derwent has been substantially affected with both physical and biological pollutants by stormwater flows from surrounding areas.

Stormwater has much more impact than as a nuisance to be dealt with in times of flooding. It represents a critical resource management problem because of the costs associated with engineering management and environmental degradation. The costs of these effects have remained hidden and unacknowledged for most of Australia's period of urban development.

The direct costs have been primarily in providing engineering solutions to changes in the volume, periodicity and velocity of flows. These solutions have, in many instances, exacerbated the problem and led to dramatic and unintended environmental effects. The environmental effects have in turn had both economic and social consequences including such things as adverse effects on fish breeding areas, loss of recreational opportunities, siltation of navigation channels, aesthetic effects associated with lower water quality, spread of environmental weeds and feral aquatic animals, effects on commercial fish farming and loss of amenity of streamside, estuarine and coastal areas.

Stormwater contaminants have been a major contributor to these effects. The major contaminants in urban stormwater systems are:

a) Suspended Solids

These can be organic (eg sewage) or inorganic (soil particles, dust, litter). Suspended solids reduce light penetration in receiving waters which affects the growth of aquatic plants - eg New Town Bay. When solids settle out they can change the shape and composition of the stream, estuary and ocean floors, which in turn alters the habitats of bottom dwelling animals and plants. Phosphorus, metals and many organic compounds are absorbed and transported with solid particles and when deposited as sediments these contaminants can be slowly released as toxicants or nutrients.

b) Nutrients

The main source of nutrients in urban stormwater are sewage overflows, industrial discharges, animal wastes, garden fertilisers, detergents and septic tank seepage. These materials promote the growth of some aquatic plants including both toxic and non toxic algae.

c) Oxygen demanding Materials

Food and garden wastes are bio degradable and require oxygen when they decompose. Many of these substances enter the stormwater systems and can reduce the BOD levels of receiving waters, which may result in oxygen levels being reduced below the level necessary for survival of fish.

d) Micro-organisms

Bacteria and viruses found in soil, decaying vegetation and sewage are common contaminants in stormwater. They can cause water borne diseases such as hepatitis, cholera and gastrointestinal diseases.

e) Toxic Organics

Garden pesticides, industrial chemicals and landfill leachate often enters stormwater systems. These materials cause long term environmental degradation.

f) Toxic Trace Metals

The sources of trace metal contamination in stormwater systems result from pavement degradation, water pipe and roof corrosion, industry and motor vehicles. These substances can have chronic and long term effects on aquatic life.

g) Oils and Surfactants

Stormwater systems carry a range of these materials flushed from roads, car parks and as the result of washing vehicles or other metal surfaces in places drained by a stormwater system.

Urban development has proceeded in the Study Area largely without knowledge of or concern for these issues. The costs of development have been transferred

from private owners, developers and users to public authorities and to the community at large through environmental degradation. This latter cost requires eventual costly remedial works (mostly at public expense) or results in long term loss of environmental quality.

Current practices do not satisfy the objectives for sustainable development as spelt out in the Resource Management and Planning System. There are two areas of focus that can be pursued to achieve these objectives. Firstly, the quantity and velocity of storm flows has to be reduced. Secondly, the quality of stormwater has to be improved.

4.3.2 Reducing Quantity

There are several methods that can be used to reduce the quantity of stormwater flows and to maintain or restore natural flow regimes. Not all of these are equally applicable and local rainfall, soil, slope and development conditions will influence the methods to be used.

a) Maintaining a Natural Vegetation Cover

As identified in Table 4.1 the removal of vegetation has been a significant contributor to changes in stormwater flows. Maintaining vegetation cover can make a very significant contribution to stormwater management. Retention of understorey and groundcover is critical. It is essential that existing vegetation cover is maintained on steep slopes, within recharge basins and adjacent to streams and water courses. Any development that involves the removal of vegetation cover should be considered in the light of the economic and environmental costs that will result from land clearance. For example the current practice of completely removing all vegetation cover at subdivision stage appears to have little economic or environmental justification.

This is the simplest and most cost effective method of reducing the quantity of runoff.

b) Restoring Vegetation Cover

In areas that have been cleared the replacement of vegetation can make a contribution to reducing the quantity of run off. Particularly important are the following:

- Restoration of riparian vegetation (this may also require the removal of vegetation such as willows and rice grass that affect stream hydrology). A minimum width of 30 metres on either side of a stream is considered acceptable for most urban water courses.
- Replanting of unpaved areas within road reservations - grasses and shrubs can be effective if there are concerns about road safety.
- Replacement of degraded vegetation areas. These often occur at the edge of development sites and result from a variety of causes. This could be part of the development process.
- Planting of open spaces. Many open spaces have paved or grassed areas which could be replanted with a greater variety of vegetation to reduce runoff.

The current program of rehabilitation on New Town Creek provides an example of the work to be undertaken.

c) On-site Detention

There are a variety of methods currently used to detain stormwater on-site in order to reduce peak flows and the severity of storm events.

These include:

- Large detention basins to reduce downstream flow rates.
- Small storages for on-site detention (e.g. flat roofs, car parks, ponding on vacant lots etc.). These storages are designed to release water to the stormwater system over a longer period of time.

d) On-site Retention

Retention basins can be used to retain runoff for absorption into the soil. This can be used throughout a catchment and there are a variety of methods available:

- Allowing roof runoff to be used directly on gardens rather than connecting downpipes to the stormwater system.
- Domestic rainwater tanks for either domestic consumption purposes or for garden uses.

- Use of absorbent surfaces as an alternative to paving. There are several products available that have greater infiltration capacity than concrete or bitumen, e.g. porous concrete, porous bitumen, open design pavers.
- Use of swale drains adjacent to the roads and footpaths to absorb runoff from impervious surfaces. This method depends on absorbent soils and relatively low grades to be effective.
- Retention ponds in public open spaces. These ponds can be part of a stormwater system and be linked to runoff points.
- Local drainage in grassed and vegetated swales instead of pipes - this technique is effective in open areas and where stream flows are intermittent.
- Reduced lot sizes and increased open space to restore and maintain vegetation cover.
- Retention basins serving groups of houses. These basins are most effective when natural depressions or basins are used.

e) Transferable Discharge Rights

As there is public cost involved in dealing with increased stormwater flows it is a valid technique to charge for use of the system. This could have two benefits. Firstly, by implementing management techniques, developers and users could avoid costs. Secondly, revenue could be generated for investment by public authorities in management systems. This method is being used in the catchment of the Parramatta River in NSW.

4.3.3 Improving Quality

Methods to improve stormwater quality are closely related to reducing quantity. In fact the best way to improve the quality of stormwater is to reduce the quantity of runoff entering the system and maximise the amount of runoff retained in the natural water cycle. The techniques that could be used include:

a) In Transit Traps and Systems

- Replacing conventional kerb and gutter systems with grassed swales. These are most effective in sandy soils. However, they are costly to maintain and can be a source of bio degradable material into the system through such practices as regular mowing.
- Gully pits trap sediments and floating pollutants. Most are poorly designed and inefficient and require frequent cleaning to retain their effectiveness.
- Grated structures in flow paths can act as collectors of larger suspended or floating objects. They tend to block easily and become inefficient if not maintained.
- Sedimentation basins can provide a larger waterway area and reduce flow gradients and velocities. They allow sediments to settle out, but removal of the deposits is required on a regular basis to maintain effectiveness.
- Gross pollutant traps. These are structures combining grated and sedimentation methods placed in stormwater flow channels. They are more effective than either of the methods in isolation.

b) In Storage Controls

- Wet retention basins are small lakes located either in stream or off stream along urban waterways. They are very effective in removing pollutants. They can also reduce flood flows and provide aquatic habitat.
- Wetlands are seasonally or intermittently waterlogged soils or inundated land. They are shallower than wet retention basins and require less maintenance. They are widely recognised as having a

significant capacity to improve stormwater quality and reduce flows. They also provide habitats for a range of flora and fauna and can have some open space values.

_ Urban lakes are large artificially created bodies of water. They can biologically treat water, but have a number of management problems as well being a relatively high cost solution.

4.3.4 Integrating Traditional and Alternative Approaches

Based on analysis of stormwater issues the following strategic approach is recommended:

_ There is a need to maintain traditional flood management systems based on engineering works.

_ These systems should not operate in isolation from strategies to reduce quantity and improve quality as there will be significant cost and environmental degradation.

_ A number of techniques and methods should be used on a local scale to reduce the quantity of stormwater and to improve its quality.

_ Alternative techniques on their own will not resolve stormwater management problems, particularly in existing built up areas.

_ The best options to reduce flows and improve quality is to reduce initial runoff.

Within the Study Area a comprehensive integrated catchment management program is not possible because actions are required outside the area. Its application in isolation from a similar approach in other parts of the catchment would be ineffective. What can be done is to ensure that any actions are consistent with best practice integrated catchment management principles and techniques.

4.3.5 Opportunities for Sustainable Stormwater Management

Resource analysis in the Study Area indicates that there are many opportunities to improve the quality of stormwater management. A number of these are set out below. It should be noted that only some of them will be able to be implemented

through the LAP whilst others will rely on a metropolitan wide approach being adopted. Above all, it will require both decision makers and resource users to regard stormwater as a resource rather than something to be disposed of as efficiently as possible.

a) Vegetation Retention

The retention of existing vegetation cover in undeveloped parts of the Study Area presents the cheapest and most effective means of improving the quality of stormwater management. Actions that are likely to reduce vegetation cover need to be assessed against the economic and environmental costs of increased runoff, erosion, siltation and pollution.

Actions to be avoided are:

- too frequent burning for hazard reduction purposes - this can reduce both ground and understorey cover,
- overclearing for development, particularly on steeper slopes - housing, roads, tracks, infrastructure, open space etc.,
- creation of unnecessarily large buffer zones to protect buildings from fire,
- grazing of animals in bushland areas - this can reduce ground and understorey cover and compact soils, and
- allowing bushland areas to be used for off road vehicles, particularly on steeper land and on tracks without drainage.

Of particular importance will be the protection of vegetation cover within 30 metres of any stream or recharge basin, and on slopes steeper than 1:10. All existing bushland within the Study Area must be considered as an important resource for reducing runoff.

b) On-site detention and retention

There are few significant opportunities for major retention or detention works. In South Hobart this is not a priority because of the relatively short duration of storm flows and the costs associated with the construction and

maintenance of detention or retention works. However, small scale on site methods need to be promoted and supported by Council.

c) Water sensitive residential design

The principles of water sensitive design for urban residential development have been developed in a number of localities in recent years. These principles should be used to guide development in new residential subdivisions in the Study Area. The key principles are:

- roads and access ways should not have a slope of greater than 1:10,
- where possible road reservations should be used as opportunities to absorb surface water,
- the area of impervious surfaces should be minimised,
- parking areas, driveways, access ways and footpaths should be constructed using techniques and materials that allow infiltration of surface waters,
- householders should be able to retain stormwater on-site for domestic or garden use,
- domestic and public landscaping should be designed to maximise stormwater retention,
- where possible, residential subdivisions should protect natural drainage channels so that they can perform their natural drainage role, and
- the amount of vegetation retained on-site during and after the development process should be maximised.

Many of the matters referred to above are referred to in the draft Code of Practice for soil and water management for the Greater Hobart Region. The review of the code in relation to the above discussion and its implementation as part of the ODP would make a significant contribution to sustainable stormwater management and the achievement of the objectives for sustainable development. Particular criteria from the Code can be built into the LAP.

5. VISUAL AND LANDSCAPE MANAGEMENT STRATEGY

5.1 LANDSCAPE VALUES

One of the aspects identified in the Background Documentation Report was the high level of visual amenity in the Study Area. This is closely associated with:

- the topography;
- the tree cover on steeper slopes and higher areas; and
- the dramatic backdrop of Mt Wellington.

The protection and maintenance of these values will need to be an integral part of the LAP.

Six landscape classes were identified in the Background Report, ranging from areas of very high amenity (mainly the wooded hills, prominent ridges and steep valley slopes) to the urban areas with limited landscape significance.

The six key landscape characteristics of the Study Area are:

- Very prominent densely wooded ridge lines and upper sloes. Prime element in most views, frequently forming mid ground landscapes, seen against a background of Mt. Wellington.
- Creek beds and banks, valleys forming foreground landscape. Prime elements of broad scale landscape setting. High degree of integrity and consistency of form, line colour and texture.
- North facing lightly treed slopes with open understorey forming local background landscape.
- South facing, densely treed slopes with a medium to dense understorey.
- Landscape setting areas frequently cleared on lightly vegetated, including some settled areas with a rural appearance.
- Highly modified urban landscapes and degraded areas requiring reinstatement.

5.2 THE STRATEGY

Figure 5.1 summarises these results and presents a simplified landscape assessment of values. The strategic issues with respect to the three areas shown on the plan are:

1. **Critical Areas**

   Subdivision of land should be strictly controlled. All tree and understorey removal should be strictly controlled. Any development or works should be subject to mandatory site design controls. Protection of riparian vegetation - with extra reserves created as part of development process.

2. **Areas of Moderate Landscape Significance**

   Selective vegetation removal could occur on lower, less visible slopes, but retention of tree cover. Site design controls over all development and works.

3. **Areas of Low landscape significance**

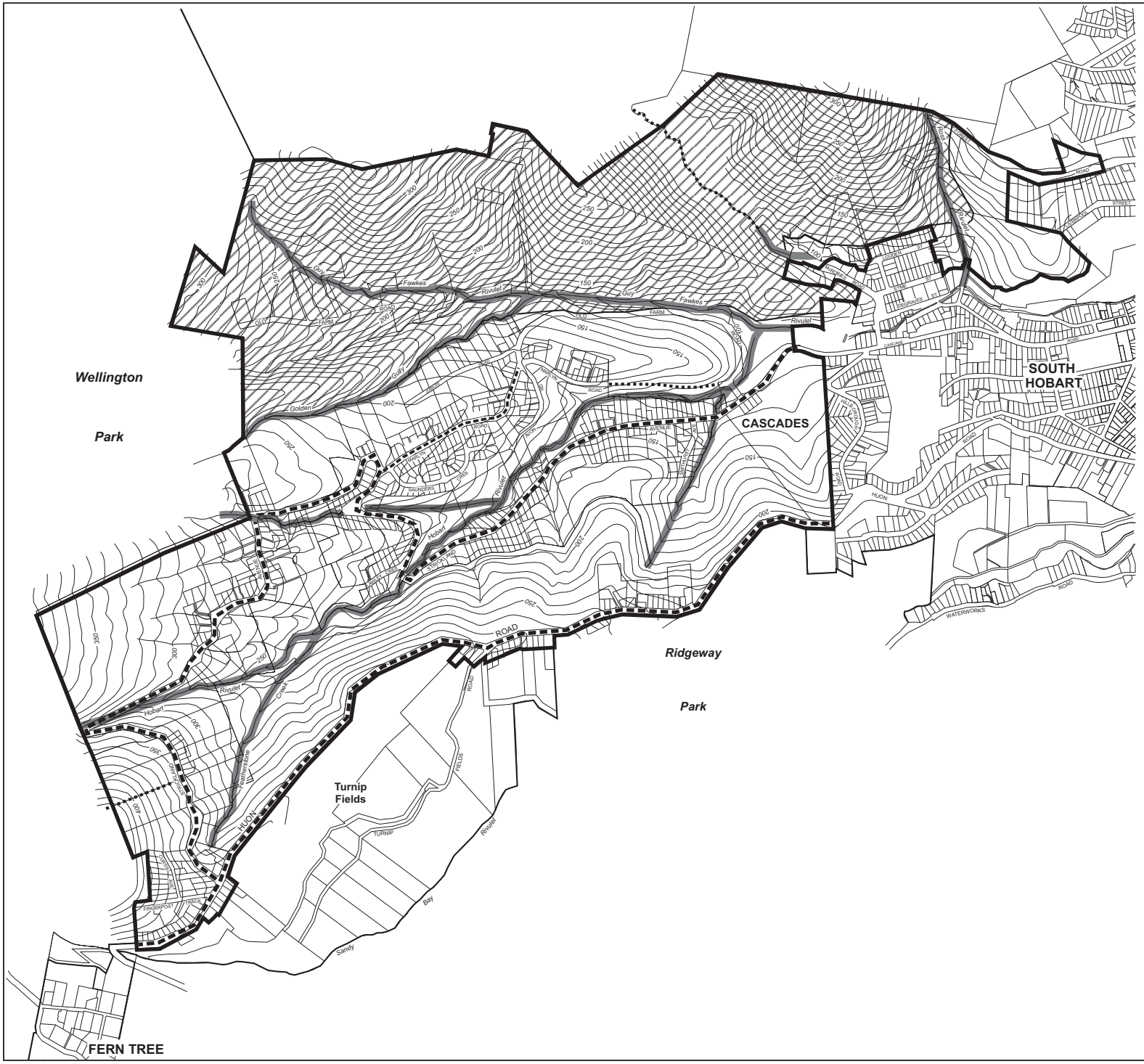
   Protection of views and vistas, restrictions on larger buildings. Visual landscape improvement programs required. Siting and design controls to be applied. Streetscape and urban design issues addressed as part of development process. No 'straight edged' vegetation removal.

Implementation of the strategy will require the development and application of standards through the LAP and the carrying out of works as part of Council's works program.

The involvement of community groups, facilitation and education on the importance of visual and bushland elements will also be an important part of this strategy.

Some community concern was expressed with the visual analysis of the poultry farm site at the western end of Forest Road/Liverpool Crescent. The land was assessed as a landscape character 4 type being typified as settled areas of general visual interest and informal rural character. The study area boundary does not include the important wooded slopes running down to the Hobart Rivulet, which would be assessed as a critical area of landscape importance. Appropriate residential development would be contiguous with the adjoining residential area and would need to be subject to siting and design requirements. Of particular importance will be the introduction of landscaping programs to provide screening for any prominent visual elements. It may also require detailed building envelope definition (height, materials, bulk, form) but development should not

be prohibited on visual aspect alone. The planning application for subdivision has become a legal dispute, with the Tasmania Supreme Court upholding planning approval for residential development.



HOBART
CITY COUNCIL

SOUTH HOBART LOCAL AREA PLAN

Areas of difficult water supply

Major routes

Minor routes

Potential bushfire escape route

Power lines

Stormwater protection areas

N

0 200 400 600 800

metres

Contour interval: 10 metres

Figure 4.1

INFRASTRUCTURE STRATEGY

6. COMMUNITY FACILITIES

6.1 EXISTING FACILITIES

The Background Documentation report for South Hobart provides an overview of:

- overview of the development history and thus the progressive placement of community facilities within the Study Area (Chapter 3);
- population, housing and socio-economic aspects of the community (Chapter 3); and
- existing community and commercial facilities (Chapter 4).

The only commercial facilities within the Study Area are the:

- Cascade Brewery, beverage plant and reception centre;
- Strickland Gallery;
- Country Crafts shop (Huon Road); and
- backyard caryard operation (Strickland Avenue).

There are no community facilities within the Study Area other than small neighbourhood parks at 209 Strickland Avenue, 110 Marilyn Road and Saunders Crescent.

There are a number of commercial and community facilities in adjoining parts of South Hobart which are used by residents including shops, restaurants, medical practitioners, chemists, childcare, sportsgrounds, indoor recreation facilities, churches, community facilities, hospital, hotels and service industries.

This section provides a summary of the community views expressed about community facilities within the Study Area and then indicates a strategy for the future planning, development and management of these facilities.

6.2 COMMUNITY VIEWS

The local community made reference to community facilities and services at the community forum and through the household survey. From the outset many people indicated a preference for the Study Area to be referred to as Cascades rather than upper South Hobart or part of South Hobart. Some people wanted greater use to be made of the local names and features in future nomenclature for the area.

At the community forum, the key points concerning the adequacy of community facilities within the Study Area were:

- the need for resolving access issues with private land and Cascade land for access to Wellington Park;
- that any non-residential uses should be sympathetic to the residential and environmental values (eg. Strickland Gallery seen as a good example, tourist accommodation, local shop);
- need for better signage of walking tracks;
- provide safe bikeways; and
- more neighbourhood parks.

The household survey asked respondents to identify favourable and unfavourable aspects about living in South Hobart, as well as assessing the adequacy of the facilities and services of the suburb. The most favourable aspects listed by a majority of respondents were living within a bushland setting, convenient access to the City, being a quiet/safe area and having good access to Wellington Park. Only 10% of the respondents referred to available facilities as a favourable aspect of living in South Hobart.

On the other hand there was no clear picture as to what respondents considered to be the worst aspects about living within the Study Area although about a third of the respondents identified the existing roads and footpaths as the major concern. This was followed by the climate, increasing crime, lack of public transport and the development of public housing within the area. The lack of community facilities was ranked sixth with about 12% of respondents noting this as a concern. There was a range of minor concerns among respondents, some of which relate to community facilities - poor cycling facilities, lack of shops and lack of police. The results of this summary are given in Table 6.1.

Table 6.1 : Community Facility Results of Household Survey in South Hobart

Facilities	Very Good %	Good %	Poor %	Unsure %
Roads and footpaths	4	34	63	-
Water supply	50	41	7	2
Neighbourhood parks (play parks)	18	45	21	16
Open spaces and reserves (undeveloped)	38	43	13	8
Recreation and sporting facilities	11	41	20	29
Services for the aged	4	7	18	71
Childcare facilities	2	14	14	70
Public transport services	16	48	27	9
Local shops	18	63	13	7
Community hall	5	30	14	50

There was a strong 'poor' response (63% of respondents) to the adequacy of roads and footpaths within the Study Area, followed by public transport services (27%), neighbourhood parks (21%) and recreation and sporting facilities (20%). The majority of respondents (greater than 50%) indicated either 'very good' or 'good' for water supply (91%), local shops (81%), open spaces and reserves (81%), public transport services (64%) , neighbourhood parks (63%) and recreation/sporting facilities (52%).

There are very few facilities within the Study Area and thus the response to the questions need to be interpreted with some care. For instance there are no local shops within the Study Area and the assessment of these facilities is likely to reflect upon availability of local shopping on Macquarie Street, in lower South Hobart. The overall response to aged, childcare, community hall and sport and recreation facilities is also likely to represent the respondents assessment of these facilities generally within South Hobart as so no such facilities are located within the Study Area.

The household survey indicated that respondents made high use of the local shops (90%), parks/open spaces (84%), medical services (46%) and Adult Education (34%) . Patronage of hotels/clubs (28%), schools (16%), churches (14%), indoor sports (12%) and childcare (o%) indicate the ability to access such facilities and services within the City rather than locally.

The general discussion at the community forum and comments on the survey sheets indicated that respondents are not suggesting that all these facilities are appropriate for location within the Study Area, but that they should be accessible within South Hobart.

The incremental development of South Hobart over many years has led to the development of most community facilities and services along Macquarie Street in South Hobart. The suburb is seen to be one of the more established residential areas within the City with a diverse range of community facilities and services, that are generally accessible to most residents within the suburb.

Importantly these facilities would appear to:

- be well located to conveniently service the local community;
- meet the expectations of many within the community across a broad spectrum of age groups and interests;
- be generally developed to a high standard; and
- give identity to the focus of community activity around the local shopping area.

However there are a number of issues that need to be addressed, including:

a) the provision, condition and safety of the existing roads and footpaths (refer to the Access Strategy);

b) inequity in the provision of neighbourhood parks, the diversity of recreation facilities and access within the Study Area (refer to Open Space and Recreation Strategy);

c) provision for local services in the future;

d) concern about public transport services (refer to the Access Strategy); and

e) concern about increasing crime and the changing social structure of the community.

6.3 STRATEGY

There is considerable overlap between this strategy and other recommended strategies and in particular Access Strategy and Recreation/Open Space Strategy. Consequently this strategy focuses on the future planning for commercial facilities, community facilities and industrial uses.

6.3.1 Commercial Facilities

There is no demonstrated need for the development of commercial facilities within the Study Area at present nor is there expected to be a significant need within the future given;

- the relatively small size of the base population within the Study Area to support facilities;
- the likelihood of a continuing pattern of incremental and small scale development given multiple land ownership, smaller titles and development constraints existing with many sites;
- the socio-economic profile of the community; and
- the level of existing services and convenient access to facilities within South Hobart and the City generally.

The local community have expressed their desire to retain one of the most favourable aspects of living within the Study Area - a pleasant bushland setting which is not overly developed as an urban area.

One suggestion at the community forum was for a local shop to be located near the intersection of Marlyn Road and Strickland Avenue, although there are significant traffic problems with this site.

The overall strategy for commercial facilities is to:

a) support the role of the existing South Hobart local shopping area as the major focus for commercial services and community facilities that service the whole of the community;

b) consider the potential for some non-residential uses (eg. local shop, tourism accommodation, gallery) within the residential area of the Study Area which would be subject to satisfying performance criteria for maintaining residential amenity, safety and traffic; and

c) encouraging home-based occupations and businesses that satisfy performance criteria for maintaining residential amenity, safety and traffic.

6.3.2 Community Facilities and Services

There is no apparent need for development of new community facilities within the Study Area for similar reasons noted with respect to commercial facilities. The overall strategy for community facilities should be to upgrade and improve the existing facilities (in particular roads, footpaths, recreation facilities, bikeways and access) that are of concern to the local community. These recommendations are outlined in the Access Strategy and Recreation and Open Space Strategy.

The Outline Development Plan is very limited in its ability to address service delivery issues such as concern about increased crime, extent of public housing and the lack of public transport services. These concerns are best addressed through a variety of measures including detailed consultation with the community about the problems, liaison with relevant agencies, establishing Neighbourhood Watch Groups and review of services against identified community expectations and needs. The lack of evening bus services to Huon Road/Ferntree area was mentioned at the community forum.

The Outline Development Plan can support planning and management of community facilities and services by:

a) allowing some discretion to consider community facilities that may be suitable within a predominantly residential area, eg. small creche, school, home based child care, church, community housing;

b) proposing the design of safe pedestrian connections and open spaces areas, including encouragement of passive surveillance over such areas through the design and development of buildings;

c) encouraging better layout of roads and buildings to reduce safety/crime risks and to allow for efficient public transport routes;

d) encouraging any infill housing development (noting that statutory planning tools cannot and should not set different rules for public or private housing) to better integrate within the existing area; and

e) re-use of existing buildings for appropriate community or commercial purposes.

6.3.3 Industrial uses

The only approved industrial use within the Study Area is the Cascade Brewery and its associated beverage factory. Under the City of Hobart Planning Scheme 1982, the site is considered as a Special Use Zone with the objective being:

"The precinct is set aside to allow the continued economic use of the Cascade Brewery complex and its conservation and enhancement as an historic complex of both local and national significance."

Section A8 of Schedule A of the 1982 City of Hobart Planning Scheme contains the following specific provisions:

- expansion of the existing beverage factory plant is permitted provided a minimum landscaped buffer of 30m is retained to Huon Road and to nearby residential properties;
- Council may require additional environmental buffer measures to maintain residential amenity and streetscape enhancement;
- approval will be given by Council for a range of activities including preparation and packaging of food and beverages, warehousing and storage of food and beverage products and recycling of products and by-products;
- any approval being conditional upon satisfying other statutory environmental approvals;

- limitations over the expansion of the existing development on the northern side of Cascade to maintain protection of the rivulet and buffer areas (including scenic and heritage values); and
- the requirement for screening and landscaping of any development of land adjacent to the existing silos.

The northern side of Cascade Road is also in a heritage precinct of the planning scheme.

The existing use is a substantial development with significant heritage and cultural values. Under the provisions of the proposed model planning scheme for the State, the Cascade Brewery complex should be covered by an industrial zone. The boundaries for the industrial site and the performance criteria to manage existing and future use of the site will be identified in the preparation of the Local Area Plan. However, the extent of potential expansion of industrial activity to the south of the existing beverage factory will require careful consideration, given the surrounding residential uses and the suitability of the land for expansion of residential uses.

The overall strategy for industrial uses would be to prohibit industrial uses within the Study Area except for the proposed industrial zone for the Cascade Brewery complex and beverage factory. There may be some scope for expansion of industrial activity within this zone subject to meeting performance criteria for protecting heritage/cultural values, scenic values, residential amenity, access and public safety.

The LAP should also recognise the economic need of existing industrial areas to redevelop and expend. The critical planning issues in any expansion will be amenity, traffic, and protection of heritage.

7. OPEN SPACE & RECREATION STRATEGY

7.1 THE EXISTING SITUATION

The boundaries of the Study Area adjoin a number of major parks managed for conservation and recreation use (Fig 7.1) including:

- Knocklofty Park to the north;
- Wellington Park to the west;
- Cascade Gardens to the east, along the Hobart Rivulet; and
- Ridgeway Park to the south.

The principal walking tracks connecting into these parks are:

- Myrtle Gully Track off the end of Old Farm Road;
- Hobart Rivulet Track extending from Strickland Avenue along Hobart Rivulet to recross Strickland Avenue and continue through to Pinnacle Road (via Woods Track or Betts Vale Track or fire trails); and
- the network of existing fire trails leading into Wellington Park (eg. off Inglewood Road, Middle Island Fire Trail, Old Farm Track).

Over the years the Council has acquired a number of reserves from subdivision within the Study Area - the majority of the reserves are along Hobart Rivulet with a few smaller reserves along Guy Fawkes Rivulet. Two areas - one off Strickland Avenue and Marlyn Road/Saunders Crescent have been developed as play parks, with the first area having very limited facilities.

The Council also owns and manages Cascade Gardens immediately to the east of the Cascade Brewery, just outside the Study Area boundary. This is a large attractive park adjacent to the Hobart Rivulet with paths, seating, picnic tables, barbeques, landscaped gardens and modern play equipment.

The Council owns and manages McCrobies Gully reserve as the City's refuse area with the long term objective for potential conversion to open space and sporting fields.

The Cascade Brewery owns large land parcels within the Study Area, the most significant being on either side of Old Farm Road through to Wellington Park and around the Cascade Brewery complex and bushland areas between Huon Road and Strickland Avenue. These areas are not accessible to the public but are maintained by Cascade as bushland.

7.2 COMMUNITY VIEWS

The community meeting and forum identified a number of ideas and opportunities for improving open space and recreation within the Study Area. These included:

- the acquisition of more land along the Hobart Rivulet to provide for a linear park connection for walking and cycling between the City and Wellington Park;
- providing more links between the residential area and the Hobart Rivulet eg. near female factory, between Saunders Court;
- improve facilities for links to Wellington Park eg. car parking area at end of Old Farm Road, better tracks at Strickland Falls area, connection between Jubilee Road and Old Farm Road;
- providing a link from Old Farm Road around the northern side of Cascade Brewery to link with the Hobart rivulet;
- pursuing the potential for public access over some of the Cascade Brewery land, especially via Old Farm Road and Marlyn Road towards the Hobart Rivulet;
- adding the bushland area to the west of Strickland Avenue to the south of Strickland Falls into Wellington Park; and
- improving parking and achieving safer walking access off Forest Road into Knocklofty Park.

Consultation with Cascade Brewery indicated a number of concerns with the current community perception that Cascade land was 'public' land and therefore available for

public access. The company raised concerns about the management difficulties resulting from:

- public risk and threat of legal cases resulting from illegal public access;
- increased threat to security of their assets;
- water degradation;
- increased risk of bushfires;
- vandalism of property including fences;
- risk of adverse possession claims;
- spread of weeds; and
- impacts from recreational use eg. erosion, increased tracks, drainage problems.

The company considers that other access options exist over private land to achieve public access, without having to use Cascade owned land.

The proposed community consultation program during late February and March 1998 was aimed at:

- providing an overview of the key results from the first two phases of the project, and in particular the strategic direction under-pinning the Outline Development Plan;
- presenting the proposed structure of the Local Area Plan and indicating how it has been built from the outcomes of the previous phases;
- seeking public response to the strategic direction and the mechanisms for implementation through the Local Area Plan; and
- consulting with the key interest groups identified through the project.

7.3 STRATEGY

A review of the following relevant reports was undertaken in preparation of the strategy:

- City of Hobart Open Space and Landscape Strategy 1994;
- Wellington Park Management Plan 1997; and
- City of Hobart Open Space Study (Volume 1) 1997.

The existing and potential open space reserves, local parks and open space links have been identified and their adequacy, level of access and suitability have been generally assessed. These are shown in Figure 7.1.

The Strategy sets out matters to be addressed with respect to open space and recreation issues in the Study Area. Many of the issues canvassed impinge upon other strategic aspects and highlight the need for integrated approaches to planning and management within the Study Area. For example, the open space strategy should be closely linked with land management and stormwater management programs.

7.3.1 Open Spaces

Figure 7.1 shows the existing land areas owned and managed by the Council within the Study Area, most of which are managed as open space reserves. The recommendations of past Open Space Studies for land acquisition are shown including:

- extensions to the Hobart Rivulet to achieve a linear park;
- adding scenic bushland areas to the west of Strickland Avenue into Wellington Park;
- protecting the scenic bushland backdrop to the Cascades Brewery; and
- securing Ross Rivulet for conservation purposes.

Given the significant contribution by the Council towards achieving the linear park along Hobart Rivulet and general community support for the extension of the park, Council will also need to consider acquiring/negotiating access agreements for two other parts of the Rivulet to achieve full public access.

Three areas were identified in the Hobart Open Space and Landscape Strategy as worthy of inclusion into Wellington Park. The area at the western end of Old Farm Road is owned by Cascade Brewery but includes access to important fire trails and the start of the Myrtle Gully Track, all of which are used by the public and agencies with reponsibilities for land management. Cascade have indicated they have no intention of selling off the land parcels, but will retain them as part of their land portfolio. The other two land areas off Strickland Avenue are also owned by Cascade and have significant landscape and vegetation values worthy

of protection. The land area is considered to be unsuitable for any future residential development and is proposed to be included within the environmental protection zone of the Local Area Plan.

7.3.2 Local Parks

The area is generally poorly served with neighbourhood parks and parks that can cater for a wider range of community interests. There are two developed parks with some play facilities, of which the Marlyn Road/Saunders Crescent location is more central, better developed and has better passive surveillance. However improvements to this park could include:

_ provision of seating and signs;

_ a path along the edge of the road verge and some rehabilitation of the site from past roadworks;

_ reducing the public hazard risk to pedestrians from the stormwater lid protruding above the footpath; and

_ an increase in general maintenance programs at the sites.

_ The park on Strickland Avenue, whilst retaining an attractive bushland setting suffers from:

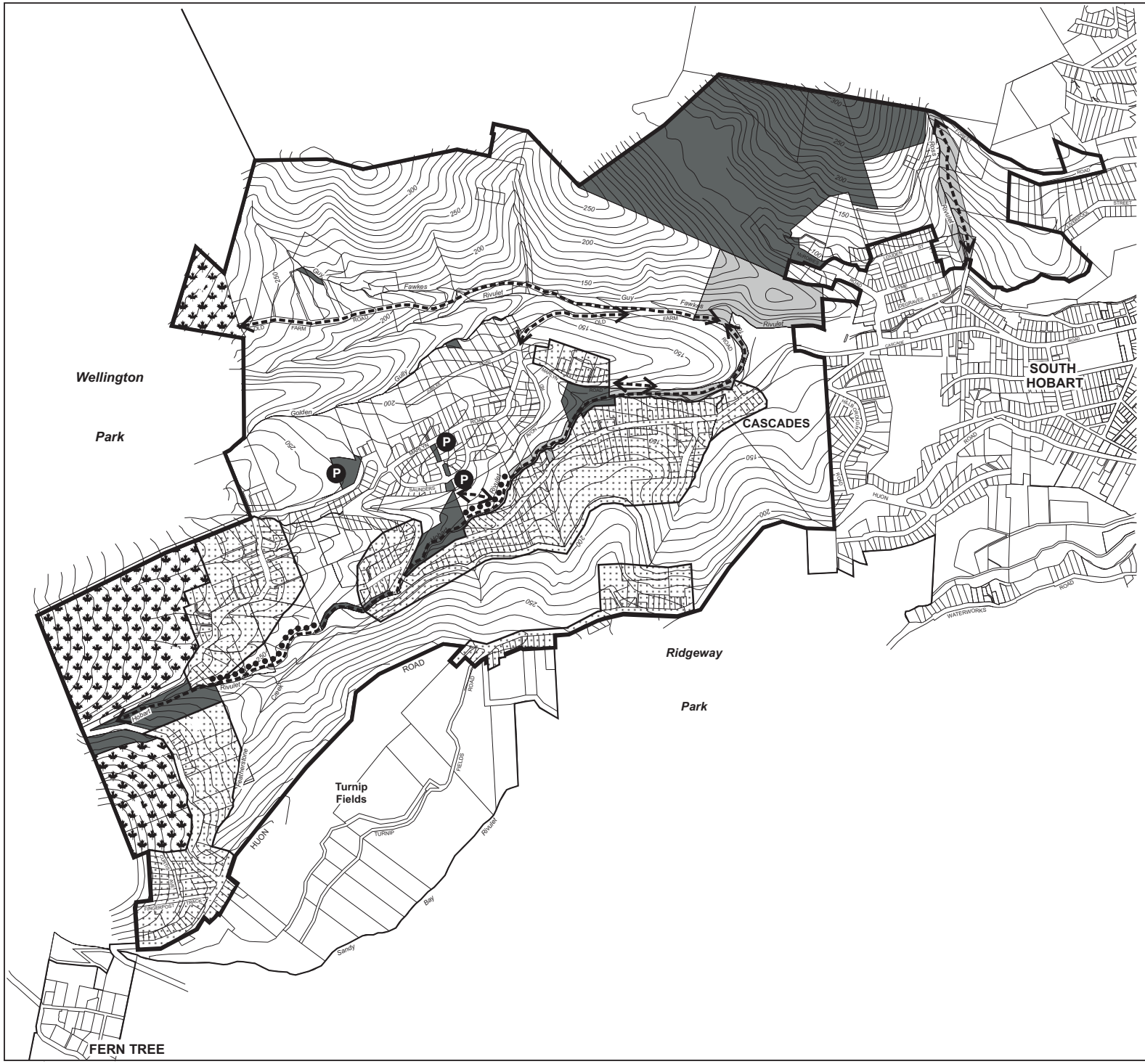
_ poor pedestrian access and unsafe vehicle access off Strickland Avenue;

_ no defined car parking area;

_ old play structures with some risk management concerns (eg. lack of undersurface around the maypole swing);

_ lack of signs and seating; and

_ damage to the small oval shaped area from mini-bikes, trailbikes and bikes generally.



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- Council owned land
- Play facilities (P)
- Areas recommended in Hobart Open Space Strategy for inclusion in Wellington Park
- Proposed land acquisition in City of Hobart Open Space Study 1997
- Acquisition / agreement required for linear park
- Areas poorly serviced by existing neighbourhood parks and facilities
- Important open space links to be investigated

N

0 200 400 600 800

metres

Contour interval: 10 metres

Figure 7.1

OPEN SPACE & RECREATION STRATEGY

A small picnic area exists on the old Strickland Avenue road bend near Strickland Falls. This site requires some upgrading to improve its appeal, including:

- amenity plantings on Strickland Avenue to reduce the apparent impacts of passing traffic on the site;
- a shade shelter or tree near the picnic table;
- improved fencing around the culvert entrance;
- defining of a track to view Strickland Falls and a link onto the fire trail; and
- signage of walk options.

An assessment of the provision of developed parks was undertaken with consideration to a planning guideline of 500m walking distance from such parks with allowance being made for topography and other access barriers. The major areas of deficiency for developed neighbourhood parks is shown on Figure 7.1 and is along the lower part of Strickland Avenue. The option may exist to provide new neighbourhood park facilities within the proposed extension to Hobart Rivulet linear park and possibly near the area proposed for future access from Strickland Avenue to the rivulet. The small population within the other two areas would not be sufficient to warrant the costs of developing additional neighbourhood park facilities.

If there was to be any substantial increase in housing in larger land blocks within the Study Area, then consideration should also be given to incorporating a small developed park as part of the future development.

7.3.3 Open Space Links

The existence of several small valleys running through the Study Area provides the opportunity for a number of open space linkages to be created. The most notable of these is the Hobart Rivulet linear park which could eventually provide a high quality walking/cycling trail from the City to Wellington Park. The requirements for land acquisition to achieve this link have been identified previously.

Other important links include:

- short links into surrounding residential areas off Hobart Rivulet (eg. Saunders Crescent, Marlyn Road;
- retention of Old Farm Road/Guy Fawkes Rivulet as a major public access route into Wellington Park with provision for going around the northern side of the Cascade Brewery to rejoin with Cascade Gardens;
- retention of old Jubilee Road for public access to the join the Old Farm Road route and as an 'escape' route in a bushfire emergency situation; and
- possibly in the longer term, an open space link via McCrobies Gully Reserve to Knocklofty Park and Lenah Valley.

The extension of the Hobart Rivulet Linear Park around the Cascade Brewery site has some difficulties. It requires acquisition of land and substantial costs to develop a pedestrian/cyclist bikeway. It also overlooks the Cascade industrial site and potentially causes some problems for site security. Cascade have indicated a preference for the public access to continue from Cascade Gardens onto Strickland Avenue and then to rejoin the Hobart Rivulet if need be. This may be the most practical means of achieving the extension to linear park.

Particular attention needs to be given to streamside management requirements in providing links along rivulets. Firstly, tracks should not be provided at the expense of riparian vegetation. Secondly, the form of construction should not add to the quantity of runoff nor result in a lowering of water quality. Thirdly, access to the rivulet needs to be better managed. Currently it is ad hoc and there is the risk of significant damage resulting from vegetation removal, ad hoc access points and dumping of rubbish. Finally, there is a need to provide strategic parking areas along the route rather than allowing cars to be parked in areas where they interfere with access to the Rivulet and cause damage to the area through soil compaction and vegetation damage.

Many of the walking track components of this strategy are poorly signed, particularly access points to trails and information about the facilities and

recreational opportunities available. A consistent and comprehensible signage program to identify facilities and opportunities is required.

It is proposed that the network of walking trails be formalised in the short term until such time as resources permit land acquisition or other works. There will need to be consultation with land owners, agreements on access points and trail locations, adequate signage and specification of use conditions (e.g. suitability for animals, fire management, restrictions on vehicles, closure of gates, keeping to trails, no interference with fences etc.). Council will also need to maintain liaison with private landowners to ensure that any problems can be resolved as they emerge.

Some of the existing trails (most of which are not shown on the plan) are used on an ad hoc basis by trail bike riders. Apart from the more obvious effects of disturbance, trail bikes can cause significant damage to natural areas. It is an extremely difficult activity to manage, but the extent of damage (vegetation removal, erosion, habitat disturbance, fires, opening up of trails in steep and erodible terrain, conflict with other activities, etc.) means that a management program is essential. There are no identified opportunities for trail bike trails in the Study Area.

8. ACCESS STRATEGY

8.1 EXISTING INFRASTRUCTURE

The existing road system is outlined in Chapter 4 of the Background Documentation report. The hierarchy of roads within the Study Area is:

a) ***Arterial Road*** - the Huon Highway forms the southern boundary of the Study Area and principally services a larger population catchment in Ferntree/Ridgeway, visitors to Mt Wellington as well as being a recognised scenic drive to the Huon Valley;

b) ***Major Collector Road -*** Strickland Avenue is the main route for all traffic within the Study Area into South Hobart and the City;

c) ***Minor Collector Roads -*** part of Strickland Avenue and Marlyn Road have the role of local collectors servicing a relatively small household catchment; and

d) the remaining local roads and streets.

This strategy looks at the overall opportunities for improved and safe access by vehicles and bicycles within the Study Area. Pedestrian access is dealt with in the Open Space and Recreation Strategy.

8.2 COMMUNITY VIEWS

The community expressed potential concerns about traffic management within the Study Area if :

- a link road was created from Strickland Avenue to Pinnacle Road as the new entry road to Mt Wellington (an option currently being investigated by the Council);
- a link road was ever constructed through McCrobies Gully to Lenah Valley; and
- with any major development such as the proposal for a cable car from Cascades into Wellington Park.

The concerns referred to the inappropriateness of the proposed developments, increased traffic volumes, increased through traffic, loss of residential amenity, visual impact, environmental degradation and inherent problems with the existing road system to cater for increased traffic movements.

The community survey found that 63% of respondents considered the roads and footpaths to be 'poor' within the Study Area. The condition of the roads/footpaths were ranked as the most unfavourable aspect of living within the Study Area. Respondents also made mention of poor cycling facilities and traffic problems. At the community forum residents identified the following general traffic problems and issues:

- the threat of the above mentioned possible road links and developments;
- dangerous road conditions on parts of Strickland Avenue (eg. tight bends, poor sight distances, multiple access points, dangerous access points, lack of pedestrian footpaths);
- the need to retain the character of the old bridge on lower Strickland Avenue but improve warning signs for users;
- the need for footpaths on Strickland Avenue from the Hobart Rivulet to the intersection with Marlyn Road;
- concern about the safety of the existing Strickland Avenue and Marlyn Road intersection;
- concern about the lack of escape routes in bushfires eg. Marlyn Road, Jubilee Road;
- poor cycling conditions on Strickland Avenue; and
- maintaining public access rights through Cascade Brewery land in the future (many of these "rights" do not actually exist).

Some of the suggested improvements to access were:

- controlling future development to avoid substantial increases in traffic movement;
- planning for escape routes as part of any future subdivision planning process;

- provide a footpath along parts of Strickland Avenue servicing the residential area;
- provide a bikeway and pedestrian path as part of the Hobart Rivulet linear park;
- improve sight distance on some of the Strickland Avenue bends with careful removal of some roadside vegetation and reshaping of the road banks; and
- provide a small car parking area at the end of Old Farm Road to service users of the Myrtle Gully Track.

In regard to the cost suggestion, Cascade indicated that the car park would need to be located on Crown land and not private land.

8.3 STRATEGY

8.3.1 Roads

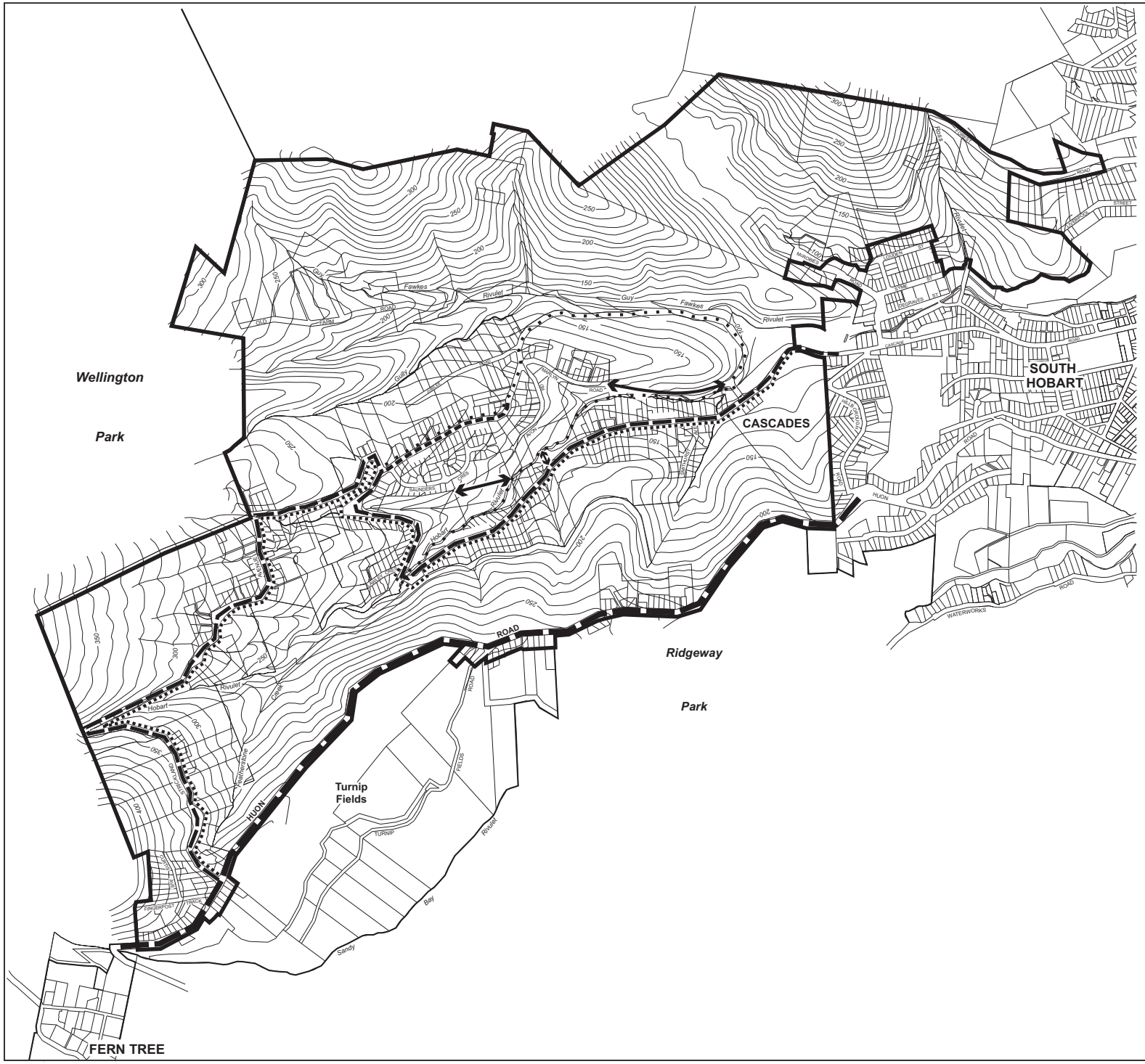
The community views on the issues and possible options for dealing with the issues require attention by Council. Resolving these matters will be important in the future use and development of resources in the Study Area.

It is suggested that a road safety audit be undertaken for Strickland Avenue to determine the extent of any existing problems and options for mitigating the risks. Priority issues are:

a) improving pedestrian safety along the edge of Strickland Avenue where no/poor footpaths exist; and

b) local traffic management measures and modifications to minimise risks (eg. improve sight distances, control traffic speeds, realign intersections).

The Local Area Plan should incorporate provisions to ensure that development which is likely to result in the need for additional public expenditure on infrastructure is required to meet its responsibilities for those additional costs.



HOBART
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SOUTH HOBART LOCAL AREA PLAN

Arterial Road

Major Collector Road

Minor Collector Road

Undertake road safety audit and investigate bikeway options for Strickland Ave

Potential walkway and bikeway path

Potential links between bikeways

N

0 200 400 600 800

metres

Contour interval: 10 metres

Figure 8.1

ACCESS STRATEGY

No further higher altitude cross road links should be considered for South Hobart which would lead to increases in through traffic between South Hobart, Lenah Valley and Glenorchy (via Kalang Avenue).

The options for a new road link to Pinnacle Road are currently being assessed by Consultants for the Council, and include the option of a connection from Strickland Avenue. Other options include the incorporation of existing alignments of Cleggs or Grays Road to connect with Pinnacle Road or traffic management/modification measures to alleviate safety and access difficulties along Pillinger Drive. The potential effects on Strickland Avenue given its deficiencies and the potential cost of upgrading should be a critical consideration in determining the final route for this by pass.

Whilst there are potential benefits from a route off Strickland Avenue (eg. reduced impacts for residents on Pillinger Drive, removal of substandard intersection on Huon Road/Pillinger Drive) the economic, environmental and social impacts will clearly need to be fully assessed. In particular the options review should include an assessment of:

- the technical feasibility of constructing a new road link;
- the value of the potential benefits against the potential costs and consequences;
- the viability implications for commercial facilities in Ferntree
- the impacts on natural and cultural values including landscape values of the bushland areas affected by construction and associated developments;
- impacts on residential amenity associated with altered traffic movement patterns;
- potential for increased traffic volumes on Strickland Avenue; and
- potential impacts on the water quality, ecology and functioning of the Hobart rivulet and its tributaries.

It is understood that the preferred option is for a western bypass of Pillinger Drive which would not impact on South Hobart.

8.3.2 Bicycles

High priority should be given to extending the Hobart Rivulet linear park as a major recreational trail within the City allowing for both pedestrian and cycling use. This will require acquisition (or access agreements) of identified private land along the creek and the development of suitable track surfaces for recreational use, along with safety measures at road crossings and signage. Marlyn Road and the lower part of old Jubilee Road could be investigated as a bikeway route to connect with the Hobart Rivulet, thus providing a safe and convenient access alternative towards the City. Discussions with the landowners (Cascade Brewery) indicated their preference to not allow public access along these two routes. Alternatives to this route may need to be identified.

Further investigations should be undertaken into the opportunities for creating bikeways within the Study Area with highest priority for safe cycling along Strickland Avenue. For commuter cyclists the principal route is Strickland Avenue which provides direct access to South Hobart shops and the City at good grade. This route is also known to be used by visitors to Mt Wellington, Brake-out bike tours and by cyclists for training circuits.

Consideration should be given to:

a) design and location of bikeway lanes onto the road pavement where sufficient pavement exists and traffic speeds are slow;

b) development of appropriate traffic calming devices to slow traffic speeds and yet be designed to avoid creating hazards for cyclists; and

c) use of open space reserves along the Hobart Rivulet with links to Strickland Avenue and Saunders Crescent where possible.

9. SETTLEMENT STRATEGY

9.1 DEVELOPING A SETTLEMENT PATTERN

Traditional approaches to setting future broad land use patterns have relied almost exclusively upon the arbitrary seperation of different forms of land use (e.g. commercial, industrial) and development (flats, units, houses, large lots etc.) into discrete growth areas. This has formed the basis of land use zoning which is the principal mechanism used in planning decision making. If a proposed development fits into one of these zones then it can go ahead.

This is a simple and easily understood approach. The only problem is that it does not produce sustainable outcomes. Under this approach, the only concern is what land use class does proposed development fit into. Once that matter has been resolved the development can go ahead. Matters that affect sustainable outcomes rarely, if ever, are able to be taken into account. These matters include;

- stormwater disposal,
- visual amenity,
- bushland protection,
- effects on infrastructure, provision and investment,
- neighbourhood amenity,
- habitat protection,
- waterway protection and management, and
- energy consumption.

More importantly the strategic directions decided upon by Council bear little or no relationship to the type of outcomes that can be achieved through this type of planning.

While there is merit in separating clearly incompatible forms of use (closer settlement and the need to protect bushland or polluting industries and housing), this can only partially be done through zoning, and then, only at a very broad level. What is critical is to;

a) determine the key desirable character and values of different areas,

b) identify the broad development types that could occur in those areas,

c) set out criteria against which proposals for development can be assessed, and

d) provide a basis for assessing performance of proposals against these criteria.

The settlement strategy applies this framework to the Study Area.

It must be emphasised that although the strategy identifies discrete areas, these are not to be regarded as traditional land use planning zones. Such zones are an inadequate means of protecting the values identified by the community.

9.2 PROPOSED DEVELOPMENT AREAS

The attached map identifies three development areas for South Hobart. (Fig. 9.1)

- Environmental Protection
- Residential
- Industrial

These areas have been defined on the basis of the development and management requirements set out above. They contain broadly similar sets of characteristics and across each there are similar management and planning requirements. They will provide:

- the basis for seperation of areas with different character in the Local Area Plan;
- a context for more detailed investigation of specific sites; and
- an indication of Council's intention for development priorities in South Hobart.

In order to achieve more sustainable outcomes from the process of making planning decisions, it will be necessary to go beyond an approach based on simple zoning. An approach is needed that requires those wishing to carry out development to show that:

a) What is proposed is compatible with the values of the area in which it is intended that the use or development is to occur; and

b) That the proposed use or development can perform in accordance with the standards and criteria applicable to particular sites.

The means of achieving this will be set out in detail in the LAP. The settlement strategy provides the mean of defining the values in each of the areas and what types of uses and developments are in accordance with those values.

9.3 ENVIRONMENTAL PROTECTION AREA

This area consists primarily of the wooded hills and slopes and the higher valleys of the western and northern portion of the Study Area. Its designation as environmental protection will mean that protection of the physical environmental and visual raw values associated with these landscapes will have the highest priority in this area.

9.3.1 Values

The values reflect the physical, environmental and cultural attributes of the land and resources of the area. The identified values are associated with the following resources:

a) Physical

The hill and valley topography, the various small streams and watercourses with unpolluted water, the natural processes of erosion and the relationships between landforms and micro-climates.

b) Biological

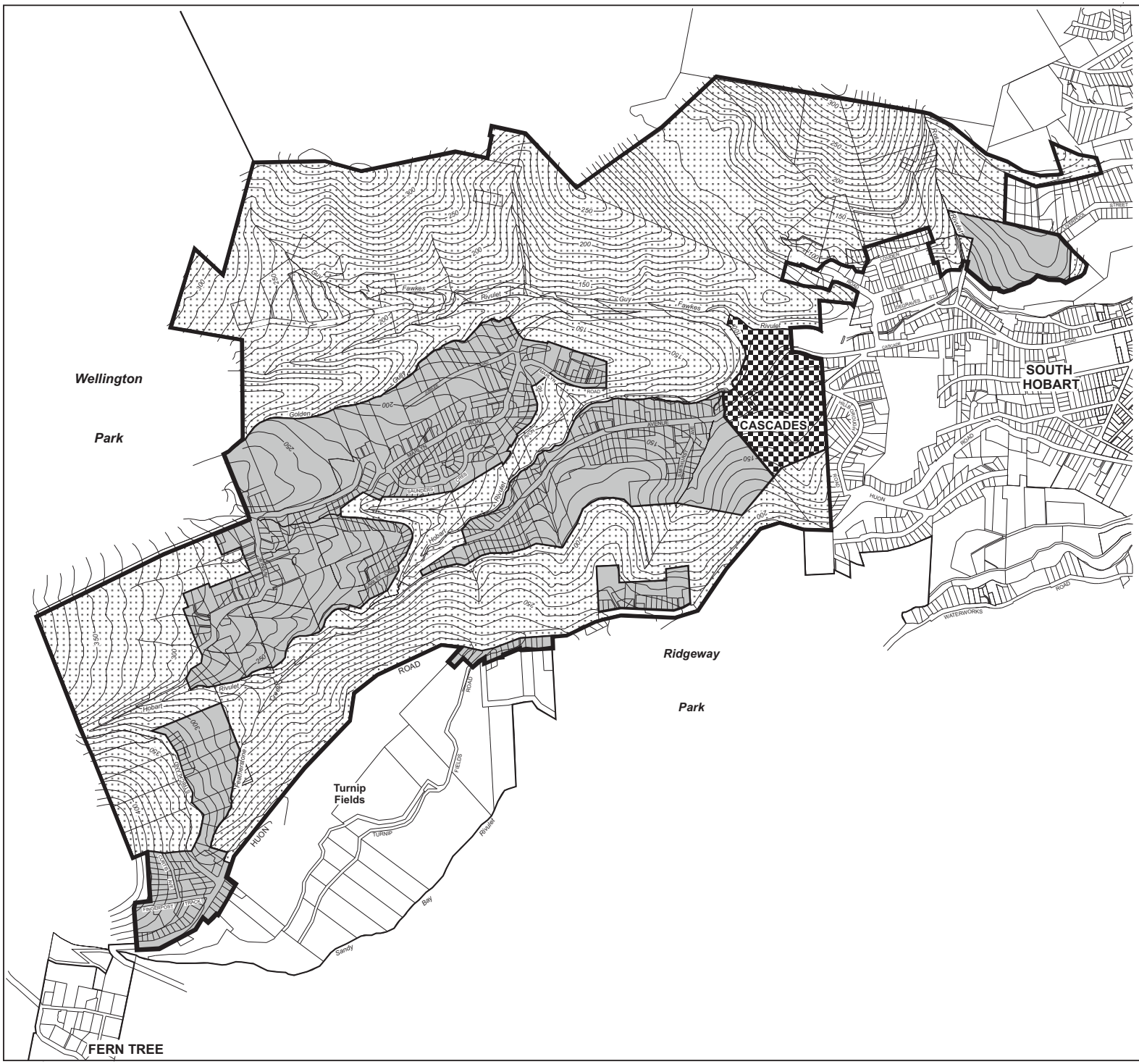
The vegetation cover and the associations between aspect, slope and vegetation cover, habitats for rare and threatened species, the wide variety of native bird life, local populations of mammals, the vertebrate and invertebrate fauna of streams and watercourses.

c) Landscape and vistas

The critical role of wooded hills and valleys in providing a natural setting for urban development, visual links between the foothills of Mt Wellington and urbanised areas, views and vistas both to and from the area.

d) Recreational

A variety of resource based recreational opportunities, particularly for walking, horse riding, sightseeing, mountain bike riding.



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SOUTH HOBART LOCAL AREA PLAN

Environmental Protection

Residential

Industrial

N

0 200 400 600 800

metres

Contour interval: 10 metres

Figure 9.1

SETTLEMENT STRATEGY

e) Economic

The natural protection provided by vegetation from erosion and poor water quality particularly along watercourses; opportunities for a range of compatible use and development forms, opportunities for recreation in natural settings and for rural production.

f) Quality of life

Pollution free environments, clean water, urban bushland setting for development and access to natural areas adjacent to urban development.

9.3.2 Preferred and Potential Uses

These values provide the basis for identifying specific objectives for and types of use and development that may occur within the area. Development in this area must be compatible with these values and protect the resources on which they depend. The forms of development have been divided into two categories based on the extent to which they can "fit in" with the values of the area - preferred and potential. Preferred uses are those that fit in with the overall values of the area provided they meet standards set for use or development. Potential uses are those that may fit in with the overall values of the area but this would have to be demonstrated before development could proceed. Other uses are not compatible with the values and should not be allowed to proceed.

The type of uses or developments which would be compatible are:

a) PREFERRED

Environmental management - including bushland protection, restoration of degraded environments, maintenance of important habitats.

Recreation - Low impact recreation such as walking, exercising of animals on designated tracks and trails.

b) POTENTIAL

Utilities - above ground and under ground infrastructure including roads, water supply pipes, sewerage pipes, stormwater systems, pumping stations, reservoirs, footpaths and trails, telecommunications facilities.

Residential - small scale, clustered and low impact residential development. Residential subdivision generally inappropriate**.**

Agriculture - extensive agriculture on existing cleared land, intensive agriculture on specific sites

9.4 THE RESIDENTIAL AREA

This area comprises most of the developed portion of the Study Area. It consists of land that has been subdivided and subsequently occupied for residential development, together with a number of sites that have the potential to be used for residential development. The land in the residential area consists of a north east/south west tending strip with small pockets off Forest Road and Huon Road.

Most of the development has taken place on ridgelines and lower slopes. As noted in Chapter 5, development in this area has frequently occurred without regard to natural attributes, residential amenity, infrastructure and access needs. Also many buildings and subdivision works do not reflect site constraints. Much of the undeveloped land is relatively steep with shallow soils and in some locations there are significant environmental features, such as vegetation cover and fauna habitats.

There are a number of sites with potential for development, however, these have significant constraints. Development in these areas will have to be carefully and comprehensively planned if it is to proceed. These areas include Forest Road, Jubilee Road, the upper sections of Strickland Avenue and land above the Cascade beverage factory.

The key values of this area are associated with its evolution as a residential area interspersed with some natural areas and the more developed urban area of South Hobart. The values to be maintained and enhanced through the planning process are associated with the following:

a) Residential

Residential development which has high levels of on-site amenity, supporting infrastructure, good access to community and commercial facilities, relatively high levels of amenity and views and vistas both to the city and to Mt Wellington.

b) Quality of Life

A relatively pollution free atmosphere, clean water, access to adjoining bushland, reasonable access to high level urban services and facilities, high standards of residential construction and an identifiable community.

c) Economic

The availability of land for development for residential purposes. Potential for a range of residential developments as infill or on vacant land. The visual amenity of Mt Wellington and its foothills.

d) Environmental

Pollution free atmosphere, a series of urban streams with high water quality, remnant areas of natural bushland and open spaces with high environmental values.

e) Landscape and Visual

High quality views and vistas, bushland setting for development, and a backdrop of wooded hills which provide a visual context for development.

f) Utilities

Infrastructure necessary to provide services to the local population together with a variety of access points for regional recreation activities.

The preferred and political uses are;

PREFERRED

a) Residential

Most forms of domestic residential development including single and multiple dwellings, home businesses and associated facilities. Residential

subdivision of land in isolation from site development planning is inappropriate in this area.

b) Recreation

Local parks and open spaces, parks based on natural features such as creeks and recreational trails linking with other localities.

POTENTIAL

a) Environmental protection

Protection and maintenance of the remaining environmental assets of the area. There should be allowance for rehabilitation of degraded environments and the plan should encourage restoration on both private and public land.

b) Commercial

Small scale commercial development serving local needs and which is compatible with residential amenity.

c) Utilities

Infrastructure necessary to provide services to the local population, environmental management infrastructure.

9.5 THE INDUSTRIAL AREA

The Cascade Brewery and beverage factory sites at the eastern end of the Study Area need to comprise distinct set of sites with their own values and use and development options.

The key values of the area are associated with:

- its use for residential and commercial purposes;
- its landscape setting;
- availability of infrastructure and a reliable water supply; and
- the important historic and architectural elements.

The preferred uses in this area are those associated with industrial activities.

10. PUBLIC COMMENTS AND SUBMISSIONS

10.1 Consultation Program

The community consultation program during late February and March 1998 was aimed at:

- providing an overview of the key results from the first two phases of the project, and in particular the strategic direction under-pinning the Outline Development Plan;
- presenting the proposed structure of the Local Area Plan and indicating how it has been built from the outcomes of the previous phases;
- seeking public response to the strategic direction and the mechanisms for implementation through the Local Area Plan; and
- consulting with the key interest groups identified through the project.

The consultation program for the Outline Development Plan involved:

- the preparation of a information handout on the Outline Development Plan which included a brief survey and invitation to participate in other community consultation programs (refer to Appendix 1);
- interest group meetings and site briefings;
- two community walks;
- community meeting;
- exhibition of the Outline Development Plan at the Strickland Gallery and Council Customer Service Centre for a three week period;
- invitation of written submissions, phone calls and response to the plan; and
- ability to purchase copies of the plan from the Council.

The results and corresponding action taken by the Consultant Team are provided in Table 10.1.

Table 10.1 Outline of Consultation Program for South Hobart

Consultation Technique	Target Group	Results	Action to be Taken
Summary information (handout) on the ODP directions and LAP framework.	General community	Handout with survey delivered to all households. Surveys received from @ 40 households	Resident views were documented into the revised ODP document
Interest group briefings and site meetings and inspections	Key interest groups such as Progress Associations, Jubilee Road residents, Cascade Brewery, Housing Co-op, Landcare Groups	Meetings arranged with all groups. Walk and meeting undertaken with Jubilee Road residents. Preliminary meeting with Cascade with follow-up meeting set for early April. Early April meeting with Progress Assoc. Landcare Group not require meeting.	Review of comments received at meetings and revision of some aspects of the ODP given additional information eg. land tenure, concern about public access on Cascade land, more detailed review of Jubilee Road issues.
Community Walks (2 per suburb)	General community	Four people on first walk and none on second walk. Covered range of issues including bushfire escape routes, mgt Cascade land, public access, Jubilee Road, illegal car business, open space links	More detailed review of bushfire escape routes and open space links (noting Cascade concerns also)
Community Forum (1 per suburb)	General community	Attended by 11 people. Presented and discussed draft strategy plans. Key issues included critical habitat values mapping, infrastructure (water pressure), bushfire escape routes, visual impacts (poultry farm), Cascade mgt of land, Jubilee Road as Residential in Settlement Strategy	A number of issues were followed up with landowners - critical habitat mapping and visual mapping. Errors in critical habitat map identified and to be altered for poultry farm site. Address some of the visual assessment terminology.
Local Exhibition	General community	Exhibition at Council Offices and Strickland Gallery for a three week period. Comments received in the survey sheets	Review comments from survey returns and submissions
Written submissions	General community	16 written submissions were received of which 8 were of a similar nature and 1 was a petition (13 residents). Majority of submissions referred to issues with Jubilee Road. Summary of responses attached.	Review of the comments/issues occurred during the revision of the ODP and LAP. Any errors corrected.
Council staff review session	Council staff	Occurred for approval of ODP's to proceed to community review.	Final review session for ODP undertaken.

Aldermen presentation	Aldermen	Yet to be arranged	Offer for briefing/meeting provided

Table 10.2 Survey Response

	Questions	SA %	A %	U %	D %	SD %	NR %
1.	**Better design and layout of subdivisions should be required to protect bushland and residential amenity.**	77	13	8	0	2	0
2.	**Infill housing should continue within the existing residential areas rather than extending into new areas**	38	30	17	4	9	2
3.	**New development should not overshadow or cause loss of privacy to neighbouring dwellings.**	73	19	4	0	4	0
4.	**Energy efficiency should be required in development.**	66	24	6	0	2	2
5.	**There should be a choice of housing types provided residential amenity and the environment are protected.**	70	24	2	0	2	2
6.	**There should be controls over vegetation removal whilst allowing for bushfire protection.**	70	24	2	2	2	0
7.	**Important landscapes and vistas should be protected.**	83	13	0	2	2	0
8.	**Stormwater runoff from private properties should be managed to reduce erosion and pollution.**	83	15	0	0	2	0
9.	**There should be effective control over nuisances (e.g. noise, dust etc.).**	70	24	2	0	0	4
10.	**Some non residential uses (local shop, visitor accommodation, gallery) could be allowed.**	58	28	8	0	6	0
11.	**Home based occupations that do not affect residential amenity could be allowed.**	54	28	8	4	6	0
12.	**Community facilities (creche, churches, schools etc.) could be allowed in the study area.**	49	34	9	2	6	0
13.	**Industrial uses should be confined to the Brewery site.**	62	19	9	6	4	0
14.	**Open space links and trails (e.g. Hobart Rivulet, Old Farm Road) should be kept for public use.**	92	6	0	0	2	0

15.	**Traffic safety measures should be put in place (e.g. sight distances, vehicle speeds, unsafe junctions).**	62	21	13	0	4	0
16.	**Pedestrian safety and convenience along Strickland Ave. should be improved.**	74	11	9	2	4	0

SA = Strongly Agree A = Agree U = Unsure D = Disagree SD = Strongly Disagree NR = No response

Care should be taken with analysis of this information due to the response rate being less than 10% of total households within the Study Area. However when viewed with the results from the other consultation programs, it would appear to be consistent with the general views being expressed by residents.

10.2 Written Submissions

In addition to the completed questionnaire surveys a number of written submissions on the planning documents were received. Twenty four responses were received from residents of the South Hobart residents, many of which refer to the issues associated with the Jubilee Road area.

10.2.1 Jubilee Road Area

Written submissions were received from a number of residents in Jubilee Road and a summary of the issues raised in the submissions is presented.

Ted Mead and Dr Juliet Lavers

Mr Mead and Dr Lavers made several submissions regarding proposed zoning for Jubilee Road and in particular how it did not provide the same protection as the proposed zoning for Old Farm Road nor the controls under the current Planning Scheme - in particular the Jubilee Road Environmental Capacity Review. Concerns included:

- The proposals did not accord with the objectives for sustainable development as set out in the objectives of the Land Use Planning and Approvals Act.
- The capacity of Jubilee Road would restrict further development.
- Further subdivision is highly unsuitable.

- The proposed zoning is in contradiction to the environmental maps produced as part of the plan investigations.
- The proposal does not recognise the outcomes of the JRECR.
- There is insufficient recognition of the bushfire hazard in Jubilee Road.
- The "natural character and residential amenity" would be altered with inappropriate development.
- Environmental controls will not be enforced and adhered to be Council.
- Good environmental criteria for bushland development need to be drawn up.
- Freehold land owned by Cascade will be a problem for anyone advocating a restriction on development.
- Critical environmental areas should get extra protection.
- The desired future character of the area has been spelt out by existing residents and they want it to remain as it is.
- Jubilee Road is rich in flora and fauna and this should be protected.
- Surrounding bushland is visually important.
- There is strong support for the current zoning.
- Any further development would result in the capacity of Jubilee Road being exceeded.
- Jubilee Road should have the same status as Old Farm Road.

Mr Mead and Dr Lavers have expressed strong views about the future of their area and are concerned that the proposals contained in the draft LAP will reduce the level of "protection" afforded under the existing Scheme.

Robert White and Fiona Perrin

Mr White and Mr Perrin are also residents of Jubilee Road and raised similar concerns as other submissions including;

- Opposition to further clearance of bushland.
- Development to be excluded from bush blocks and confined to cleared land.

- Do not oppose infill developments in areas such as Strickland Ave and Saunders Crescent.
- Most undeveloped land in Jubilee Road is on bush blocks and their development would result in loss of bushland, degradation of the bushland character of Jubilee Road.
- Differences in the development potential of different blocks should be recognised - reliance should be placed on aspects such as bushland character and faunal habitat rather than on physical dimensions of a block.
- Jubilee Road should be included in the Environmental Protection Zone.
- Inappropriate for Jubilee Road to remain in the residential area.
- Jubilee Road is in a bushfire prone area and this should be a limiting factor on development.
- Strickland Avenue provides the only escape route in a fire.
- Approval of more development would be contrary to the Precautionary Principle.
- Incentives should be provided to owners of bushland blocks to retain their tree cover, or to rehabilitate areas and to provide public access - consistent with the open space strategy.
- There should be increased support for local Land Care groups.
- Promote the name "Cascades".

Mr David Judson

Mr Judson lives on the corner of Marlyn Road and Jubilee Road and raises similar concerns as other residents of Jubilee Road. These include;

- Urban bushland values should be recognised.
- Zoning should be the same as Old Farm Road.
- Role of urban bushland as a buffer should be recognised n its role as providing protection from more pristine bushland and areas such as the Mountain Park.
- Increased urban development will lead to further pollution particularly from wood smoke, vehicle emissions and dust.

- Fire is an issue to be considered in allowing further development in the area.

Mr Garry Oates

Mr Oates is a Jubilee Road resident and expresses concerns about the changes and restrictions that have resulted in:

- Reduced fire hazard reduction burns.
- Closure of Jubilee and Marlyn Roads.
- End of plans for connecting Jubilee Road to Marlyn Road and Avon Road to Strickland Ave.
- End of plans for a shop.
- End of plans for a cable car.
- Non restoration of the community hall.

Mr Oates goes on to suggest that environmental zoning will reduce the value of property in Jubilee Road and that compensation needs to be considered. He then proposes that;

- Jubilee Road be zoned rural with a dwelling unit factor of 1:40000.
- Fire reduction program be reconsidered.
- Jubilee Road be upgraded.
- Access to lower Jubilee Road and Marlyn Road be re-instated.
- Upgrading of Strickland Ave.

Other Residents of Jubilee Road

Eight letters covering the same issues and signed by 15 residents were received. These letters raised the following concerns:

- Need to have the same controls as Old Farm Road (specifically a 40,000 m2 lot size minimum and a rural zoning).
- The high fire risk associated with further development of the area.
- Capacity of Jubilee Road to cope with increased traffic.
- The quiet bushland character and amenity of the Jubilee Road area.

Petition signed by 13 residents of Marlyn Road

Any planning scheme should encourage the retention of bushland in the Jubilee Road/Marlyn Road area.

10.2.2 Other Areas

Mr Kevin Wilson

Mr Wilson has raised a number of points regarding the coverage and accuracy of the Plan Documentation. The points raised include;

- Inaccuracies in the land tenure map.
- Insufficient emphasis to certain tracks - particularly those on private land but which are considered by the community as public access ways.
- Many tracks are not marked as they are not shown on official maps.
- Too much importance is placed on lower Jubilee Road as a pedestrian access as opposed to Old Farm Road.
- Land at the Brewery is not used for extensive grazing.
- Historical water pipelines in the area should be the subject of more study.
- The matter of water extraction rights should be reviewed.

Maria Grist

This submission expresses views about the wider area of Cascades. In particular, Ms Grist suggests that;

- Bushland is protected.
- No natural areas are cleared.
- Removal of vegetation for management purposes be allowed.
- Infill housing be judged on the merits of each application.
- Energy efficient housing.
- Housing should take account of the local environment.
- Stream and water quality management should be improved with monitoring and remedial programs, using Council expertise to assist local landholders.

- Roads and accesses are adequate but speed limit should be reduced and more traffic management measures implemented.
- More footpaths should be provided.
- Public access to public area is retained and talks undertaken with large landowners to facilitate public access.

Peacock Darcey Anderson Pty Ltd (162A Forest Road)

The submission indicated that the proposed development concept for the land appeared to be supported by the Outline Development Plan to a large extent. The submission made reference to:

- The land suitability for development whilst recognising some land area with limited capability.
- That the proposed development could be catered for with the existing infrastructure.
- Agreement with the identification of land as having low landscape significance and protection of Ross Rivulet.
- The whole land area should be covered as Residential in the settlement strategy.
- Questioning the critical habitat status placed over part of the land known to be cleared and used for farming purposes over the last 50 years.

Confidential

Concerns expressed about:

- Volume, speed and noise of heavy vehicles on Strickland Ave.
- Spillage of garden waste on to roads from trailers and other vehicles.
- Use of Strickland Ave as a "race track".
- Traffic management measures needed to reduce speeds.