



LENAH VALLEY LOCAL AREA PLAN

Volume 2

Draft

Outline Development Plan

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1. A LOCAL RESOURCE MANAGEMENT AND PLANNING SYSTEM FOR LENA VALLEY

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 within 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 and 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 Lenah Valley there are three such priority areas.

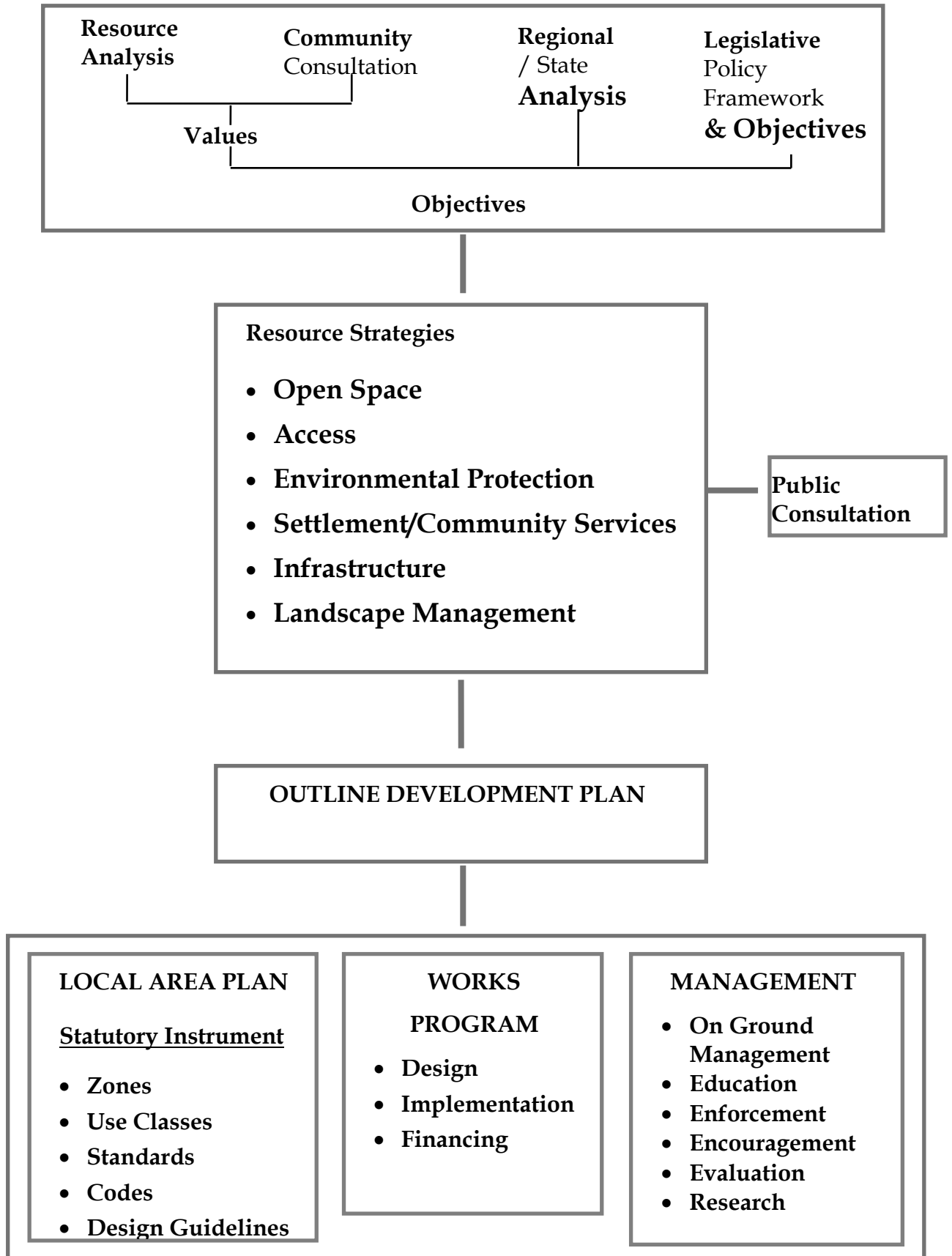
- Environmental Protection
- Residential Development
- Industrial

These are shown in the Settlement Strategy map (Section 4, Figure 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 are now being 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 Lenah Valley



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 the 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 Report, 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 Lenah Valley 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 policies 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 LENA VALLEY LOCAL AREA PLAN.

The Lenah Valley LAP will be required to deliver outcomes which support the objective 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 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

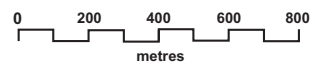
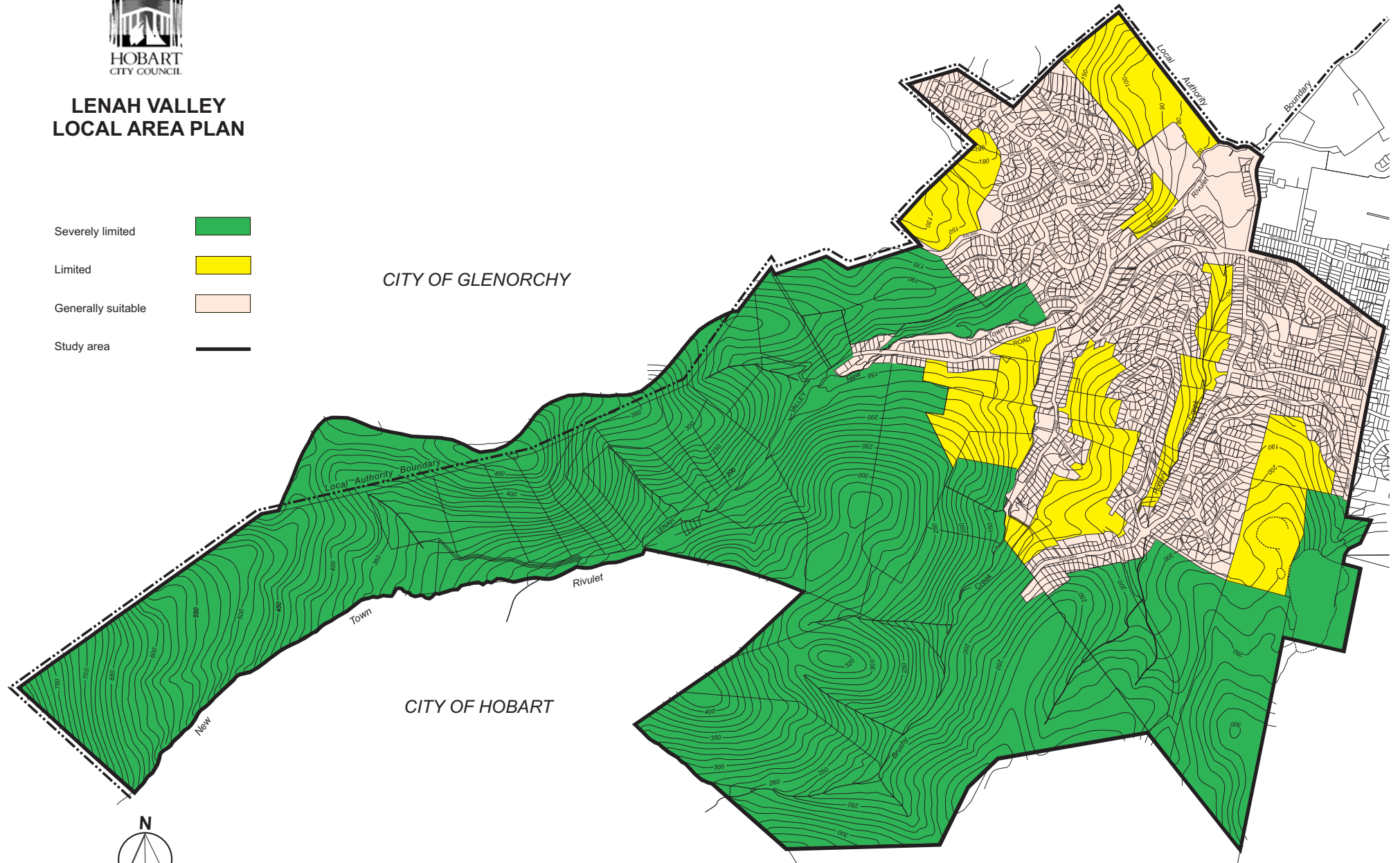
To ensure that:

- 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.



LENAH VALLEY LOCAL AREA PLAN

- Severely limited
- Limited
- Generally suitable
- Study area



Contour interval: 10 metres

Figure 3.1
URBAN SETTLEMENT CAPABILITY

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	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 fact 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 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:

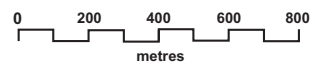
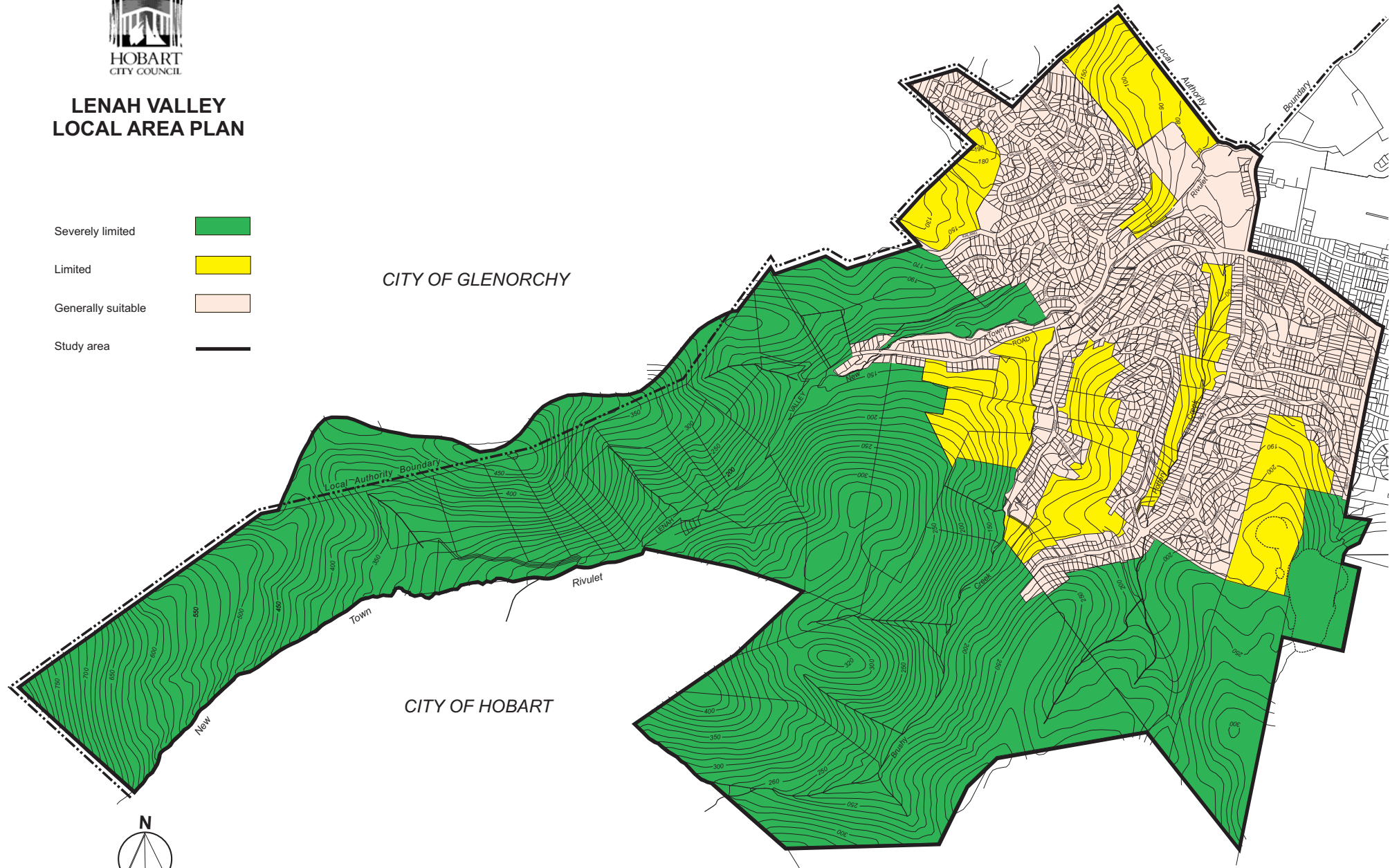
- a) Urban development incorporates;
 - Primarily residential development at densities of between 12 and 20 dwellings per hectare,
 - roads, footpaths and access ways,
 - water, sewerage and stormwater connected to centralised systems,
 - some commercial and small scale industrial development, and
 - 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 3.1.

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).



LENAH VALLEY LOCAL AREA PLAN

- Severely limited
- Limited
- Generally suitable
- Study area



Contour interval: 10 metres

Figure 3.1
URBAN SETTLEMENT CAPABILITY

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 Figure 3.1.

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 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 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.

These 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 which give direction and guidance as to how the values are to be protected and the application of these 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.

- a) extent of provision;
- b) areas to be provided; and
- c) management of pressure.

4.1.1 Extent of Provision

The highest reservoir site in Lenah Valley is at 260 metres. Allowing for sufficient pressure for higher areas, this currently limits closer settlement to areas below 230 metres. Given that most of the areas above this height are unsuitable for settlement it is not cost effective to construct reservoirs above 260 metres to serve those areas.

If there is to be substantial settlement above 230 metres (e.g. a complex of buildings or a recreational development) it would be best supplied by means of a pumped supply from the existing system.

The location of the 260 metre contour is shown in Figure 4.1.

4.1.2 Areas to be Provided

Most settled areas below 200 metres are already supplied with water. Areas in the upper portions of New Town Rivulet and Pottery Creek do not have a mains water supply. The number of properties affected is small (less than 100). They are scattered throughout a number of locations. Many of the lots are large and much of the development is in the form of “fingers” following the creek beds.

There is also a problem in providing sufficient water at adequate pressure for fire protection, both in the higher areas and in those areas not connected to the mains supply. If development is to occur in these locations sufficient on site storage will have to be provided to meet fire fighting requirements.

In order to justify the installation of additional reservoirs approximately 750 new dwellings would have to be connected to the additional supply. The cost of providing a reservoir to meet this level of demand is \$1.2 million. Given the environmental and landscape constraints there is little likelihood of this level of development in the foreseeable future. The construction of a new reservoir to supply remote areas is not recommended.

In some of the lower areas, high water pressure is a problem. 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. 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.

Improvement in the stormwater system will also assist in reducing infiltration from surface flows.



LENAH VALLEY LOCAL AREA PLAN

Areas of difficult water supply
(260m contour - theoretical
supply level)



Major routes/collectors



Minor routes/local collectors



Potential links



Power lines

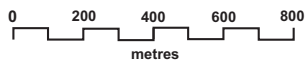
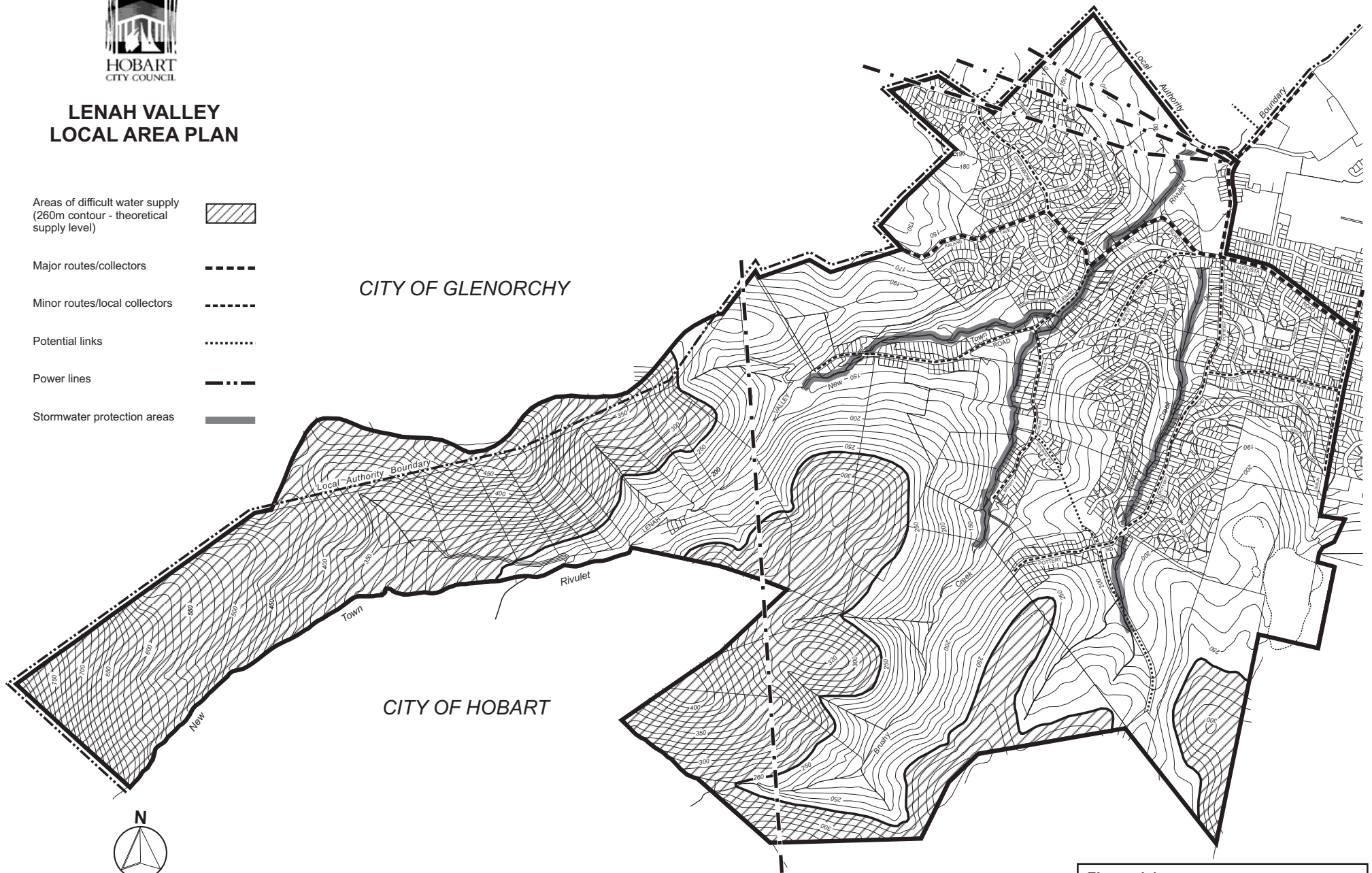


Stormwater protection areas



CITY OF GLENORCHY

CITY OF HOBART



Contour interval: 10 metres

Figure 4.1

INFRASTRUCTURE STRATEGY

Increasing the capacity of treatment has a lower priority. There are few alternatives to increasing the capacity of the existing plant at Selfs 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 upper portion of New Town Rivulet. 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 developments beyond the extent of the system the best method is on site maceration and disposal through a connection to the system.

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 of the fact that 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 leading to 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 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 the 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 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 objective. 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 increase flooding). A minimum width of 30 metres 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. Again 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.

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 pond scan 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 the undeveloped part 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) Restoration of vegetation

Some cleared sites within the Study Area have the potential to be revegetated. These include;

- the riparian zones of New Town Rivulet, Brushy Creek and Pottery Creek,

- sections of John Turnbull Park,
- cleared areas adjacent to Lenah Valley Road and between Brushy Creek Road and Brushy Creek - some of these areas have been subject to flood damage and erosion in recent years, and
- cleared roadsides along the various stream valleys.

c) On site detention and retention

There are few significant opportunities for major retention or detention works. In Lenah Valley 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.

d) 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 and steep valley slopes) to the urban areas with limited landscape significance.

The two key landscape characteristics of the Study Area are:

- Wooded slopes and hillsides of the western portion of the Study Area. These provide a bushland character to the suburb and provide a visual transition between urbanised areas to the east and the bushland areas of the lower slopes of Mt. Wellington.
- Very informal, low density, detached, single or 1 1/2 storey timber clad dwellings, along winding kerbless/swale drain “lanes”, mostly limited to valley floors, often in parallel with an ephemeral stream, with densely wooded slopes that provide a mid ground view that is often seen against a background of Mt Wellington. (Lenah Valley Rd, Brushy Creek Rd, Pottery Rd.)

5.2 THE STRATEGY

Figure 5.1 summarises these results and presents a simplified assessment of landscape 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. Of particular importance will be the introduction of landscaping programs to provide screening for any prominent visual elements.



LENAH VALLEY LOCAL AREA PLAN

- Critical areas
- Areas of moderate landscape significance
- Areas of low landscape significance
- Study area

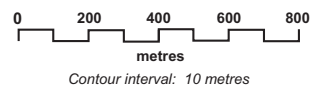
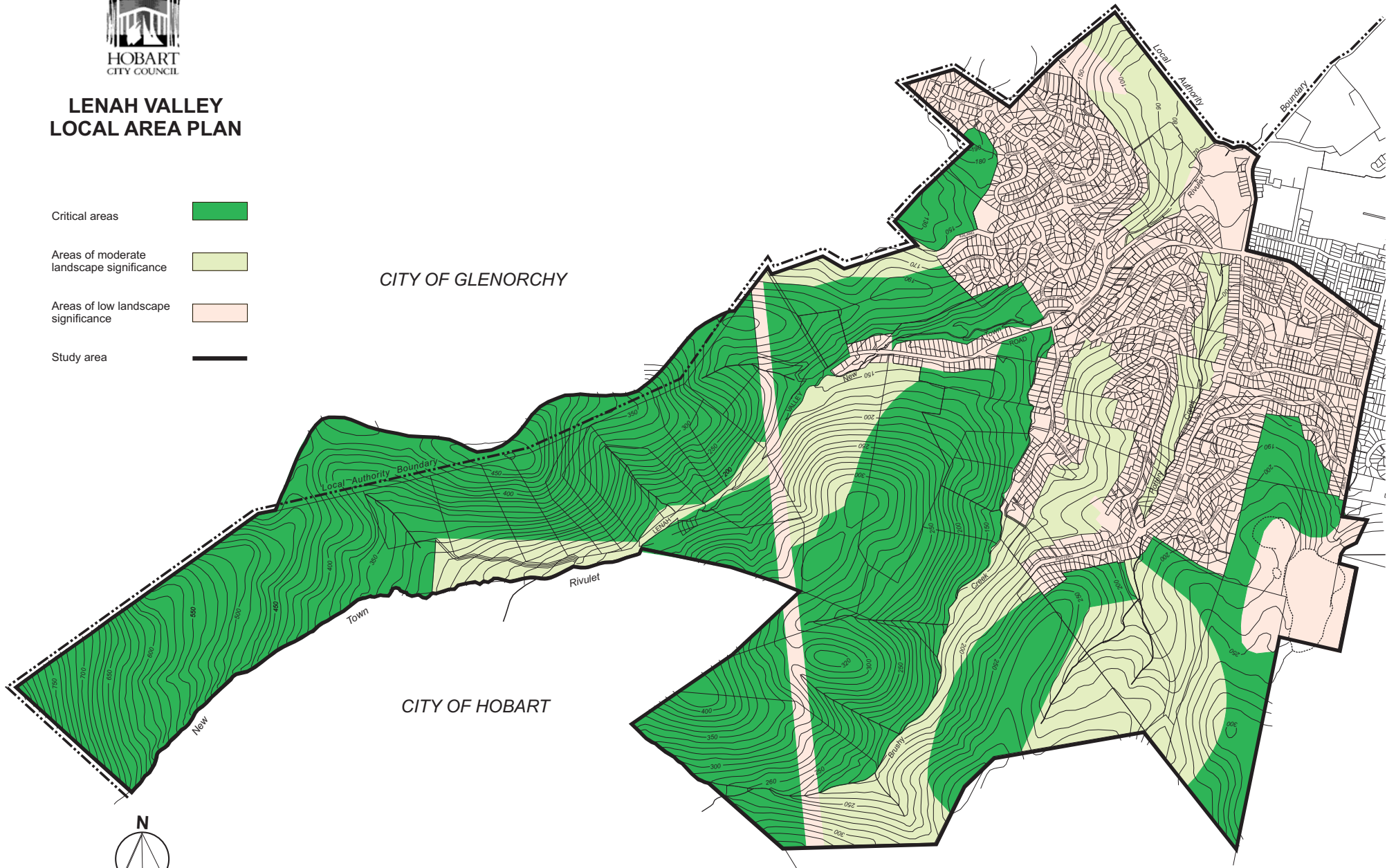


Figure 5.1
VISUAL & LANDSCAPE MANAGEMENT

6. COMMUNITY FACILITIES STRATEGY

6.1 EXISTING FACILITIES

The Background Documentation report for Lenah Valley provides an 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).

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.

The key points in relation to the adequacy of community facilities within the Study Area made at the community forum were:

- the existing facilities (especially the parks and walking tracks) contributed to the value of living within Lenah Valley;
- there were not enough police services;
- water pressure problems existed in some areas during summer;
- concern about the reduction in Metro bus services to Lenah Valley;
- the need for safe bicycle routes within the Study Area; and
- the need for a developed public access to Wellington Park to overcome the problems of illegal access over the larger private land blocks.

The household survey asked respondents to assess the adequacy of the facilities

and services within Lenah Valley. The results of this summary are given in Table 6.1.

Table 6.1 Community Facility Results in Lenah Valley

Facilities	Very Good %	Good %	Poor %	Unsure %
Roads and footpaths	11	68	15	6
Water supply	31	54	13	1
Neighbourhood parks (play parks)	35	56	7	1
Open spaces and reserves (undeveloped)	25	58	7	10
Recreation and sporting facilities	12	52	22	13
Services for the aged	4	29	13	49
Childcare facilities	11	36	10	43
Public transport services	10	61	23	6
Local shops	31	61	6	2
Community hall	9	56	8	25

With the exception of aged and childcare facilities where there was a high proportion of respondents who were unsure about these facilities, all the remaining facilities received majority assessment as being 'very good' or 'good'.

This assessment of adequacy supports the identified favourable aspects of living within Lenah Valley - closeness to the city centre, neighbourhood character, local services and public transport services. The incremental development of Lenah Valley over many years has led to the development of community facilities and services in response to community needs. 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. Importantly these facilities:

- are well located to conveniently service the local community;
- appear to meet the expectations of the community across a broad spectrum of age groups and interests;
- are generally developed to a high standard; and
- help give identity to the local area.

A review of the local shops and commercial areas in the Study Area and along Augusta Road indicated there was limited scope for expansion of the existing local facilities. The existing commercial facilities are appropriate within the overall hierarchy of commercial facilities of the City. The city centre is recognised as the main regional focus for commercial, administrative and entertainment functions with sub-regional centres at North Hobart and New Town, suburban based shopping areas on Augusta Road and smaller local neighbourhood facilities within the Study Area. (Augusta Rd - Giblin Street, Lenah Valley Rd - Augusta Rd and Kalang Avenue).

The development of new areas or significant expansion of existing areas would potentially create localised site problems including loss of existing residential uses, requirements for off street parking provision and safety issues for pedestrians.

The community facilities ranked in order of highest 'poor' ranking were:

Public transport services	23 %
Recreation and sporting facilities	22 %
Roads and footpaths	15 %
Water supply	13 %
Services for the aged	13 %
Childcare facilities	10 %
Community hall	8 %
Neighbourhood parks (play parks)	7 %
Open spaces and reserves (undeveloped)	7 %
Local shops	6 %

The survey response tends to show that whilst most facilities are adequate across the Study Area there are pockets of more localised problems such as found in the upper parts of Pottery Road where there is poor water pressure, lack of footpaths, narrow roads and limited opportunities for some developed recreation.

The 'poor' assessment of public transport services requires further investigation given the 71% of respondents indicated 'very good' to 'good' services - the problems may be related to the programming of the bus timetable or limited options to reach the outlying residential parts of the Study Area.

6.3 STRATEGY

There is considerable overlap between this strategy with the other recommended strategies and in particular access, open space/recreation and infrastructure services. Consequently this strategy focuses on the future planning for community facilities and commercial facilities.

6.3.1 Community Facilities

There is no demonstrated need for the development of new community facilities within the Study Area at present nor is there expected to be a significant need within the future given the socio-economic profile of the community, level of existing services, pattern of development and convenient access to facilities within the City. However the options for improving the adequacy of some facilities to meet emerging needs should be considered including:

- a) improving amenity and safe pedestrian movement between key destinations within the Study Area (eg. streets to schools, open space linkages, links to shops);
- b) the options to adapt or extend multi-functional use of some existing facilities and spaces to meet future community interests (eg. programming use of halls for a range of interest groups rather than separate facilities) ;
- c) re-assessing the options for improved public transport services; and
- d) developing of bikeways for both recreational use (eg. New Town Linear Park) and commuter use (eg. Lenah Valley Road and Augusta Road).

6.3.2 Commercial Facilities

The strategies for commercial facilities within the Study Area should include:

- a) retention of the existing local neighbourhood shopping areas with only limited potential for expansion (both the Lenah Valley Rd- Pottery Rd and Kalang Avenue have some scope for minor site expansion on the existing lots);
- b) potential for approval of a local shop(s) generally within the residential area of the Study Area subject to satisfying performance criteria for maintaining residential amenity, safety and traffic; and
- c) encouragement of home-based occupations and businesses that satisfy performance criteria for maintaining residential amenity, safety and traffic.

6.3.3 Industrial Facilities

There are only two industrial sites within the Study Area. The first site is the Tasmaid Foods operation off Lenah Valley Road and owned by National Dairies Tasmania Limited. There is significant capital investment at the site and limited scope for further expansion without affecting the inherent amenity values of the New Town Creek Linear Park, the adjoining John Turnbull Park and surrounding residential uses. The operation has existing use rights to continue to operate from the site in the future. The strategy is to acknowledge the existence of the industrial use but not to encourage significant new development that would impact on the surrounding values. The opportunity may exist to secure wider community benefits from:

- a) achieving public access along the New Town Creek to extend the New Town Creek Linear Park (although this would need to occur on the northern side of New Town Rivulet involving considerable costs, as compared with maintaining public access through John Turnbull Park to Lenah Valley Road, then rejoining the Rivulet);
- b) enhancement plantings along the adjacent reserves to improve the visual amenity of the park and reserve areas;
- c) landscaping and general streetscape enhancement works of the site towards Lenah Valley Road; and

- d) co-operative arrangements between the company, Council and local community in regard to dealing with any impacts from the site operations.

The second industrial site is the Council's hot-mix operation within the former quarry site at the end of Giblin Street. The long term rehabilitation of the quarry site requires investigation given the extensive area involved, instability of the site, public risk management issues and potential for some parts of the site to be used for other activities in the future.

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 AND RECREATION STRATEGY

The Study Area has a range of open space resources, ranging from formal parks and playing fields to extensive areas of bushland with informal trails.

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

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.

7.1 LOCAL PARKS

The urban area is generally well served with neighbourhood parks. They appear to be well maintained and offer a range of facilities to cater for different user needs. They are in appropriate locations and access from surrounding residential areas is good. Table 7.1 provides a summary of the existing parks, facilities and their function.

Table 7.1 Open Space Facilities in Lenah Valley

EXISTING PARKS	FACILITIES	FUNCTION
John Turnbull Park	Oval, play, picnic, toilets, seating, community hall, large grassed area, paths	Community Park
Edge Avenue	Play, grassed area, seating	Neighbourhood Park
Glenrose Park	Play, grassed area, seating	Neighbourhood Park
Firth Avenue	Grassed area, seating, picnic table, artworks	Neighbourhood Park
Risley Court	Play, picnic table, seating	Neighbourhood Park
Kalang Avenue	Play, picnic table, grassed area, paths	Neighbourhood Park
Wallace Avenue	Play, seating, grassed area	Neighbourhood Park

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 area of deficiency for developed neighbourhood parks is in the area of newer residential development on the western side of Pottery Road and extending to Brushy Creek Road. There is a need for at least one and perhaps two local neighbourhood parks in this area in the future, especially with any future development occurring.

Whilst specific sites and opportunities have not been identified, options should include a park in the vicinity of Susan Parade and another located off Ruth Drive. If there was to be any substantial increase in housing in the upper parts of Brushy Creek, then consideration should also be given to a small developed park as part of the future development.

There may be a need to purchase sites or provide them through the residential development process. The provision of local parks in this area is made more difficult because of the difficult access patterns created through the incremental subdivision of land and the steepness of most undeveloped sites.

The opportunity exists to also plan for the upgrading of facilities within the existing neighbourhood parks with identified priorities for:

- a) introducing shade trees or shelters near play facilities in Edge Avenue, Risley Court and Kalang Ave park;
- b) install paths to play facilities from street entrances at Glenrose Park and Risley Court;
- c) improve access to Glenrose Park from Copley Road; and
- d) undertake landscaping works within Wallace Street park to improve overall amenity of the park.

7.2 OPEN SPACE RESERVES.

Three major open space reserves have been created along New Town Rivulet. These provide a range of experiences from playing fields to open grassed areas to the formal setting of Ancanthe Park. At the Study Area level there is adequate provision of open space reserves.



LENAH VALLEY LOCAL AREA PLAN

- Existing neighbourhood parks designed with play facilities or other facilities
- Existing open space reserves
- Areas poorly serviced by existing neighbourhood parks and facilities
- Recommended areas for addition to Wellington Park / Knocklofty Park
- Open space links required
- Proposed walking tracks network
- Proposed horse riding tracks
- Review reasons for purchase (sell)

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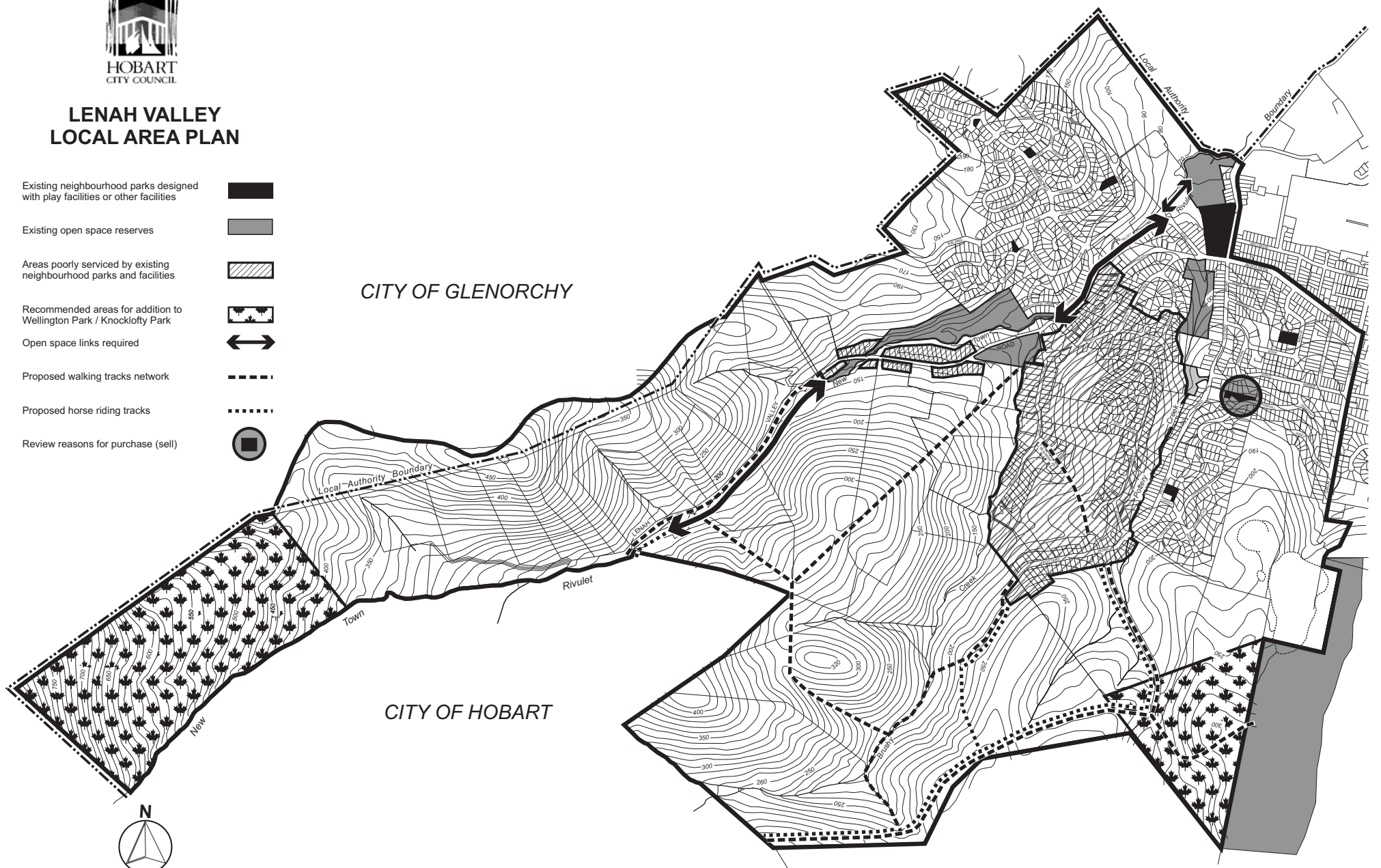


Figure 7.1
OPEN SPACE & RECREATION STRATEGY

0 200 400 600 800
metres
Contour interval: 10 metres

All of these reserves fulfil a regional function and attract users from a wide area. The Study Area is bounded on the western and southern sides by the Mountain Park, perhaps the most significant open space reserve in the Metropolitan area.

The existing reserve Rosehill Crescent as appears to have limited recreation value, even as a future linkway. The potential for sale of this land should be considered given higher priorities for neighbourhood parks and managing reserves within the Study Area.

As well as providing open spaces these reserves fulfil important roles in managing runoff adjacent to creeks and rivulets. It is in this role that there is a deficiency. Firstly, there is a need to develop the area of Council owned land along Pottery Creek as a reserve. This will involve provision of access, removal of environmental weeds and restoration of vegetation, particularly along Pottery Creek. Secondly stream banks in other reserves require stabilisation through plantings within the 30 metres riparian strip. Current practices of mowing and allowing grass clippings to enter streams increases nutrients in these streams. It may be better in the long term to replace grass cover with tree and understorey cover or use grasses that do not need mowing. There is also a problem of locating tracks and access ways on stream banks. This will increase the quantity of runoff and contribute to erosion and down stream sedimentation. The use of boardwalks as in parts of the New Town Rivulet reserve is one means of reducing these impacts.

All open space reserves need to be planned and managed with their role as components of the stormwater management system in mind.

7.3 NEW RESERVES

The Hobart Open Space Strategy (1997) recommended the acquisition of a triangular piece of bushland adjoining Knocklofty Park and McCrobies Gully Reserve.

The area of steep land at the western extremity of the Study Area was recommended for purchase and inclusion in Wellington Park in the Wellington Park Management Plan.

The land north of Kalang Avenue and adjoining the Glenorchy City boundary could also be given reserve status. This will require significant improvement in management of the area.

It is currently used on a casual and ad hoc basis by trail bike riders and there are no formal trails or access points. It is an important habitat area for the swift parrot and the bushland cover should be retained.

Cascade Brewery who own a large area of bushland to the east of Fossil Hill have indicated that the land is not essential to their operation and may be relinquished in the future, although no plans exist to do so. A land management plan to deal with the environmental, recreational and visual management issues associated with the land should be undertaken in the longer term.

7.4 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 New Town Rivulet links which will ultimately provide a high quality walking trail from New Town Bay to the summit of Mt Wellington. Two sections of this links need to be completed within the Study Area;

- John Turnbull Park to Lenah Valley Road, and
- the creek crossing on Lenah Valley Road to the Wellington Park entrance.

The Hobart Open Space Study (1997) recommended the Council acquire parts of New Town Creek to extend the New Town Linear Park and an extension of Haldane Reserve to Pottery Road along Pottery Creek. These recommendations, based on the findings of the Hobart Open Space and Landscape Strategy (1994) are supported.

Achieving a connection past the Tasmaid site to Lenah Valley Road would require acquisition of land on the northern side of New Town Creek, construction of a high bridge and footway. This is made difficult by the general topography of the land (old fill dumping) and likely cost involves in such works. The alternative option is to continue the pedestrian path south around the Tasmaid site to rejoin Lenah Valley Road.

There is an opportunity to provide a linkage along Pottery Creek from the RSL Club to the old bus terminus. This link would provide an alternative access to Wellington Park via upper Pottery Road and to hillside areas west and south of Pottery Road. It could be developed as part of the creation of the open space reserve on lower Pottery Creek.

The previous open space studies have also recognised the need for a link between Lenah Valley to the Knocklofty Park in Mt Stuart. The options for these links are seen to be:

- a) via the proposed reserve for acquisition to the south of Pottery Road which adjoins Knocklofty Park and McCrobies Gully; and/or
- b) gaining safe public access through the old quarry site or with any further subdivision of the larger land areas to the west of Giblin Street.

The first option is considered to be more preferable.

In summary the priorities for investigating open space links are seen to be:

- a) New Town Creek past Tasmaid industrial site to join Lenah Valley Road;
- b) New Town Creek along Lenah Valley Road to start with Wellington Park;
- c) extension of Haldane Reserve along Pottery Creek to join Pottery Road; and
- d) gaining a link between Lenah Valley and Knocklofty Park.

Particular attention needs to be given to streamside management requirements in providing these links. 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 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.

7.5 WALKING AND HORSE TRAILS

The Study Area provides a number of opportunities for walking trails. The most notable is the New Town Rivulet trail. Figure 7.1 identifies a series of other trails. Most of these are in adjacent bushland areas and on private land. Although a number are currently in use there is a potential conflict between land owners and users (there is already some low level conflict in the area south of Pottery Road).

The network of trails proposed in the plan should be investigated. 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 landowners to ensure that any problems can be resolved as they emerge.

The plan also identifies horse trails. The same approach as outlined for walking trails is proposed.

Many 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.

7.6 SIGNAGE

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.

7.7 CONCLUSION

The above strategic outline 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. For example, the open space strategy should be closely linked with land management and stormwater management programs.

8. ACCESS STRATEGY

8.1 EXISTING INFRASTRUCTURE

The existing access infrastructure is outlined in Chapter 4 of the Background Documentation report.

This strategy looks at the 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 strong concerns about traffic management within Lenah Valley with roads/traffic ranked as the most unfavourable aspect about living within the Study Area. At the community forum residents identified the following general traffic problems and issues:

- the perceived lack of long term traffic planning;
- the through traffic from Glenorchy using Kalang Avenue as a quicker access route into the City and the need to slow vehicle speeds on Girrabong Road and limit heavy vehicle use;
- loss of residential amenity caused through traffic calming devices such as speed humps;
- use of residential streets by through traffic - e.g. Doyle Avenue, Rose Hill Crescent, Bealey Avenue;
- poor intersections along Lenah valley Road eg. Girrabong Road, Athleen Avenue, near Tasmaid, Pottery Road, Brushy Creek;
- the need for better parking arrangements and pedestrian safety near the local shopping centre on Augusta Road; and
- concerns about traffic speeds on Lenah Valley Road.

A number of more specific problems were identified through the mapping exercise with local residents at the forum. These included:

- the need for markings on Pottery Road to better direct traffic;
- the dangerous intersection of Doyle Avenue onto Pottery Road due to poor sight distances;
- poor intersection of Rosehill Crescent onto Doyle Avenue;
- concern about too much through traffic on Bealey Avenue;
- need for wider footpaths along Shirley Blvd and Pottery Road; and
- number of tight corners on Pottery Road and on Lenah Valley Road (above Brushy Creek junction) with poor sight distance available.

8.3 ASSESSMENT OF STUDY AREA

8.3.1 Roads

Road access issues reflect the incremental nature of growth in the Study Area. Original road development was based on Augusta Road with minor roads serving linear development along Pottery and New Town creeks. These three roads are still the core of the access network in the Study Area.

Incremental subdivision development over the last 70 years has used these three routes as entry points into the wider system

As early as 1948 proposals were put forward for linking the Study Area with South Hobart and via a high level link to Glenorchy. Glenorchy Council has always been keen to have a western link to the City of Hobart (see the 1964 Hobart Area Study and the Hobart Transportation Revision 1971) . A de facto link was created through the linking of Girrorabong Road and Kalang Avenue. This route although of low standard, has since become a major through route for northern suburbs traffic to the city. Glenorchy has also attempted to link Ripley Road and

Springfield Avenue to Hobart's road system. Resident opposition saw both of these proposals dropped.

The Kalang Avenue connection creates problems for Lenah Valley residents through increasing volumes of traffic on residential streets. Also the junctions of Kalang Avenue and Girrabong Road and Girrabong Road and Lenah Valley Road are deficient. Traffic management measures have helped ameliorate these problems. However, Glenorchy City is still allowing development which depends on the link without regard to the consequences for Lenah Valley residents.

Most residential development in the Study Area has proceeded through addition of small subdivisions at the edge of existing built up areas. This has meant that additional traffic depends on existing residential streets to access the main road network. Many of the older residential areas were not designed for through traffic. Collector routes such as Doyle Avenue, Pottery Road, Athleen Avenue, Girrabong Road, Rosehill Crescent and Bealey Avenue have a number of minor deficiencies including poor junctions, poor sight distances, narrow sections, lack of room for large vehicles and inadequate footpaths. Whilst none of these problems can be classified as critical they are of concern to residents and have steadily worsened as development has extended and traffic volumes have increased.

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.

8.3.2 Bicycles

For commuter cyclists the principal route is likely to be Lenah Valley Road - Augusta Road which provides direct access to Elizabeth Street and the City at good grade. Doyle Avenue may also provide good grade and access via Mt Stuart into the city.

The opportunities for developing improved facilities for bike riding within the Study Area have been identified through consideration of key destinations and effective routes to reach these. The key destinations within the Study Area are:

- John Turnbull park;

- the Lenah Valley shops on Augusta Road (including the main shopping area just outside the Study Area);
- Lenah Valley Primary School;
- Immaculate Heart of Mary School;
- New Town Linear Park; and
- local neighbourhood parks.

The design of a bikeway and other improvements to Lenah Valley Road and Augusta Road would service both commuter and recreational cyclists. New Town Linear Park provides excellent opportunities for a major recreational bikeway and also a good commuter cycling route into the Moonah and New Town areas. Cycling to the other destinations within the Study Area would be improved through consideration of a number of options including:

- a) selection of some key streets for street enhancement as major recreational trails within the Study Area (ie. promotion of safe and convenient access by pedestrians and cyclists);
- b) shared use or dedicated use of a footpath, especially where two footpaths exist in residential streets;
- c) design of bikeway lanes onto the road pavement where sufficient pavement exists and traffic speeds are slow;
- d) development of appropriate traffic calming devices to slow traffic speeds yet be designed to avoid creating hazards for cyclists; and
- e) use of open space reserves and links as cycle routes where possible.

8.4 STRATEGY

Figure 8.1 shows the proposed road hierarchy for the Study Area and identified problem areas that require investigation. The key points are:

- No further high altitude cross road links be considered for Lenah Valley which would encourage any further through traffic between South Hobart, West Hobart and Glenorchy.

- A road safety audit be undertaken for Pottery Road, Lenah Valley Road, Doyle Avenue and Bealey Avenue to determine the extent of any existing problems and options for mitigating the risks. Council should consider the adoption of a headworks charge for any developments likely to increase local through traffic.
- Proposals for new residential development should incorporate an assessment of the “downstream” traffic impacts and include measures designed to alleviate impacts.

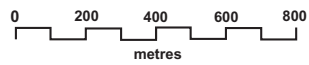
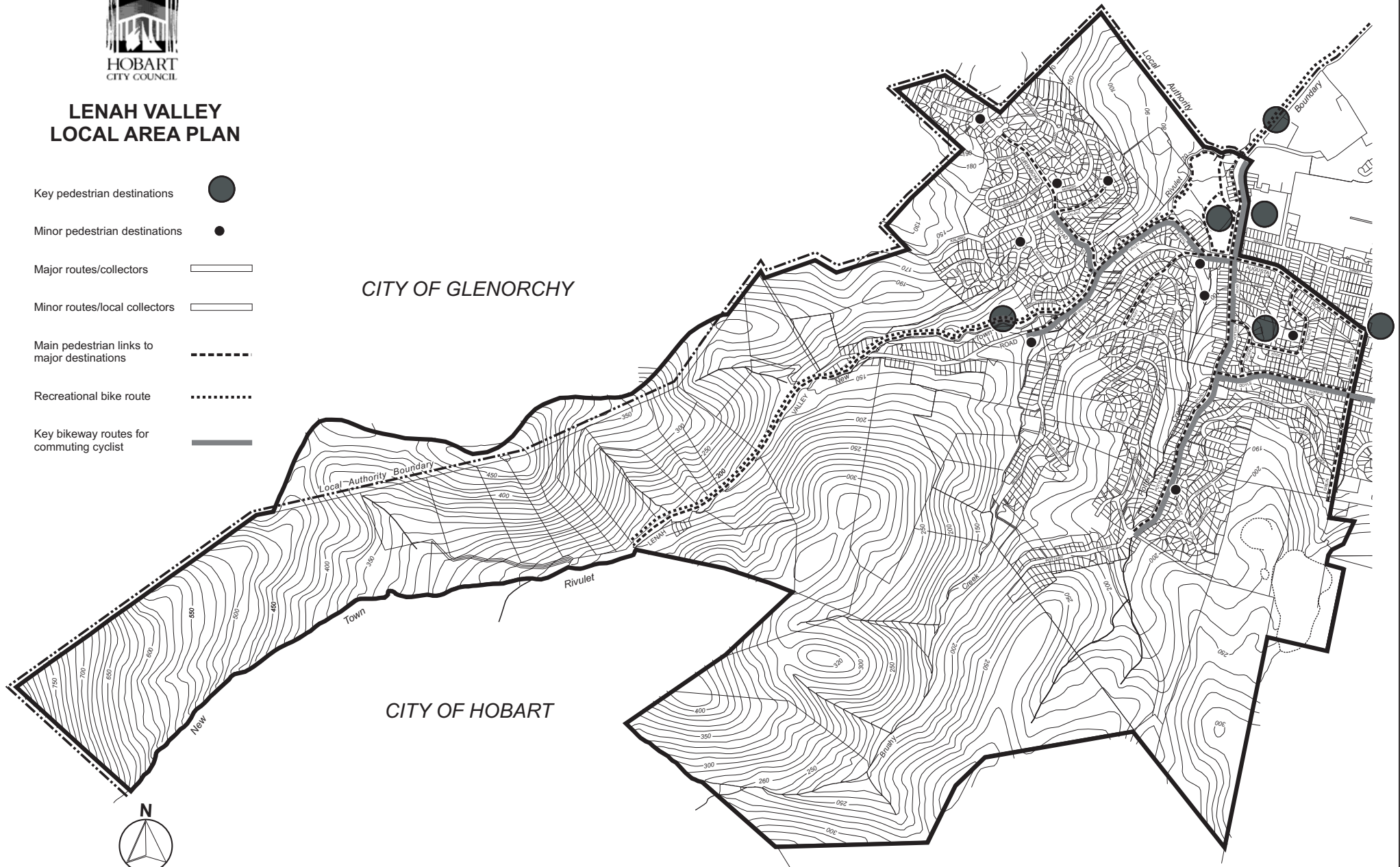


LENAH VALLEY LOCAL AREA PLAN

- Key pedestrian destinations ●
- Minor pedestrian destinations ●
- Major routes/collectors ———
- Minor routes/local collectors ———
- Main pedestrian links to major destinations - - - - -
- Recreational bike route ·····
- Key bikeway routes for commuting cyclist ———

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Contour interval: 10 metres

Figure 8.1
ACCESS STRATEGY

- An assessment of need for minor junction and pavement improvement should be on the program for the Study Area.
- Consideration should be given to speed restrictions (40km/h) on narrow roads - specifically Pottery Road, Upper Lenah Valley Road, Rosehill Crescent, Kalang Avenue, Brushy Creek Road and Bealey Avenue.
- Major destinations in the Study Area should be adequately signed (parks, pedestrian trails, Mountain Park entrances and community facilities).
- High priority be given to extending the New Town Linear Park as a major recreational trail within the City allowing for both pedestrian and cycling use. This will require investigating options in draining private land along the creek and the development of suitable track surfaces for recreational use, along with safety measures at road crossings and general signage.
- Further investigations be undertaken into the opportunities for creating bikeways within the Study Area with highest priority for safe cycling along Lenah Valley Road and Augusta Road. Depending on community need and support, other bikeways should be investigated and progressively developed to provide safe and convenient links to local destinations and connections to the Lenah Valley Road - Augusta Road and New Town Linear Park major bikeways.

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 separation 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;

- determine the key desirable character and values of different areas,
- identify the broad development types that could occur in those areas,
- set out criteria against which proposals for development can be assessed, and
- 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 two development areas for Lenah Valley. (Figure. 9.1)

1. Environmental Protection
2. Residential

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 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 Lenah Valley.

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 means 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 valleys of the western portion of the Study Area. Its designation as environmental protection will mean that protection of the physical environmental 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.

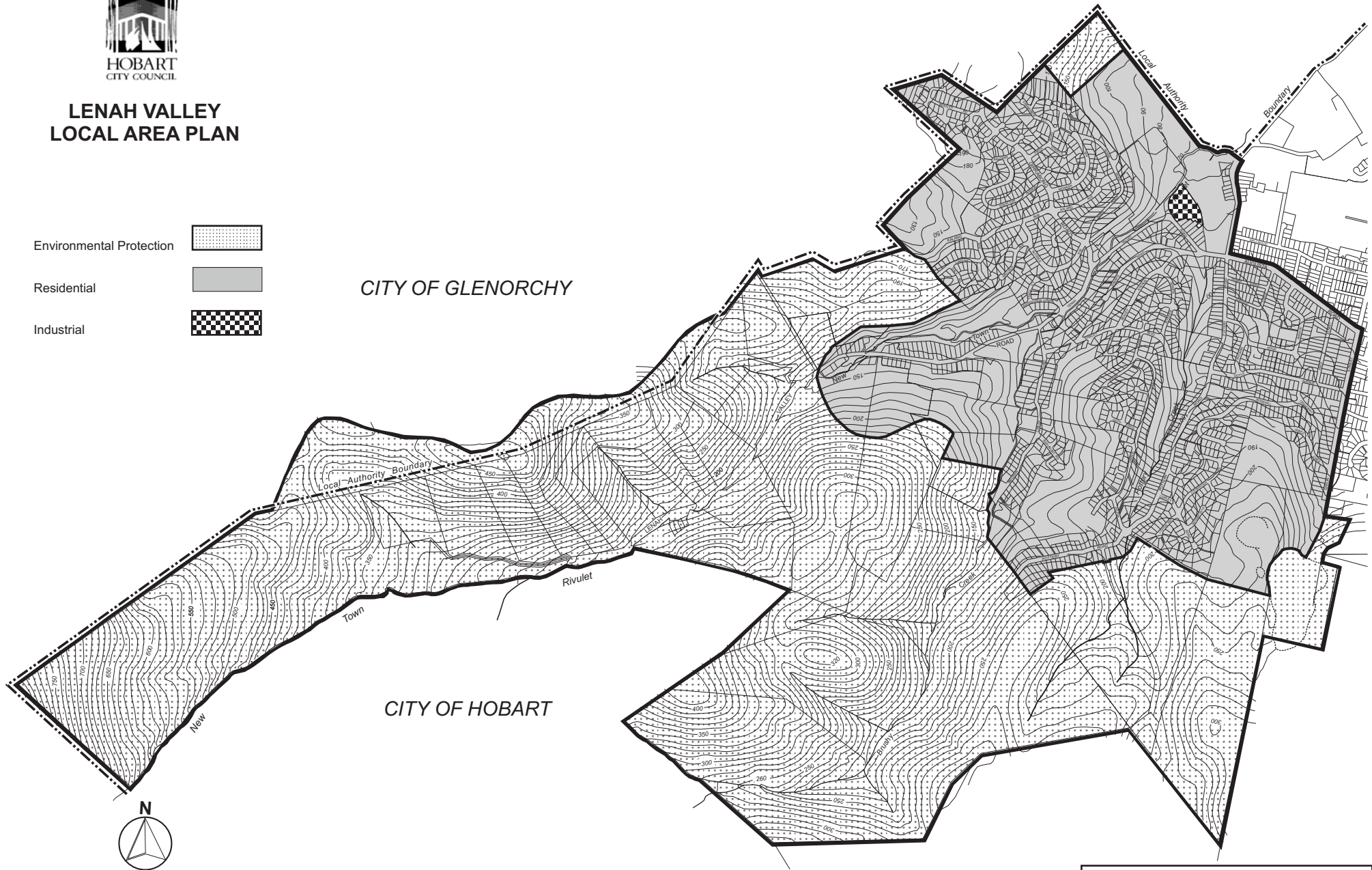


LENAH VALLEY LOCAL AREA PLAN

- Environmental Protection 
- Residential 
- Industrial 

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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 eastern 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.

Most of the development has taken place on hills 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.

The key values of this area are associated with its evolution as a residential area close to both large natural areas and to a developed urban area. 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 particularly to the foothills of Mt Wellington.

b) Quality of Life

A relatively pollution free atmosphere, clean water, access to adjoining bushland, proximity 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. Existing industrial and commercial sites. Potential for a range of residential developments as infill or on vacant land.

d) Environmental

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

e) Landscape and visual

Elevated development sites which provide high quality views, bushland settings 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, environmental management infrastructure.

The preferred and potential uses are:

a) PREFERRED

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.

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

b) POTENTIAL

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.

Commercial - small scale commercial development serving local needs and which is compatible with residential amenity.

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

9.5 The Industrial Area

The Tasmaid site would be contained within an Industrial area. The preferred users 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 Lenah Valley Primary School 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 Taken
Summary information (handout) on the ODP directions and LAP framework.	General community	Handout with survey delivered to all households. Surveys received from @ 80 households	Resident views have been documented into the revised ODP document
Interest group briefings and site meetings and inspections	Key interest groups such as Progress Association, Tasmaid, Landcare Groups	Meeting arranged Tasmaid and telephone contact with other groups offering meeting times (community walk and forum was attended by Progress Assoc and Landcare reps, and may not be needed).	Review of comments received at meetings and revision of some aspects of the ODP given additional information eg. land tenure.
Community Walks (2 per suburb)	General community	Five people on one walk and two on the other (inclement weather conditions). Key issues were the impacts on the New Town Rivulet, traffic problems etc. Walks were more of a presentation of the strategies and confirmation of direction being taken.	Review of open space links around the Tasmaid site due to inspection of difficulties.
Community Forum (1 per suburb)	General community	Attended by about 20-30 people and principally landowners in the upper areas seeking development. Concerns were about restricted subdivision in Environment Protection Area, impacts on New Town Rivulet, public access over private land, traffic problems. Division within the meeting on environmental issues and role of Council/Consultants in planning generally.	A number of issues will be addressed in the revision of the ODP and Background Report but it is likely most will be carried through to LAP statutory review as many are inconsistent with strategic direction under the Act (ie sustainability)
Local Exhibition	General community	Exhibition at Council Offices and Lenah Valley School for a three week period. Comments received in the survey sheets	Review comments from survey returns and submissions undertaken
Written submissions	General community	4 written submissions were received. Covered political aspects/fears of planning, traffic, public access, drainage problems and loss of subdivision 'rights'. Summary of responses attached.	Review of each of the comments/issues will occur during the revision of the ODP and preparation of the LAP where relevant. Any errors will be corrected.
Council staff review session	Council staff	Occurred for approval of ODP's to proceed to community review.	Final review session 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.	73	23	1	0	1	2
2.	Infill housing should continue within the existing residential areas rather than extending into new areas	45	23	15	8	7	2
3.	New development should not overshadow or cause loss of privacy to neighbouring dwellings.	74	21	2	2	0	1
4.	Energy efficiency should be required in development.	51	36	10	2	0	1
5.	There should be a choice of housing types provided residential amenity and the environment are protected.	43	37	10	6	3	2
6.	There should be controls over vegetation removal whilst allowing for bushfire protection.	65	30	3	20	0	0
7.	Important landscapes and vistas should be protected.	76	18	5	0	0	1
8.	Stormwater runoff from private properties should be managed to reduce erosion and pollution.	71	25	3	0	0	1
9.	There should be greater control over nuisances (e.g. noise, dust etc.).	62	24	11	2	0	1
10.	Some non residential uses (e.g. local shop, visitor accommodation, gallery) could be allowed.	36	39	20	0	4	1
11.	Home based occupations that do not affect residential amenity could be allowed.	37	39	12	6	3	3
12.	Community facilities (creche, churches, schools etc.) could be allowed in the study area.	37	45	10	3	2	3
13.	Industrial uses should be confined to the Tasmaid site.	72	13	10	2	2	1
14.	Open space links and trails (e.g. New Town Rivulet, Pottery Creek) should be kept for public use.	86	10	3	0	0	1
15.	Traffic safety measures should be put in place (e.g. sight distances, vehicle speeds, unsafe junctions).	58	25	9	4	2	2
16.	The Augusta Road shopping centre should be the major focus for commercial facilities serving the area.	57	30	10	3	0	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 of 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. Four responses were received from Lenah Valley residents.

Antony de Lara

Mr de Lara's submission raised similar points to those raised in a letter to the Mercury and to which Council responded. The main issues raised included:

- The LAP is politically motivated and is a waste of money.
- The "proposed environmental protection zone" is intended to be part of Wellington Park.
- Statistics show that residents are happy with the present Planning Scheme.
- Current Scheme is sufficiently restrictive.
- Council do not bother to observe their own Planning Scheme - example of works on the New Town Rivulet Linear Park given.
- Five major land owners attended the meeting. They opposed all restrictions but their views will be ignored.
- Questions Council's ability to police restrictions.

Peter Guenther

- Use of Bealey Ave to feed all new development on Mt View Hill seems ill conceived. Suggests other links be created.
- Pathway along Rivulet is great but there is a problem with uncontrolled dogs.
- In other areas, road development takes priority to pathways and suggests some additional walking tracks.
- Narrow footpaths on edge of roads are not compatible with heavy traffic.

- Drainage of properties in higher areas into lower areas is a problem. No systematic drainage plan or addressing of problems at time of construction.
- Poor drainage planning leads to land slippage.

Dennis Sprod

- Would like to see a pedestrian walkway between Stratton and Kalang Avenues.
- Too many vehicle obstacles in roadways (roundabouts).

Patrick McGrath

Mr McGrath's concerns focus on the effect of any further restrictions on the value of his property. He refers to a number of current restrictions and how they have prevented him from using his land in particular by:

- preventing subdivision;
- loss of income from forestry and firewood production;
- loss of income from prevention of building on prime sites such as skylines;
- loss of agricultural land because of restrictions on land clearing;
- uncertainty of whether previously cleared land can be used; and
- use of fire trails as walking tracks.

Mr McGrath suggests that if these "restrictions" are imposed he should be compensated.