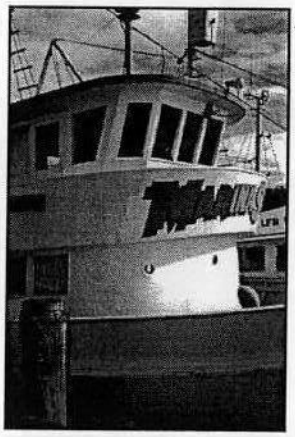
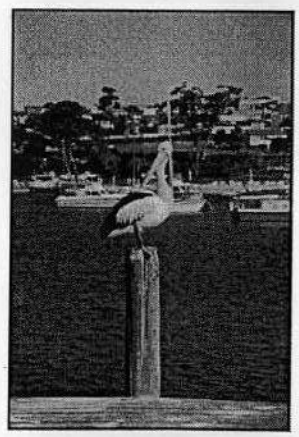
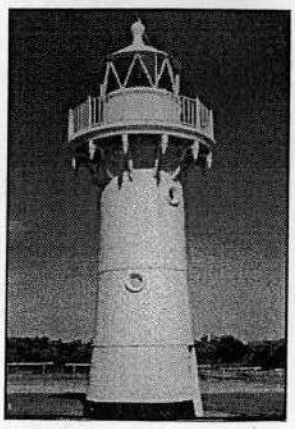


MILTON - ULLADULLA STRUCTURE PLAN

Volume 1
STRATEGY





Planning Services Division
SHOALHAVEN CITY COUNCIL
in association with
Monaro Consultants Pty Ltd
YARRALUMLA ACT

File 94/2772 September 1996

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Section One

INTRODUCTION

The aim of this structure plan is to provide a framework for the future development of the Milton-Ulladulla area, which includes the settlements of Milton, Narrawallee, Mollymook, Ulladulla, Kings Point, Burrill Lake and Dolphin Point. It assesses the current structure and function of the area as the social and economic hub of a district which includes coastal villages from North Bendalong to North Durras and acknowledges that the district is a popular destination for visitors from many parts of Eastern Australia. It also addresses the motivations for change and acknowledges the need for ecological sustainability.

The structure plan is presented in the form of three documents:

Volume 1: Structure Plan : Strategy;
Volume 2: Structure Plan : Background Study; and
Volume 3: Structure Plan : Summary Report.

1.1 BACKGROUND

In early 1994 Council commenced review of the Structure Plan for the Milton-Ulladulla district.

Structure plans establish policies and strategies for the future development of an area, which are then translated into statutory plans, which guide the spatial distribution of, and relationships between, existing and future land uses.

Pressure for Change

The existing structure plan for the area was prepared between 1978 and 1983 and was translated into an LEP in 1985.

Plans do not remain valid forever and need review as population growth, community needs and general social changes take place. Pressure on Council to amend small sections of the plan or to address issues of concern such as those expressed recently in the area are often indicators of the need for review.

Because of the complex strategic interrelationships single requests for zoning changes say on the urban fringe or in the CBD or attempts to resolve issues such as water and sewage upgrading, recreation facilities and commercial relocation in isolation often foreclose options or undermine important strategies. It is critical that these proposals are addressed in the context of an overall strategic review rather than in isolation. This structure plan represents that strategic review.

The Planning Process

There are two general approaches to the preparation of structure plans.

A *reactive approach* would examine the trends of the past, accept the continuation of those trends as inevitable and set about catering for the inevitable in the context of today's social, economic and environmental constraints.

Such a process is often fuelled by speculation on the urban fringe and results in expansion of settlements at a rate set by demand. Infrastructure is designed to cater for expected demand. The direction of growth is influenced by constraints.

The *alternative preferred approach is proactive* and seeks to establish a desired future rather than accept an inevitable future. The process is community driven, strategically focussed and interactive between stakeholders including service and infrastructure providers.

This approach involves:

- arriving at a common or shared concept of what would constitute a desirable form and function for Milton-Ulladulla for the foreseeable future through stakeholder collaboration;
- assessment of whether such a future is achievable and sustainable;
- working out appropriate ways of moving from the present to the preferred future within the context of available resources and feasible time frames; and
- continuing to monitor progress and make adjustments as and when required.

Once this preferred future has been established by the structure plan it then needs to be translated into a statutory form called a Local Environmental Plan (LEP). The LEP consists of a set of written regulations and a set of maps showing zoning and would be expected to provide for community needs for a period of about ten years.

Council has resolved to prepare a new LEP for the area when the structure plan is finally adopted so that any necessary changes to zoning can be implemented as quickly as possible.

1.2 COMMUNITY PARTICIPATION

The draft structure plan has been prepared in partnership with the community of Milton-Ulladulla and its district and in partnership with the Commonwealth and State Agencies which provide services to the area.

This collaborative approach has been greatly facilitated by the Integrated Local Area Planning (ILAP) program which has been *introduced* by the Council to encourage and empower the local community to actively participate in influencing and planning its future. Funding assistance for the program is provided by the Commonwealth Government.

The ILAP Program

ILAP seeks to offer a systematic approach to improving the overall well-being of communities, based on proper consideration of all relevant aspects of development, environmental quality and service provision.

ILAP is concerned not only with achieving more broadly-based planning, but also more effective on-going management of activities. It seeks to balance "top down" policy driven approaches, often adopted by State and Commonwealth Governments, with a greater emphasis on "bottom up" implementation-driven processes. The major principles underlying ILAP are:

- Recognition that local areas and communities differ and that more emphasis should be placed on devising appropriate responses to distinctive local circumstances and needs.

- Acknowledgment that an holistic view should be taken of local areas, linking related physical, environmental, economic, social and cultural issues as opposed to dealing with them separately.

- Need for a shared understanding of key issues amongst all those concerned with the well-being of local communities and, as far as possible, a shared vision of desired futures.

- Co-ordination of the related activities of different departments, organisations and spheres of government in order to address key issues and achieve desired futures.

- Need for more efficient and effective use of available resources to eliminate unnecessary gaps or duplication.

- Need to increase the extent of community involvement and management processes.

- Recognition that local government has a mandate to play a leading role in implementing these principles.

A Steering Committee was established to oversee the implementation of the ILAP program and included representatives from Councillors, Council staff, the community (Mainstreet, Healthy Cities and four individuals), State and Commonwealth Governments.

A specialist team from the Centre for Resource and Environment Studies (CRES) was also appointed to work with the community to develop a shared vision for the future and to ensure that the community views were given effective representation in the structure plan.

A full report on the consultative process, including workshops, public meetings, staff training and monitoring of outcomes is appended.

1.3 KEY STAKEHOLDERS

The key stakeholders within the Milton-Ulladulla Structure Plan area are:

- Residents of Milton-Ulladulla.

- Residents of coastal villages and the rural lands which rely on Milton-Ulladulla as their main service centre.
- Business proprietors of Milton-Ulladulla.
- Non permanently resident property owners of Milton-Ulladulla.
- Frequent holiday visitors to Milton-Ulladulla.
- Shoalhaven City Council.
- State Government.
- Commonwealth Government.

Council has attempted to provide opportunities for all stakeholders to participate in the planning process.

1.4 SUB REGIONAL CONTEXT

Previous structure plans throughout the City of Shoalhaven and the major controlling statutory plan (SLEP) have been based on a strategy of three major urban centres: Nowra-Bomaderry; Milton-Ulladulla; and St Georges Basin-Sanctuary Point, with two smaller centres at Culburra and Sussex Inlet.

The Council has based its social and infrastructure planning on this concept. The areas identified as service districts for each centre are shown in Figure 1.1. The location of Milton-Ulladulla in relation to the above centres and to major population centres such as Sydney, Wollongong and Canberra is also shown.

The three centre policy is currently under review due to significant policy changes relating to the Jervis Bay area (a draft Regional Plan has been exhibited), however, the role of Milton-Ulladulla within its own service district and its relationship to Nowra-Bomaderry are not likely to change significantly.

Milton-Ulladulla is the social and economic hub of a district which includes villages from North Bendalong to North Durras and includes rural and rural residential communities as far west as the Clyde River. It is important that the Milton-Ulladulla Structure Plan is not seen as an isolated policy document but rather part of an overall structure for the sub region (Area 5).

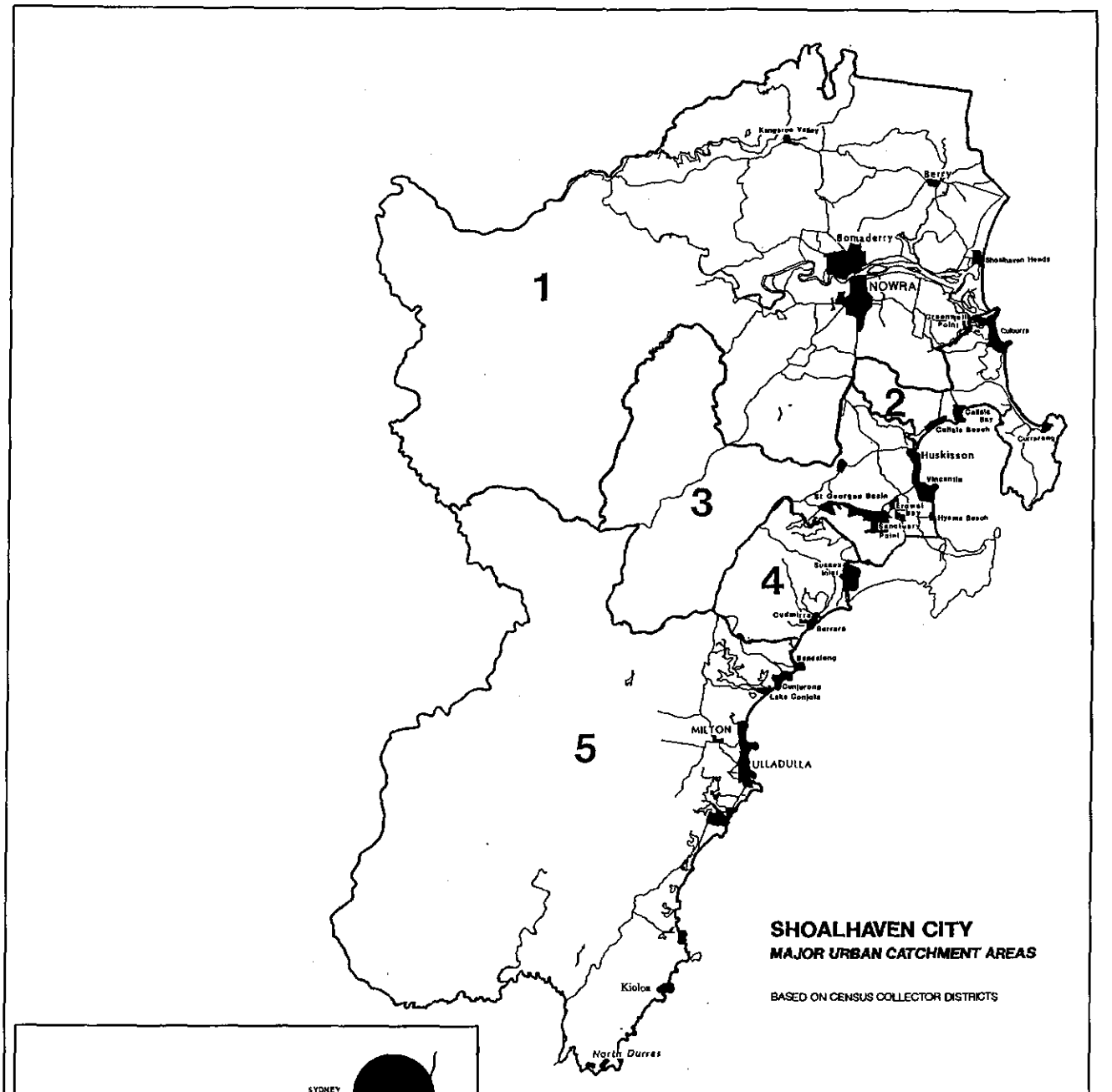
This overall structure for the subregion will be realised by integrating the draft Rural Plan and the more detailed Milton-Ulladulla Structure Plan.

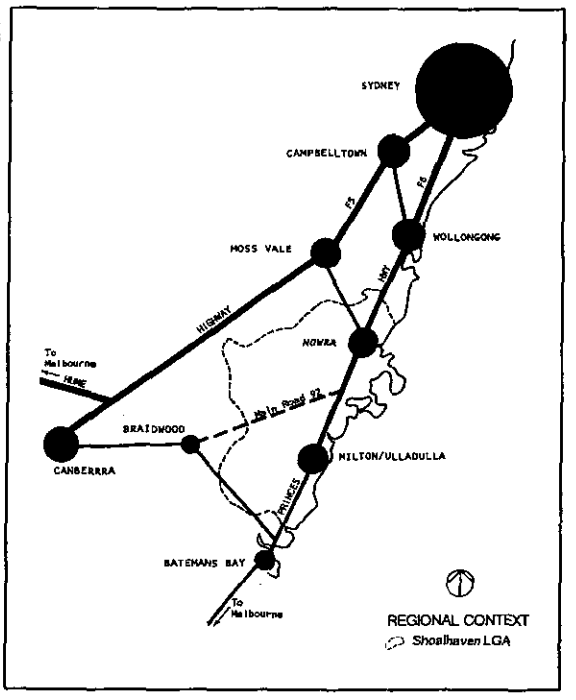
1.5 RELATIONSHIPS TO OTHER PLANS AND POLICIES

Structure plans are not implementation plans - they need other related instruments to put the overall desired future into practice. While it would be easier to plan in sequence from the broad to the specific this is most often not achievable. Planning is mostly iterative in that detailed decisions already made and implemented have to be woven into the fabric of a broader plan.

In the same way detailed decisions taken locally may influence broader State Government policy and be incorporated into Regional Environmental Plans (RLEP).

As a general principle the hierarchy of plans is shown in Figure (1.2).





SHOALHAVEN CONTEXT

FIGURE 1.1

Plans in effect or proposed include:

Illawarra Regional Environmental Plan (1986)
The REP is currently under review with a draft expected during 1996. One of the key strategies which will influence the review is the Illawarra Coastal Planning Strategy which establishes principles and guidelines for coastal urban settlement in the region. This strategy has been exhibited but not finalised.

The key thrust to that strategy is that coastal villages should retain their character and that the Shoalhaven local government area generally has enough zoned urban land for up to twenty-five years.

City of Shoalhaven Local Environmental Plan (1985)
This plan covers the whole city area about 466,000 hectares and was based on structure plans developed for each town and village area (over fifty separate villages) during the period 1978-1983. Extensive public consultation was a feature of this planing process.

The plan is strongly zone based and provided for a range of lifestyles as well as for various tourism uses and an adequate supply of industrial and commercial land.

This plan will be up-dated as a result of the structure plan review.

Draft Rural Plan
A draft rural LEP was exhibited from August to November 1994. The plan is to incorporate amendments made as a result of submissions and will be re-exhibited during 1996.

The plan is underpinned by the principles of environmental sustainability (ESD) these are:

- intergenerational equity (resource conservation)
- intragenerational equity
- the precautionary principle
- maintenance of biodiversity
- internalisation of environmental costs.

The plan also implements total catchment management principles as a means of achieving sustainability and changes emphasis from land ownership to land suitability.

Strategies for resource conservation, natural hazards, biodiversity and heritage, and settlement provide the policy basis for the plan.

Densities of settlement greater than one lot per 40 hectares of land are provided only in Rural Lifestyle Areas (1(c) zones) or Special Rural Lifestyle area.

Development Control Plans
A number of DCPs are in force within the Milton-Ulladulla Structure Plan area. These include some City-wide controls such as car parking, subdivision and dual occupancy codes but specifically:

PLANNING PROCESS

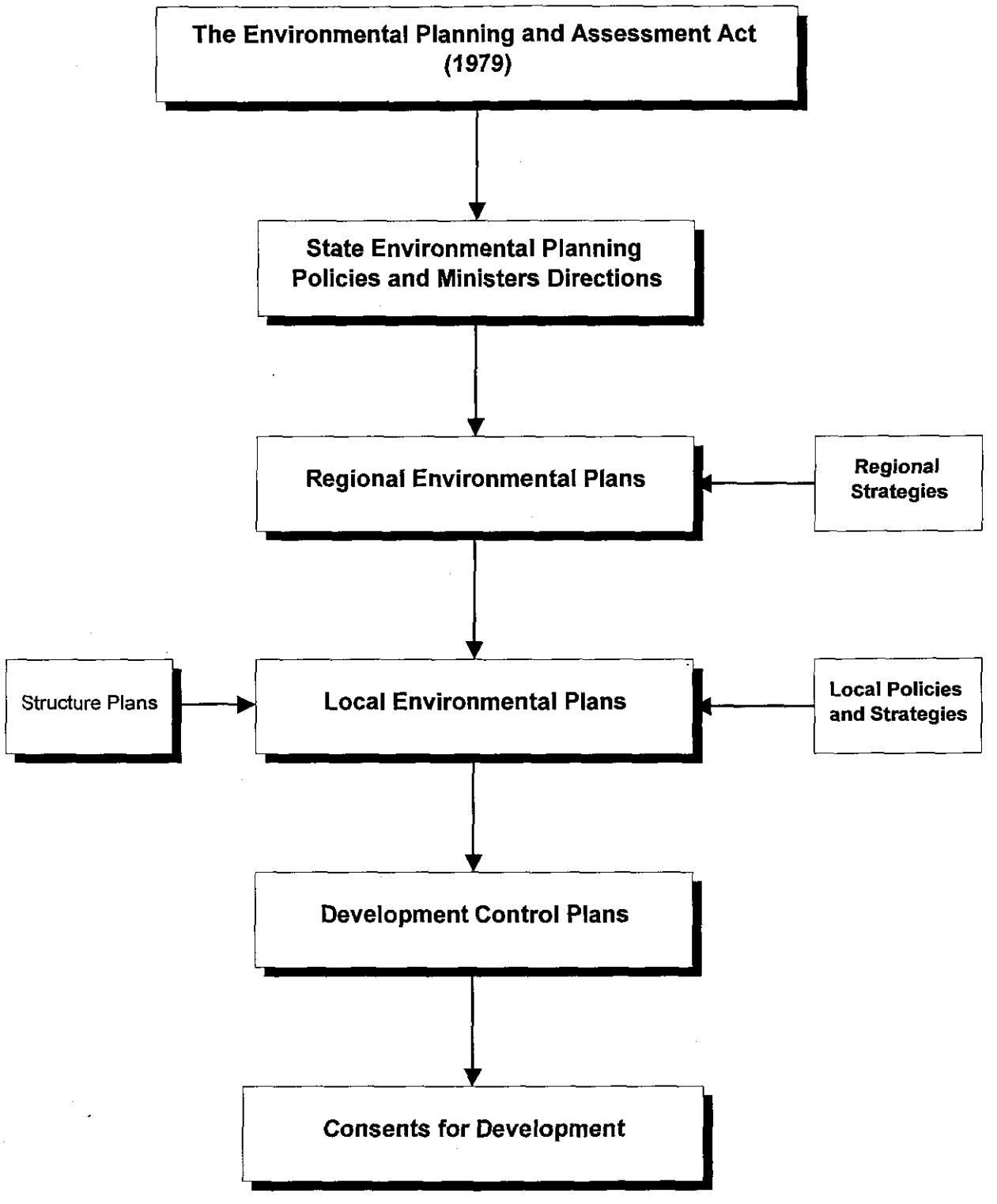


FIGURE 1.2

- DCP No. 26 Milton Commercial Centre
- DCP No. 56 Ulladulla Town Centre.

DCPs are not statutory but provide implementation regulations and guidelines to control development in certain areas or specific issues. They are developed in consultation with the community and are usually upheld by the Court in cases of appeal.

Some of the above DCPs may require amendment as a result of the structure plan review.

Section Two

STRATEGY FOUNDATION

2.1 COMMUNITY VISION

The community vision is based on the Milton-Ulladulla community's appreciation of its current lifestyle and assets; its awareness of the need to change aspects of the status quo, followed by its collective aspirations to strive for something better.

2.1.1 The Need For Change

Although Milton-Ulladulla continues to possess many characteristics that are highly valued by resident and visitor alike, it is experiencing a number of trends that have the potential to make it a dysfunctional urban-rural system. These can be expressed in terms of its economic, social and physical environments.

Economic Environment

Milton-Ulladulla's economy has in recent years been based on boom and bust activities such as house building and seasonal activities such as tourism. Since the area is currently at the bottom of the development cycle, there is low building activity and high unemployment. Whilst there are a number of attractive developments in Mollymook and in Milton, there has been a tendency in recent years for the area's tourism industry to rest on its laurels providing more of the same to its traditional markets. The fishing industry is facing an uncertain future with depleting fish stocks and hence the imposition of quotas by the Federal Government. The viability of the dairy industry is also under threat because of the trend towards larger enterprises on the one hand and the pressure to subdivide prime crop and pasture land on the other. General industry in the area tends to focus on servicing the needs of the resident and holiday populations. The area has had limited success in attracting industries that export their products and services from the area. The Ulladulla commercial centre is unable to offer a wide range of facilities and services to its residents and visitors, who often need to travel to Nowra or Batemans Bay for greater choice.

Social Environment

High unemployment and the prevalence of under employment are tending to put pressures on families and social services. As in many Australian communities, young people are having difficulty finding work locally and are often forced to go elsewhere for work or remain in the area as unemployed. The aging of the population will put further pressures on the area's medical and support services.

Physical Environment

The planning of the physical environment has, in recent years, tended to follow a reactive process. The various attributes of the physical environment have been treated as constraints on what can be done for other economic and social reasons. They have not been considered as elements in their own right. The urban environment is characterised by vehicle congestion in the centres of Milton and Ulladulla during peak holiday periods. The urban fringe is being modified by ad hoc additions of rural residential development that have the potential to seriously compromise the future planned expansion of the areas's key settlements. There is a real threat that the urban villages of the district will lose their individual characters and become integrated within a continuous urban area, devoid of structure and sense of place.

2.1.2 The Vision

To avoid the realisation of an unwanted future more or less by default, the identification of a "vision" that had majority support in the community was considered fundamental to the future well-being of Milton-Ulladulla.

On the basis of extensive community consultation by the CRES team, which included mail outs, and local group meetings, the following community vision has been adopted to act as the basis of the structure plan.

The Vision - as expressed by approximately 500 people in the southern area of the Shoalhaven,

'We will redirect our energies towards:

- A community with pride in itself and its ability to enhance a special environment;
- A quality life in a quality environment to share with visitors who understand and appreciate it; and
- A responsive Council working cooperatively with its community.

The Vision will be achieved by everyone, by

Saving what we value, through:

- Staying clean and green;
- Separating urban living and natural bushland;
- Opening up options for share-farming and shared land use without sub-division;
- Protecting catchment areas and wildlife habitats for the long-term;
- Maintaining recreational fishing through strict controls;
- Designing inland sewerage recycling systems;
- Keeping all waterways clean;
- Valuing Ulladulla harbour; and
- Monitoring all aspects of the environment through locally-selected indicators.

Maintaining our cooperative communities, through:

- Keeping separate village centres and identities;
- Debating local issues in open public forums;
- Establishing outdoor eating, walkways, bikeways, and community spaces;
- Ensuring local access to schools, twenty-four hour health care and financial services;
- Linking the everyday activities of the old and young;
- Capturing the vision in a community-supported five year plan;
- Building a creative are centre for the whole community;
- Keeping urban design in balance with the foreshores and the forests; and
- Regulating the community scale of buildings, roads and spaces.

Creating a strong, diversified, local economy, through:

- Thinking creative local employment;
- Building an enthusiastic work ethic;
- Protecting and marketing forests and national parks;
- Protecting and marketing rural activities and lifestyles;
- Identifying specialty crops, such as vineyards, flowers, herbs and market gardens;
- Identifying specialty tourist services, such as outdoor activities staffed by young local guides;
- Appreciating and supporting local crafts;
- Designing and marketing an attractive light industry area;
- Advertising opportunities for rural based information industries.

Ensuring liveability of the area, through a transport/movement system which is consistent with saving what we value, maintaining cooperative communities, and creating a diversified local economy, by:

- Integrating public/private personal transport;
- Cycleway Milton/Narrawallee/Mollymook/Ulladulla/Burrill Lake;
- Footways everywhere;
- Pedestrian access in CBD;
- A by-pass road and a country lane link up;
- Fast connections to Sydney and Melbourne;
- Small bus transport (kids, older people);
- Traffic calming and diversion for safety and tranquillity; and
- Maximising the opportunities of modern communication systems.

2.2 INTERPRETING THE VISION

The vision was produced with reference to the whole of the southern Shoalhaven (from Bendalong in the north to North Duras in the south), Milton-Ulladulla's catchment, known by Council's planners as Area 5. Therefore a number of the vision elements are either of a general nature, or do not necessarily related to the Milton-Ulladulla Structure Plan area. Again certain aspects of the vision do not have a spatial dimension and therefore cannot be directly addressed by the structure plan. They are more the province of the policies and programs of Council's other management and executive arms.

2.2.1 Forming the Big Picture

Before segmenting the vision into its manageable parts, it is considered important to form a big picture and attempt to construct, in holistic terms, what the vision for Milton-Ulladulla could be for say the year 2020. One variant of the big picture, by no means the only one, can be described as follows:

'By the year 2020 Milton-Ulladulla will be a system of coastal villages, set within an attractive undulating rural landscape. It would be a gentle yet exciting and creative place, where there is a place for everything and everything is in its place. Economic activity would be encouraged in a form and scale that is in balance with the overall quality of the environment. Economic activity would focus on: development of Ulladulla as a significant tourist centre; a service centre for the southern Shoalhaven, providing for the needs of both the resident and the visitor; rural diversification; and the nurturing of 'new age' businesses and industries. When flying over the area, the prevailing colours of the land use pattern would be green and blue, interspersed with flashes of orange, dull reds, whites and earth colours of the roofs and facades of its built form. There would be a strong emphasis on the quality of place, with a specific identity and theming identified for each settlement, that reflect its heritage and cultural landscapes. Mediocrity in design would not be acceptable. Transport through the area and between its settlements would assist interaction, yet not be intrusive to its inhabitants' quality of life. Emphasis would be placed on community transport and off-road networks, such as cycleways and bridle paths. Support utility infrastructure would be provided in response to need, with an emphasis on local sourcing and disposal.'

2.2.2 Focus Group Workshop

On the basis of the visioning exercise, a focus group workshop was held, specifically focussing on the future development of Milton-Ulladulla, with the aim of discerning a set of workable development principles, that could be said to have wide community support. The workshop, held in November 1995, included representatives from Milton-Ulladulla's key business and community segments. It focussed on the following areas of concern:

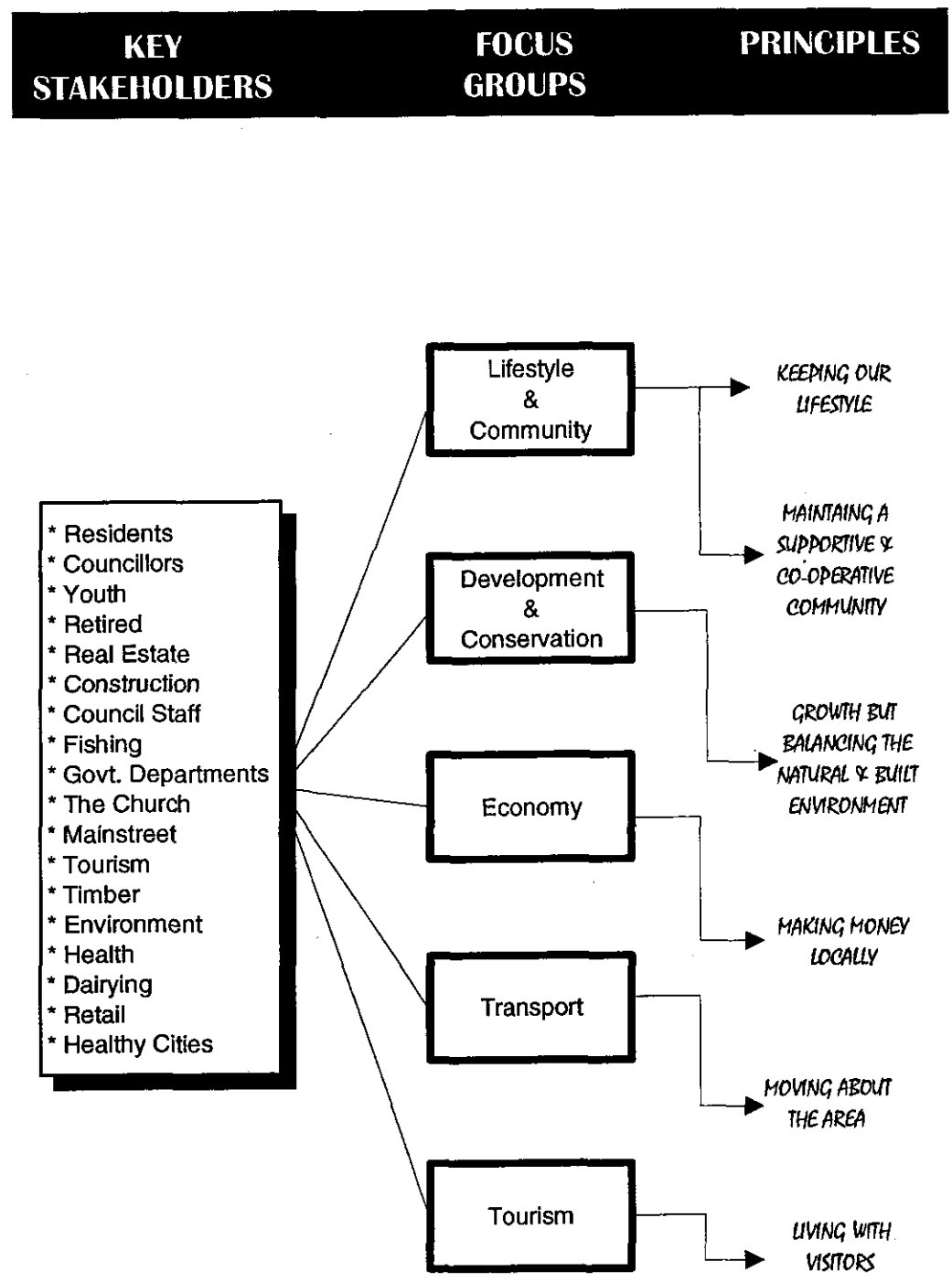
- lifestyle and community;
- development and conservation;
- the economy;
- transport; and
- tourism.

The focus group workshopping process is illustrated in Figure 2.1.

2.2.3 Community Attitudes to Development

The discernment and identification of development principles was parallelled by a general community position that was in the form of:

- calling a halt to excessive development within the structure plan area;
- redirecting growth to particular areas by expanding existing urban villages; and
- a certain ambivalence to higher density development within the urban villages (Table 2.1).



DEVELOPMENT PRINCIPLES IDENTIFICATION PROCESS

FIGURE 2.1

Table 2.1
COMMUNITY RESPONSE TO DEVELOPMENT PROPOSITIONS

Development Proposition	Nature of Response
No more growth once the present rate bars the continuation of community priorities.	Indecisive or strongly in favour.
Redirect growth to particular areas by:	
• *expanding existing villages*	In favour.
• creating a new coastal or rural village	Strongly against.
• transferring more rural land to residential *(rural residential)*	Strongly against.09 September 1996
or change your stated values and priorities for the Milton-Ulladulla area by:	
allowing higher density development (more units, dual occupancy and more storeys)	Polarised between those strongly against and those in favour.
• merging all of the villages by allowing development in the green space buffers	Strongly against.
• developing new villages on agricultural land	Strongly against.
• extending development down the coast from Dolphin Point	Strongly against.

Source: CRES (1996) questionnaire to workshop participants

2.3 DEVELOPMENT PRINCIPLES

On the basis of this process the community has espoused the following six principles to provide the foundation to the planning of the southern Shoalhaven in general and to the structure plan for Milton-Ulladulla in particular:

Principle 1: *Keeping Our Lifestyle*
Principle 2: *Balancing Natural and Built Environments*
Principle 3: *Making Money Locally*
Principle 4: *Sharing with Visitors*
Principle 5: *Moving Around the Area*
Principle 6: *Maintaining a Supportive and Co-operative Community*

These principles are articulated in the following pages by way of text, tables and plans. In each case the following questions are addressed regarding the principle:

- Where are we now? and
- How will we get there?

2.3.1 Principle 1: Keeping Our Lifestyle

This principle is concerned with safeguarding the livability of the district's villages, and facilitating the enjoyment of a relaxed, friendly and stimulating atmosphere. Key desired outcomes of this principle are:

- A clearly discernible settlement structure based on seven discrete villages of: Milton, Narrawallee, Mollymook, Ulladulla, Kings Point, Burrill Lake and Dolphin Point; and

- Maintenance of Ulladulla Harbour and CBD as the focal point of the district.

The current and potential positions regarding this principle are addressed in Table 2.2 and its salient spatial attributes are illustrated in Figure 2.2.

2.3.2 Principle 2: *Balancing Natural and Built Environments*

This principle is underpinned by the desire to facilitate continuing growth, but at the same time keeping the landscape balance and environmental quality; and safeguard the identity and character of the district's villages. Key desired outcomes of this principle are:

- maintenance of the district's prime crop and pasture land, cultural landscape and agricultural base;

- maintenance of significant native vegetation communities and fauna habitats in the vicinity of Burrill Lake and Narrawallee; and

- maintenance of an open space system which separates urban villages and links the district's coastline, inland waterways, networks of creeks and ridge lines with major urban foci and other centres of community activity.

The current and potential positions regarding Principle 2 are highlighted in Table 2.3 and its key spatial dimensions are depicted in Figure 2.3.

2.3.3 Principle 3: *Making Money Locally*

This principle is concerned with diversifying business and industry based on the community's lifestyle; and building on and protecting valued cultural assets. Key desired outcomes of this principle are:

- maintenance of the Ulladulla CBD as the commercial hub of the subregion;
- development of an attractive business park as the enterprise centrepiece of the district; and
- development of community-based enterprise nodes.

The current and potential positions regarding this principle are summarised in Table 2.4 and its key spatial attributes are fleshed out in Figure 2.4.

2.3.4 Principle 4: *Sharing with Visitors*

This principle is predicated on the desire to develop tourism in a manner which conserves the existing community lifestyle by attracting visitors who share the community's values about the special nature of the Shoalhaven. Key desired outcomes of this principle are:

- smoothing out the peaks and troughs of Milton-Ulladulla's seasonal visitor pattern by making the district a more attractive place in which to stay during shoulder and off-peak periods;
- provision of built attractions, accommodation and support facilities which would encourage visitors to develop an empathy with the area's community and natural environment, causing them to stay more often, stay longer and spend more money; and
- increasing opportunities for tourism and hospitality development particularly larger space users.

The current and potential positions regarding Principle 4 are addressed in Table 2.5 and its significant spatial dimensions are illustrated in Figure 2.5.

2.3.5 Principle 5: *Moving Around the Area*

This principle is concerned with developing a more diverse and integrated transport system and developing a transport system which specifically meets the needs of older and younger people. Key desired outcomes of this principle are:

- a primary road network based on the Princes Highway and the Southern Link Road/Bypass;

Principle 1 - Keeping Our Lifestyle:

- Safeguarding the livability of villages
- Enjoying a relaxed, friendly & stimulating atmosphere

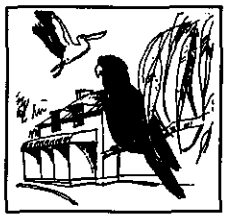
Where are we now?

- Transition from holiday settlement to living community.
- Relaxed coastal, lakeside and rural lifestyle.
- Linking development threatening the identity and character of urban villages.
- Variety of residential development options.
- Previously strong population growth now slowing.
- Trend to population aging & ethnic composition change.
- Increasing number of retirement facilities in Milton-Ulladulla
- Modest growth in public sector housing.
- Continuing demand for rural-residential lifestyle.
- Utility infrastructure (eg sewerage treatment) requires significant upgrade by year 2020.

How will we get there?

- Maintain and enhance unique identities of each urban villag
- Create attractive residential/workplace/commercial centre environments
- Conserve and develop the theming potential of Milton-Ulladulla's key urban heritage values.
- Conserve Milton's cultural landscape.
- Maintain and enhance district's lifestyle options: harbour-urban(Ulladulla); ocean-suburban (Mollymook and Ulladulla); forest-suburban (West Ulladulla); lakeside/forest - suburban (King's Point); lake entrance - suburban (Burrill Lake and Dolphin Point).
- Development of a range of residential options in each urban village in keeping with its lifestyle theming.

TABLE 2.2



Principle 2 - Balancing the Natural & Built Environment:

- Continuing growth but keeping the current landscape balance and environmental quality.
- Safeguarding the identity and character of villages.

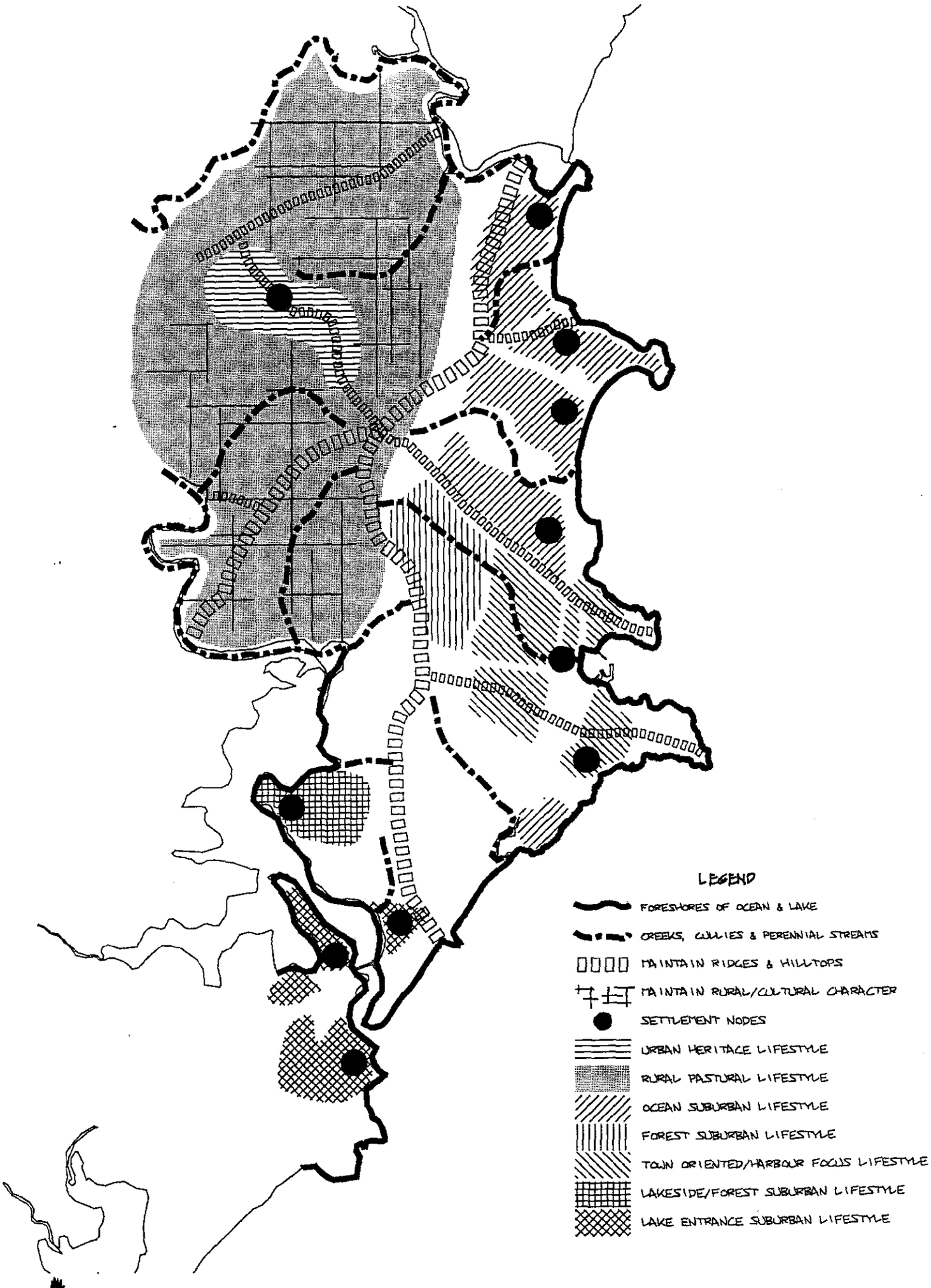
Where are we now?

- Unique balance of coast, forest and pasture.
- Lacklustre quality of Ulladulla's built form.
- Significant areas of high landscape value.
- Pressure for urban expansion on agricultural land.
- A variety of coastal and forest habitats worthy of conservation.
- Strong pressure for rural residential subdivision near Milton.
- Significant pollution levels recorded in Millard's Creek and on Racecourse Beach as a result of sewer ocean outfall.
- Significant odour levels originating at the sewerage treatment plant reported in south Ulladulla.
- Significant siltation occurring at Burrill Lake entrance.
- Attractive harbour setting at Ulladulla.
- High probability of Aboriginal features located adjacent to coastal headlands, lakes and major creeks.

How will we get there?

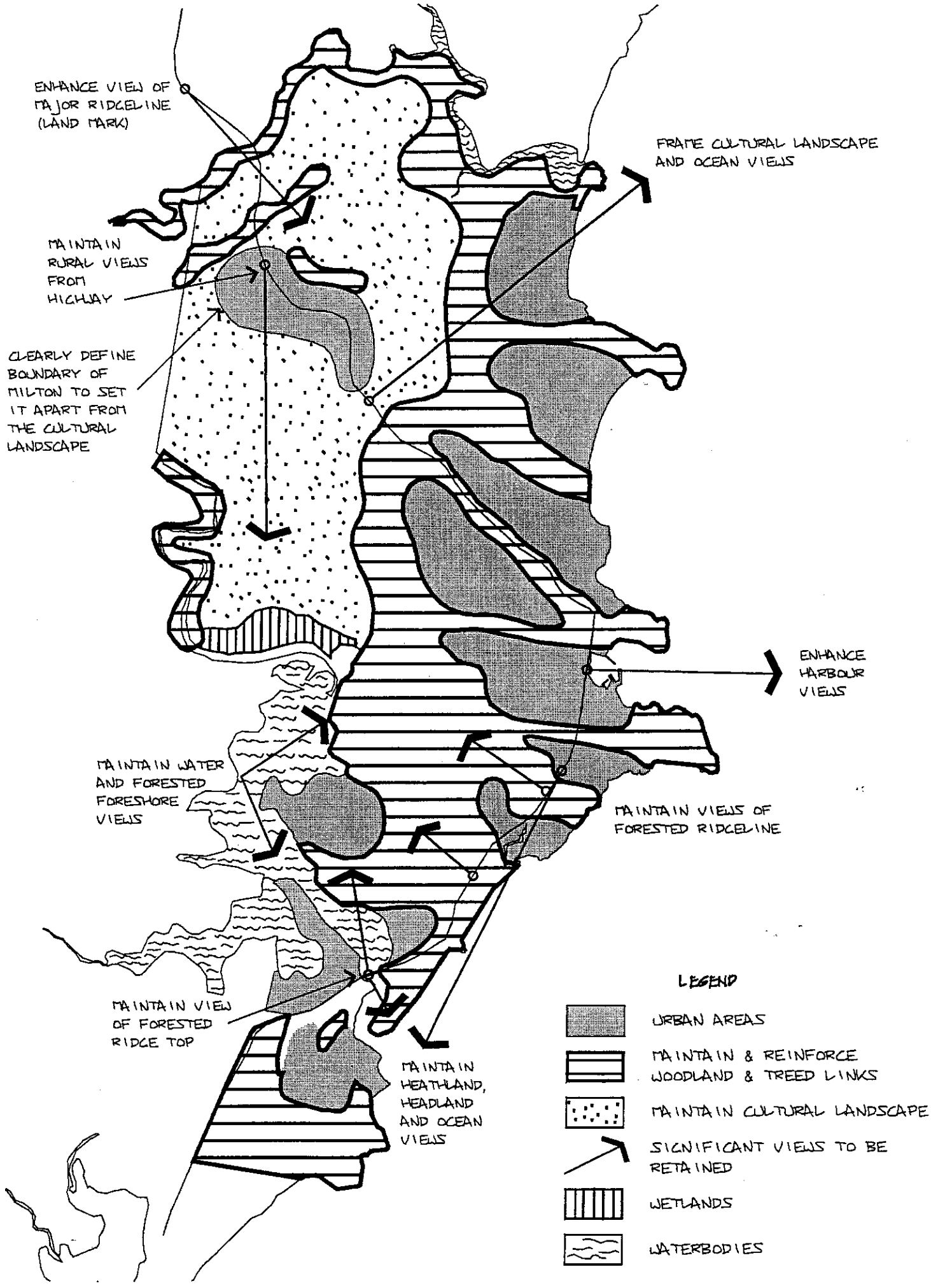
- Maintain and enhance open space between settlements.
- Conserve key flora and fauna habitats and corridors.
- Maintain and enhance water and air quality.
- Provision of rural residential subdivision opportunities to th west outside the Structure Plan area.
- Relocation of Ulladulla Sewerage Treatment Plant and abandonment of ocean outfall in favour of land diposal effluent.
- Regime of a strict water quality control in new urban subdivisions.
- Restriction on development in Burrill Lake catchment.
- Conservationof areas with high probability of presence of Aboriginal features.
- Maintain and enhance the visual character of the district's headlands, ridgelines and creeklines.
- Conservation of the monzonite prime crop and pasture land around Milton.
- Introduction of structural landscaping (major trees such as Norfolk Island Pines) along the southern Ulladulla ridgeline

TABLE 2.3



PRINCIPLE 1:
KEEPING OUR LIFESTYLE

FIGURE 2.2



PRINCIPLE 2:
BALANCING THE NATURAL & BUILT ENVIRONMENTS

FIGURE 2.3

Principle 3 - Making Money Locally:

- Diversifying business and industry based on existing lifestyle.
- Building on and protecting valued cultural assets.

Where are we now?

- Traditional industries in decline or undergoing major change.
- Decrease in the volume of fishing catch and potential decrease in commercial fleet size.
- Shift to export oriented fish catches (Southern Blue Tuna).
- Increase in dairy productivity and decline in the number of establishments.
- Dependent on highly seasonal tourism industry.
- Slow take-up of industrial estate allotments.
- Boom and bust building industry.
- Lack of employment opportunites outside the retail and hospitality sectors.
- *Strong pressure to expand Ulladulla CBD southwards.*
- Industry focusses on servicing needs of resident and holiday populations with almost total lack of 'export' industries.
- Public sector a significant employer in district.
- Generally low prospects for economic growth in the short term

How will we get there?

- Maintain Ulladulla Harbour as a working fishing port.
- Maintain dairy farms as intact units.
- Create a viable regional retail and service hub at Ulladulla.
- Develop an attractive business park at South Ulladulla as centrepiece for district.
- Provide for local enterprise nodes.
- Facilitate agricultural diversification without undue subdivision.
- Balance the need to introduce retail majors into the Ulladulla *CBD with the objective of containing retail within the centra* area.
- *Development of heritage based commercial centre at Milton* (eg antique shops, galleries, markets, bookshops and arts & crafts).
- Milton to perform a commercial servicing role for rural-residential development to west of Structure Plan area.

TABLE 2.4

Principle 4 - Sharing With Visitors:

- Developing tourism which maintains our lifestyle.
- Attracting visitors who share our values about the special nature of Shoalhaven.

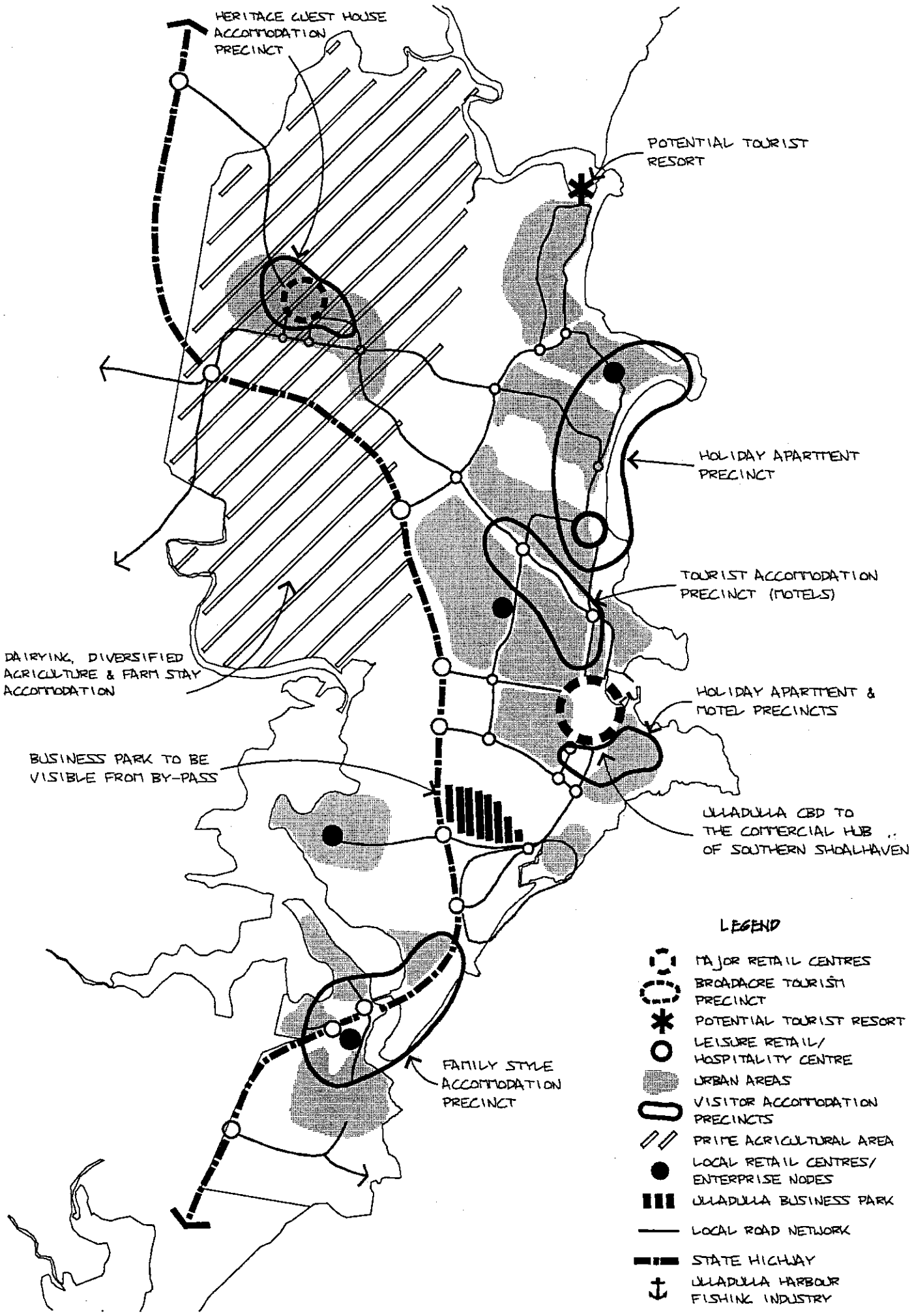
Where are we now?

- Natural features of ocean and beaches represent major visitor attractions.
- Family groups comprise main visitor segment.
- Sydney, ACT, Country NSW and Victoria represent major visitor source markets.
- Highly seasonal annual visitation pattern.
- Lack of diversity in entertainment facilites.
- In creasing congestion in the harbour at peak holiday *periods.*
- Greatest demand for health services at peak holiday periods.
- *Trend towards quality guesthouses and B& B in Milton* and Ulladulla.
- Trend towards quality holiday apartments in Mollymook.
- Lack of built visitor attractions during inclement weather.
- Majority of motels and caravan parks located adjacent to Princes Highway.
- Shortage of up-market visitor accommodation.

How will we get there?

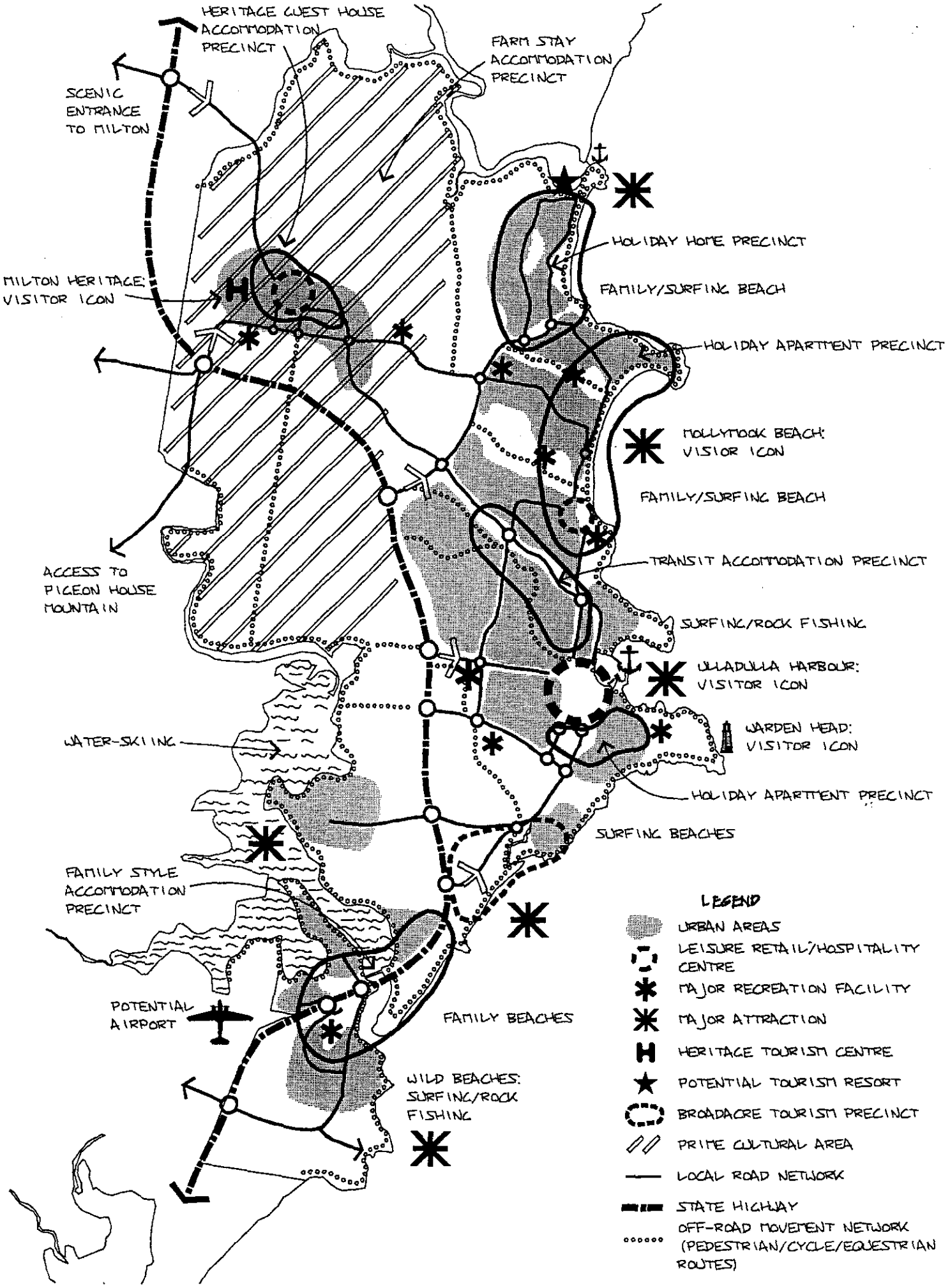
- Development of heritage based tourism at Milton.
- Reduce dependence on caravans as major accommodation form.
- Development of quality guesthouses and B&B.
- *Development of holiday appartments in Mollymook 'Golde* Triangle' and adjacent to Ulladulla Harbour.
- *Shift of emphasis of visitor accommodation from transit* routes to primary natural attractions.
- *Development of leisure retail and hospitality services in* Mollymook 'Golden Triangle'.
- Development of a 'broadacre tourism' zone at South Ulladulla to cater for land intensive tourism and recreation facilities.

TABLE 2.5



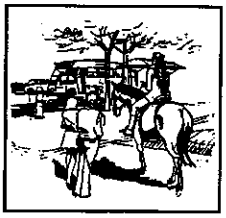
PRINCIPLE 3:
MAKING MONEY LOCALLY

FIGURE 2.4



PRINCIPLE 4:
SHARING WITH VISITORS

FIGURE 2.5



Principle 5 - Moving Around the Area:

- Developing a more diverse and integrated transport system.
- Developing a transport system that specifically meets the needs of older and younger people.

Where are we now?

- Princes Highway provides spine to district's road system with an incomplete duplicate network.
- High dependence on private vehicles.
- Low bus patronage (school children and elderly).
- Taxis provide important transport modefor low income families and the elderly.
- Council's community and recreation/service courtesy mini buses important transport mode for elderly.
- Incomplete off-road movement network.
- Original road system of Ulladulla and Milton based on grid iron pattern.
- Recent residential subdivisions based on loops and culs de sac.
- Perceived lack of adequate parking at peak holiday periods.
- Traffic congestion and pedestrian conflict at peak holiday periods in CBD.

How will we get there?

- Development of by-pass for Milton-Ulladulla by 2010.
- Development of St Vincent Street as inner by-pass for Ulladulla.
- Development of pedestrian priority precinct in central Ulladulla and Mollymook's 'Golden Triangle' by year 2000.
- Development of pedestrian priority precinct in Milton by year 2010.
- Development of a road system conducive to bus routing.
- Development of an integrated cycleway system in urban areas.
- Development of coastal walkway system.
- Development of strategic riding trails linking the Pony Club with the rural district.
- Development of extended leisure boat harbour at Ulladulla.
- Explore th epotential for an informal boat anchorage in Narrawallee Inlet
- Explore the potential for a local airport to the south of Burril Lake.

TABLE 2.6

Principle 6 - Maintaining a Supportive & Cooperative Community:

- Providing coordinated services and community facilities.
- Recognising, accepting and providing for the special needs of diverse community groups (eg. youth and elderly).

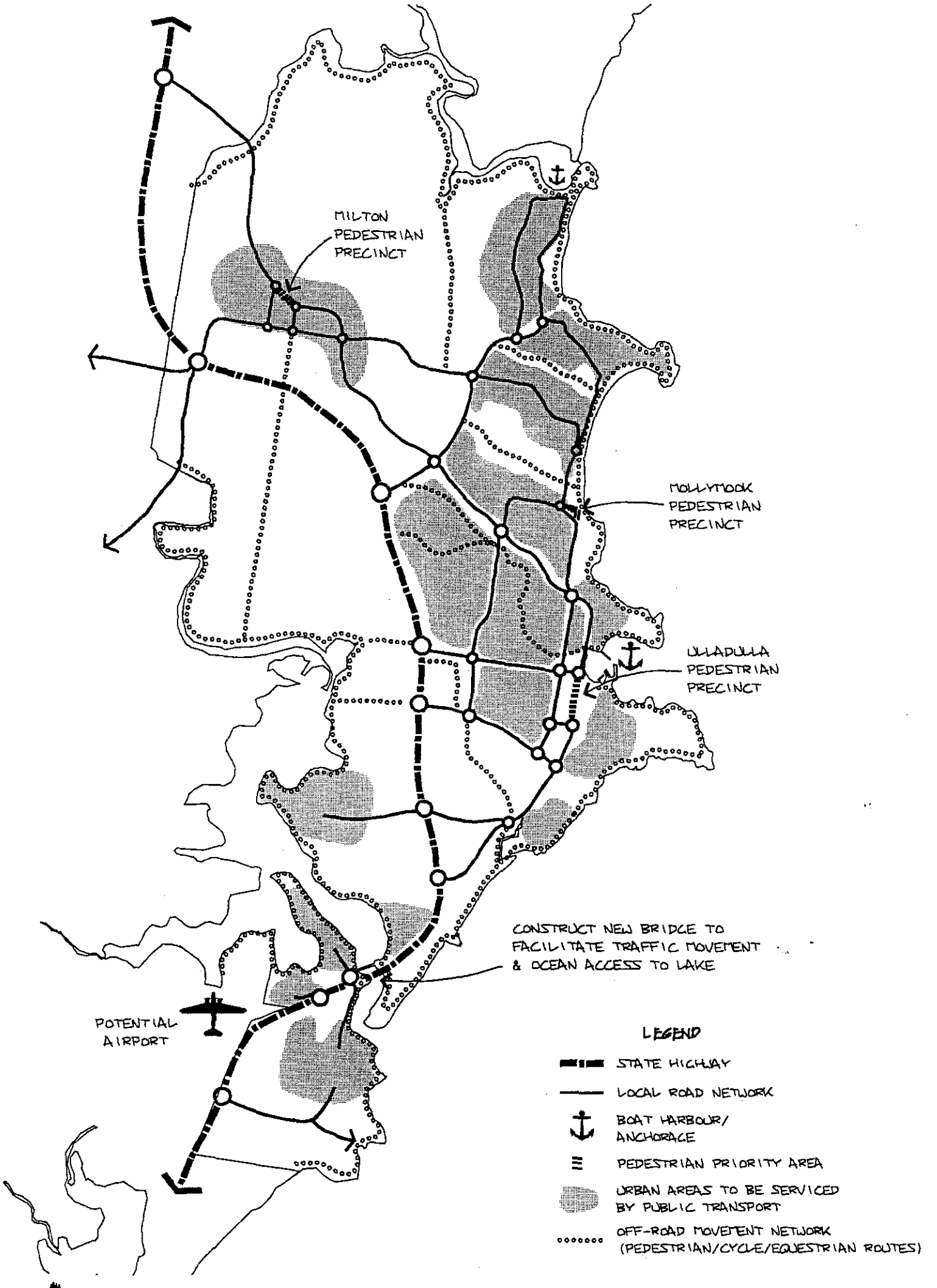
Where are we now?

- Community facilities concentrated in Ulladulla and Milton.
- Lack of community foci in some of the urban villages (eg. King's Point, Burrill Lake and Dolphin Point)..
- General lack of facilities for young people.
- Demand for an indoor aquatic centre.
- Demand for a centralised sporting complex for Milton-Ulladulla.
- Lack of public meeting places (formal and informal).
- Trend to greater attendance of the district's children at non-government schools..
- High youth unemployment.
- Recreation/service clubs fulfil an important role as community foci as well as important facilities for the visitor population.

How will we get there?

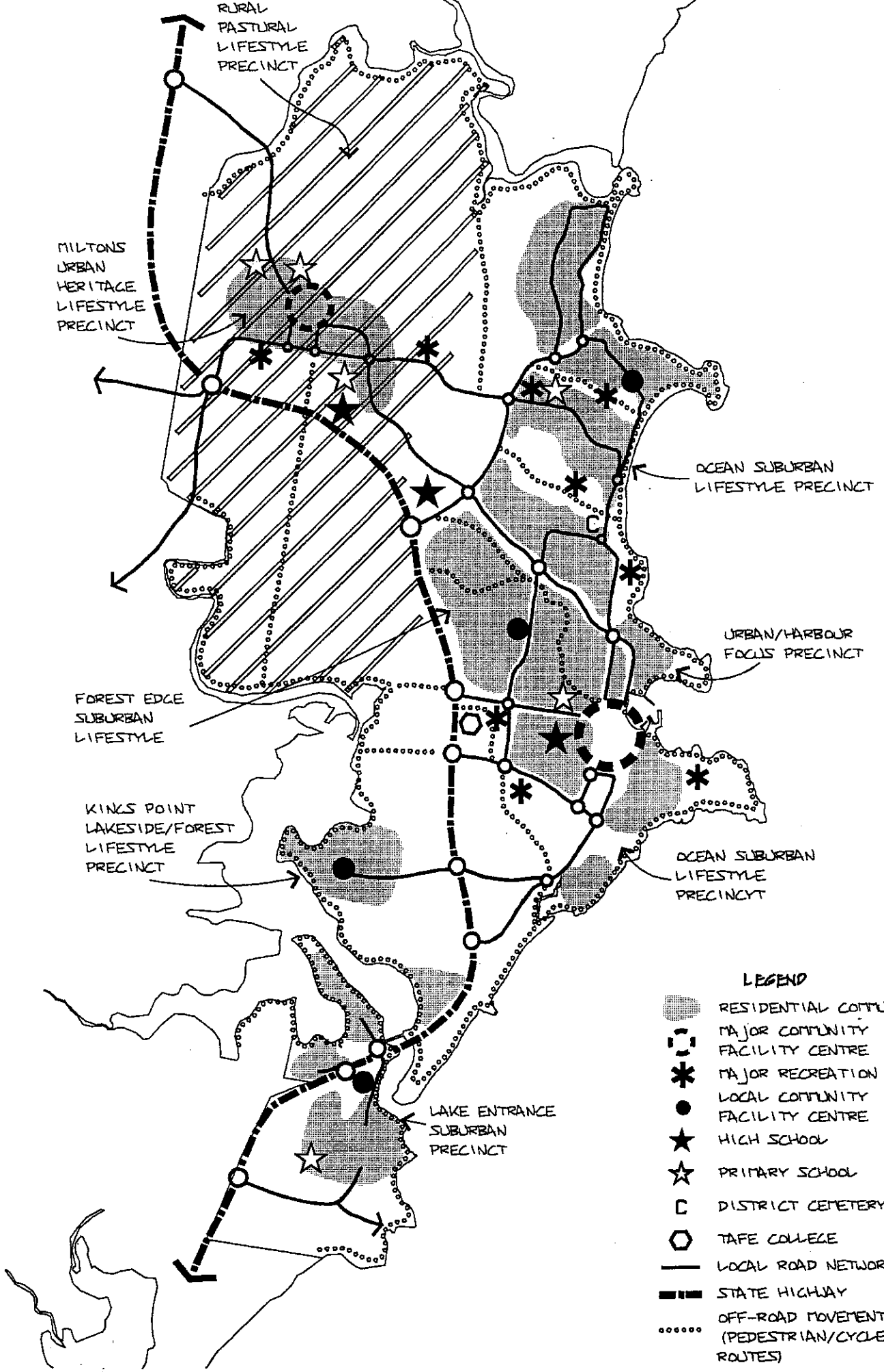
- Achievement of a critical population mass to sustain a highe threshold of community facility provision.
- Adoption of the social justice principles of access and equit in the provision and location of community facilities.
- Creation of strong community foci in each urban village.
- Development of an indoor aquatic centre in Ulladulla.
- Development of a sporting complex at South Ulladulla.
- Development of new high school at Milton to serve souther Shoalhaven.
- Development of retirement accommodation in close proximity to community, retail and transport facilities.
- Development of formal meeting space associated with the Ulladulla Civic Centre.
- Establishment of a system of informal regional public open spaces, formal town parks and local open space networks (passive and active).

TABLE 2.7



PRINCIPLE 5:
MOVING AROUND THE AREA

FIGURE 2.6



PRINCIPLE 6:
MAINTAINING A SUPPORTIVE & COOPERATIVE COMMUNITY

FIGURE 2.7

- pedestrian priority areas in Ulladulla CBD, Milton and Mollymook; and

- a system of off-road networks linking the district's centres of community activity and visitor attractions.

The current and potential positions regarding this principle are summarised in Table 2.6 and its significant spatial attributes are given form in Figure 2.6.

2.3.6 Principle 6: *Maintaining a Supportive and Co-operative Community*

This principle is underpinned by the need to provide co-ordinated services and community facilities and recognising, accepting and providing for the special needs of diverse community groups (eg youth and the elderly). Key desired outcomes of this principle are:

- provision of community/retain centres in each urban village; and

- development of a formal meeting space associated with the Ulladulla Civic Centre.

The current and potential positions regarding Principle 6 are addressed in Table 2.7 and its significant spatial dimensions are depicted in Figure 2.7.

2.4 PUTTING PRINCIPLES INTO PRACTICE

The acid test of any plan is how effectively it integrates its underlying principles, in a way that is considered to fairly reflect the needs and aspirations of its stakeholders and is consistent with urban and rural planning best practice. For the six principles to be melded into a composite principles plan, inevitably a number of compromises and trade-offs have had to be made.

2.4.1 Role of Professional Planners

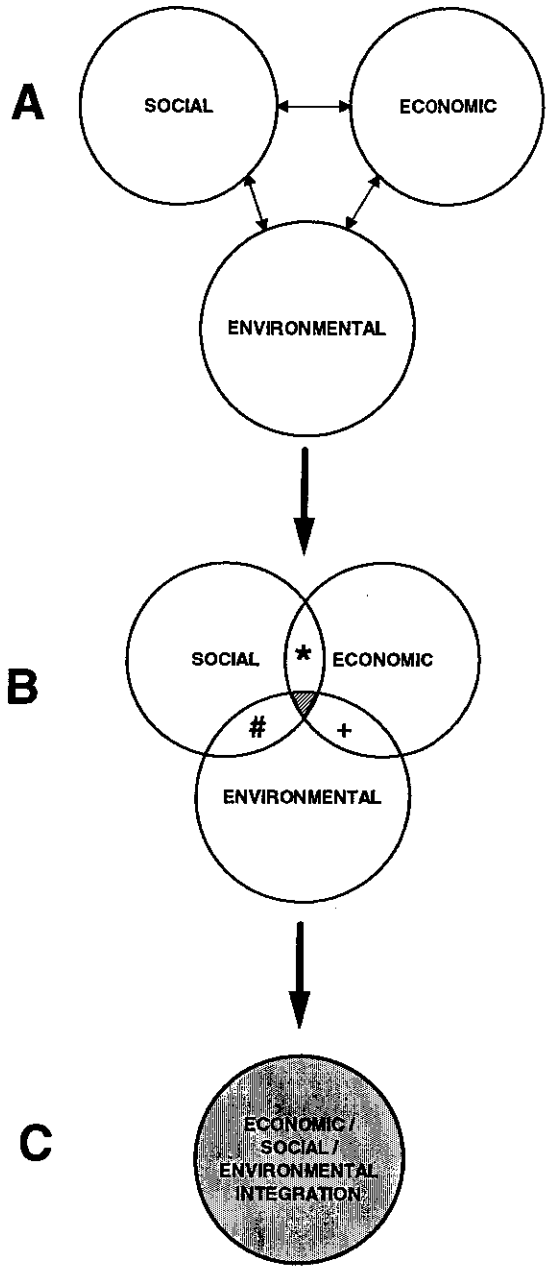
These have been made by professional urban planners, who have indirectly been given custodianship of the built and natural environment by the community. It has essentially been their role to impartially interpret and translate the vision into reality. Inevitably this interpretation and translation will have been influenced by their technical knowledge, previous experience, individual values as well as their collective professional value judgments. A potential bias in this area is fully acknowledged.

2.4.2 Other Issues and Priorities

In addition there will inevitably be issues, commitments and priorities, of which the community would be either not fully aware, or do not consider to be important when forming the 'big picture'. These issues, commitments and priorities would nevertheless need to be addressed in the Structure Plan, so that it can adequately meet the social, economic and physical needs of the Milton-Ulladulla community in the future.

2.4.3 Quest for Sustainability

At the heart of the integration of the six development principles is the need for local



LOCAL SUSTAINABILITY

FIGURE 2.8

sustainability, as enshrined in Local Agenda 21, adopted at the 1992 Rio Summit. In theory this state would eventuate once the social, economic and environmental realms are fully overlapped, as illustrated in Figure 2.8. The independent integration of two such realms can be termed:

- *Social Justice:* where the social and economic realms overlap;
- *Supportive Environments:* where the social and environmental realms overlap; and
- *Ecological Sustainable Development:* where the economic and environmental realms coincide.

The full integration of all three realms constitutes *Local Sustainability*, the desired outcome.

2.4.4 Integrated Principles

On this basis, the integration of the six development principles is illustrated in the *Principles Achievement Matrix* (Table 2.8). The relationship between, the findings of the Background Study report and the key actions of the Structure Plan Strategy are also summaries in this Table. The set of distilled principles and their spatial manifestation, considered to be fundamental to the balanced future development of Milton-Ulladulla, are depicted in Figure 2.9.

2.4.5 From vision to Reality

The manner in which the vision becomes reality will depend on a number of factors. An important vehicle for this transition is sensitive urban and environmental design, which melds aspiration with form and function, thus providing the three dimensional environment in which we live. Unfortunately, quality sensitive urban and environmental design is not a guaranteed outcome of community participation. What then constitutes quality urban and environmental design?

The build environment can be said to express our values, aspirations and power relationships with eloquence and clarity. It represents our most significant artefacts. Yet there is much about our built environment that appears uncontrolled, even chaotic, as it evolves in the maelstrom of technological and cultural change, shifting social needs and economic constraints. At the same time, global homogenisation of places and design styles is an ever apparent symptom of contemporary cultural and economic reality.

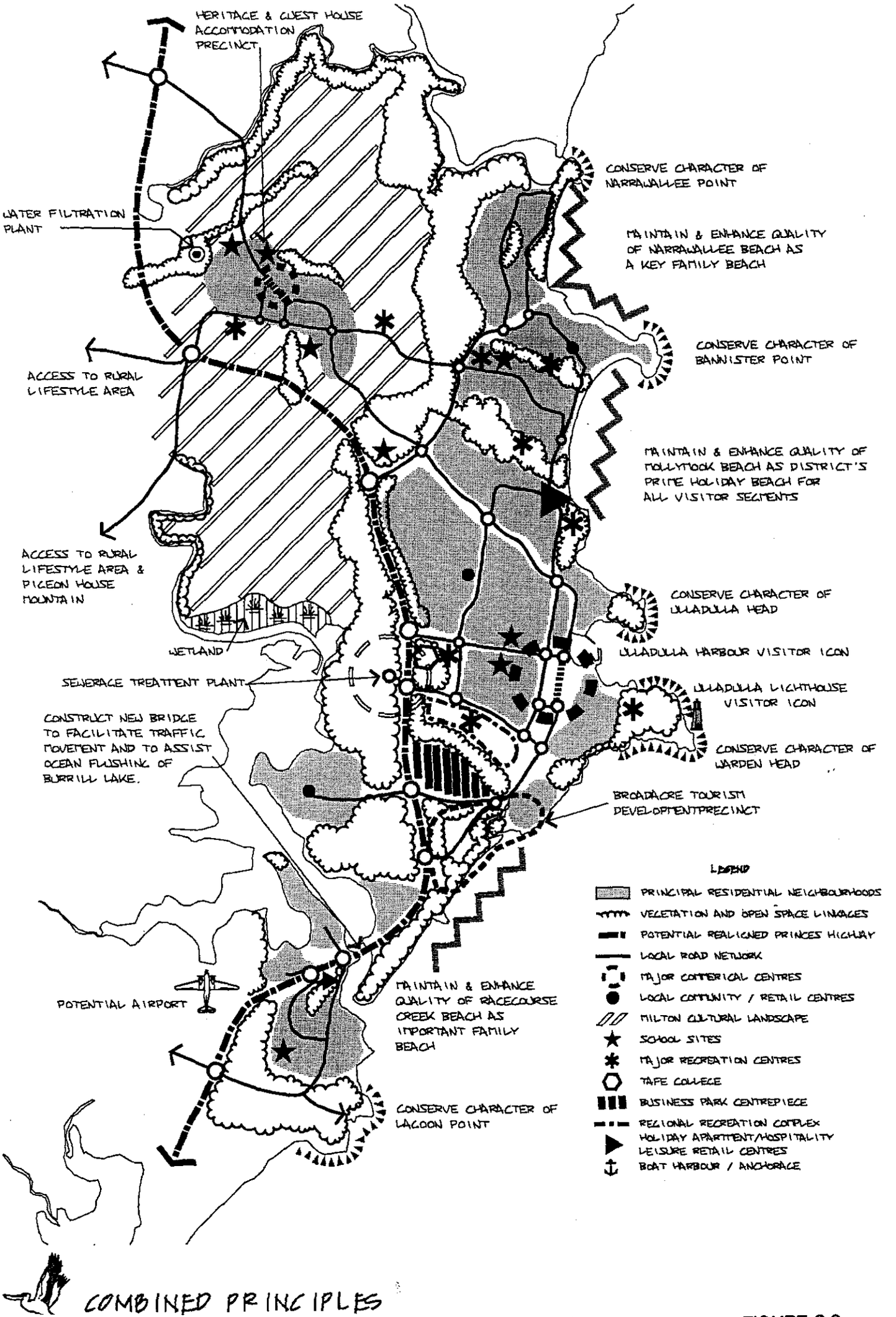
Sensitive urban and environmental design is concerned with visual meaning and functional efficiency. It does not depend on universal principles or national codes, but is grounded in local characteristics, needs and community aspirations, so much so that it is often difficult to notice, being distinguished by a natural fit between form and its context. Urban and environmental design manifests itself in many ways, but it almost always centres on the quality of the public realm.

Drawing on the work of the US urbanist, William Lyman Porter, a set of criteria for good urban and environmental design can be identified. Good urban and environmental design:

- demonstrates excellence in the design of buildings and urban spaces;

PRINCIPLES ACHIEVEMENT MATRIX

EXISTING PATTERNS & TRENDS *(Where are we now?: from Background Study)*	DEVELOPMENT PRINCIPLES *(Where do we want to be?: from Community Vision)*	STRUCTURE PLAN OBJECTIVES *(How will we get there?: from Council's planning team)*
1. Lifestyle: • Transition from holiday settlement to living community. • Relaxed coastal lifestyle. • Linking development threatening the identity & of urban villages. • Variety of residential environments.	**1. Keeping Our Lifestyle:** • Safeguarding the livability of villages. • Enjoying a relaxed, friendly & stimulating atmosphere.	**1. Maintaining Lifestyle Quality:** • Maintain & enhance unique identities of each urban village. • Create attractive residential/workplace/commercial centre environments. • Conserve key heritage values (urban & rural).
2. Physical Environment: • Unique balance of coast, forest & pasture. • Pressure for urban expansion on agricultural land. • Generally acceptable water & air quality. • Lacklustre quality of Ulladulla's built form.	**2. Balancing the Natural & Built Environments:** • Keeping the current landscape balance & environmental quality. • Safeguarding the identity & character of villages.	**2. Urban Form:** • Maintain open space between settlements. • Conserve key flora and fauna habitats & corridors. • Maintain & enhance water & air quality.
3. Local Economy: • Traditional industries in decline or undergoing major change.(eg dairying, fishing & forestry). • Dependence on highly seasonal tourism industry. • Slow take-up of industrial estate allotments. • Boom & bust building industry.	**3. Making Money Locally:** • Diversifying business & industry based on existing lifestyle. • Building on & protecting valued cultural assets.	**3. Sustainable Local Economy:** • Maintain Ulladulla Harbour as a working fishing port. • Maintain dairy farms as intact units. • Create a viable regional retail & service hub at Ulladulla. • Develop an attractive business park as centrepiece. • Provide for local enterprise nodes. • Facilitate agricultural diversification without undue subdivision.
4. Tourism & Hospitality: • Natural features of ocean & beaches represent major visitor attractions. • Family groups comprise main visitor segment. • Highly seasonal annual visitation pattern. • Lack of diversity in entertainment facilities.	**4. Sharing with Visitors:** • Developing tourism which maintains our lifestyle. • Attracting visitors who share our values about the special nature of Shoalhaven.	**4. Sustainable Tourism Industry:** • Development of heritage-based tourism at Milton. • Reduce dependence on caravans as major accommodation form. • Development of quality guesthouses & holiday apartments. • Development of Mollymook leisure retail/hospitality precinct. • Development of tourism in rural resource areas.
5. Local Transport Network: • Traffic congestion at peak holiday periods. • High dependence on private car/low bus patronage. • Incomplete off-road movement network. • Perceived lack of adequate parking at peak holiday periods.	**5. Moving Around the Area:** • Developing a more diverse & integrated transport system. • Developing a transport system that specifically meets the needs of older & younger people.	**5. Integrated Movement System:** • Development of by-pass for Milton-Ulladulla. • Development of pedestrian priority precinct in central Ulladulla. • Development of a road system conducive to bus routing. • Development of integrated off-road movement system.
6. Community Facilities: • Community facilities concentrated in Ulladulla & Milton. • Lack of community foci in some of the urban villages. • Perceived lack of adequate parking at peak holiday periods. • Lack of public meeting places (formal & informal).	**6. Maintaining a Supportive & Cooperative Community:** • Providing coordinated services & community facilities. • Recognising accepting and providing for the special needs of diverse community groups (eg youth & elderly).	**6. Equitable Community Facility Provision:** • Achievement of a critical population mass to sustain a higher threshold of community facility provision. • Access & equity in the provision & location of community facilities. • Creation of strong community foci in each urban village.



COMBINED PRINCIPLES

FIGURE 2.9

- distributes benefits widely in the community;
- produces environmental benefits;
- responds to local features, needs and aspirations;
- has relevance to the contemporary world;
- forges connections to the past; and
- leaves open the possibility for continuing adaptation and change.

The Role of Structure Planning in Urban and Environmental Design

It is not the role of the structure plan to be prescriptive and thus determine with some certainty the future quality of the district's urban and environmental design. Rather its role is to provide the structure or framework for the achievement of quality urban and environmental design. It will be the function of the following LEP and Development Control Plans to ensure that the vision for a better place is translated into three dimensional reality.

Section Three

LOCAL SUSTAINABILITY

Sustainability is a very complex issue; everyone aspires to it but cannot agree on how to define it. It is raised in this section of the plan because:

- there were many references to sustainability in vision responses
- the "vision to action" workshop resolved to have consultants address the issue
- the ILAP principles are intended to promote a more sustainable future
- there is a professional responsibility to address the issue through Agenda 21 and the National Strategy on Ecologically Sustainable Development (ESD).

Sustainability has global national and local dimensions. It is generally suggested that unless local communities undertake local action global issues are unlikely to be resolved. This structure plan is underpinned by the statement "thing globally - act locally".

3.1 SUSTAINABILITY PRINCIPLES

Despite arguments about definition the concept of sustainability can be expressed in terms of generally agreed principles. Table 3.1 tracks these from a global to a local perspective.

Table 3.1
Sustainability Principles: Global to Local Perspectives

Common Global Themes or Principles	National ESD Objectives	Integrated Local Area Management Goals
• intergenerational equity • intragenerational equity • conservation of biodiversity • the precautionary principle • *internalisation of* environmental costs of *development*	• to enhance community well being and welfare by following a path of economic development which safeguards the welfare of future generations • to provide for equity within and between generations • to protect biological diversity and maintain essential ecological processes and like support systems	• Social justice: the overlap between social and economic decision making • Supportive environments: the overlap between social and environmental decision making • Ecologically sustainable development: the overlap between environmental and economic decision making

3.2 Local Approach to Sustainability

Sustainability is both an approach or way of doing things and an outcome or goal towards which the community aspires and actively works. This structure plan has simply recognised that local sustainability can be expressed at any time by what this generation is prepared to pass on to the next and subsequent generations.

The structure plan represents what the Milton-Ulladulla community has expressed as its preferred future or in other words what it envisages leaving as a legacy for future generations. This concept would, of course, be refined over time as a more complete understanding of the consequences of local action emerges.

The process used to arrive at the structure plan has been an equitable and inclusive as possible. Figure 3.1 demonstrates how the principles of sustainability have been incorporated into the planning process.

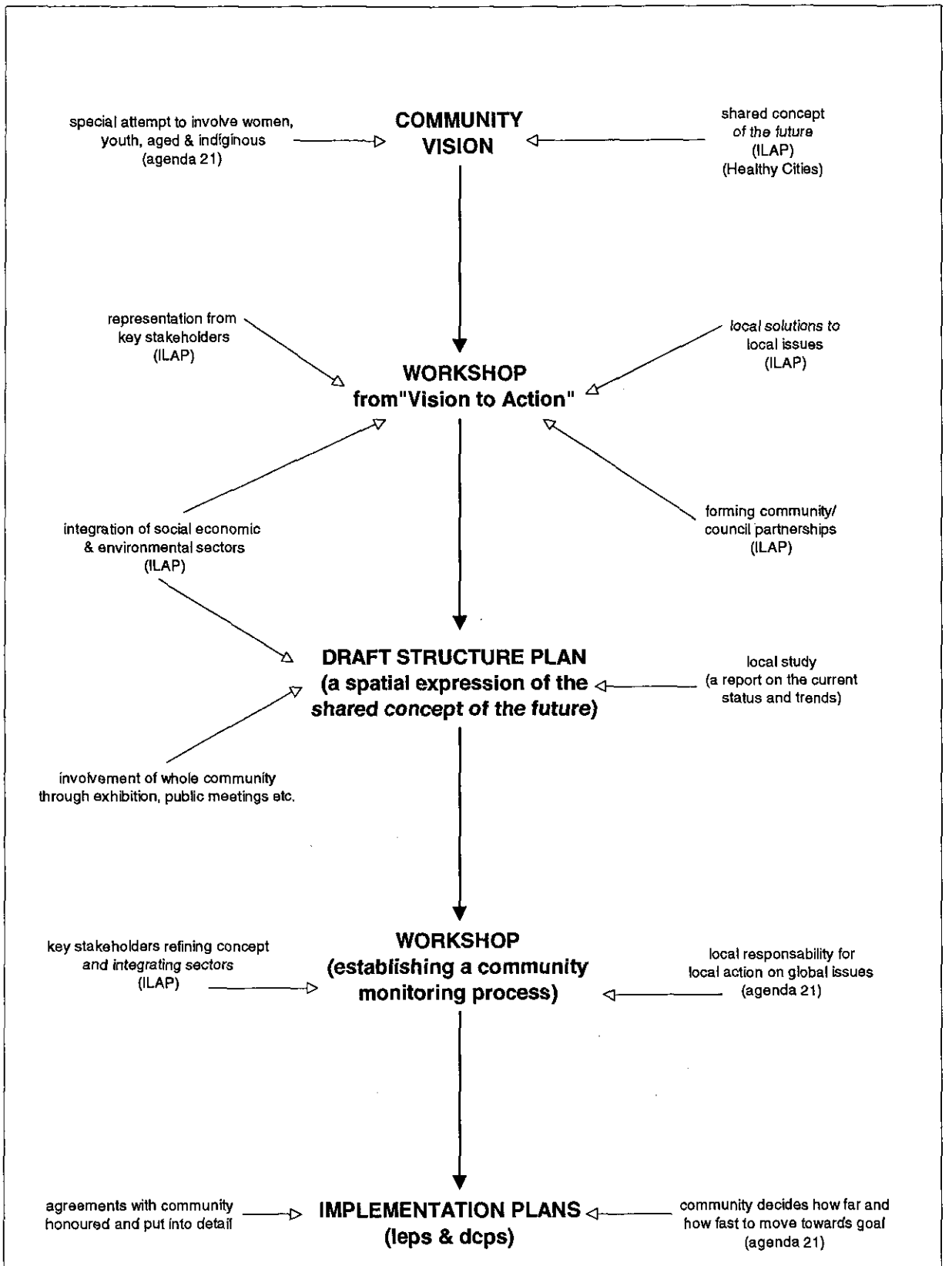
3.3 Local Action on Global Issues

To become more sustainable changes in attitudes and practices are necessary. Tables 3.2 to 3.9 show some potential local actions which can be incorporated into the structure plan and subsequent LEPs or DCPs to both meet the community's expressed aspirations and contribute towards solutions to global concerns.

The timing for implementation of these initiatives will depend on the willingness of the community to take up the challenge and the preparedness to explore new ways of achieving community well being without affecting the welfare of future generations. The following Tables show how equity between generations may be addressed.

Table 3.2 Conservation of Energy

Local Issues (from vision)	Potential Local Action
An integrated and socially responsive transport system	• encourage diversity to reduce car use • model to reduce travel times • a highway bypass • more local production of goods • link residential and workplaces • cycleways and walkways
Design new areas to enhance lifestyle	• solar orientation in subdivision design • insulate buildings • solar design of buildings • energy efficient fittings and appliances
Clean industry giving employment without lifestyle change	• an open leafy technology park • energy efficient tools and buildings • locate close to transport
A vibrant accessible and appealing town centre	• more compact centre to avoid transport between retail outlets • co-ordinated shop and street lighting • design for natural light and air flow • pedestrian priority in key areas • co-ordinated parking



PLANNING FOR LOCAL SUSTAINABILITY
THE CONSULT PROCESS

FIGURE 3.1

Table 3.3 Reduction of Greenhouse Gas Emissions and Ozone Depletion

Local Issue	Potential Local Action
Maintain clean and green holiday usage and a healthy coastal lifestyle	• heavy emphasis on landscaping • protect significant areas of urban bushland • provide shade in public areas • reduce private car use
Threat of sea level rises and climatic change with global warming	• avoid new areas below 2-3 metres AHD • care with design of infrastructure • gradually convert foreshores to open space • protect sand dune buffers

Table 3.4 Minimise Waste Generation

Long term solution to disposal of solid waste	• local recycling and re-use schemes • accessible waste transfer sites • composting of household waste • attention to local packaging • sustainable tip site management • alternative disposal technologies
Minimise odour generation and pollution of ocean and beaches	• upgrade sewage treatment facility • dual water supply in new areas • agricultural re-use scheme

Table 3.5 Conservation of Essential Life Support Systems and Ecological Processes

Local Issue	Potential Local Action
On-going community access to clean fresh water	• population growth within local water cycle capacity • domestic collection and water saving fittings • avoid polluting uses in catchments and storages • waste re-use schemes for non drinking use
Water quality in the ocean, estuaries and streams	• protect wetlands and seagrasses • avoid development near poorly flushed bays and creek entrances • revegetate creek lines • replace Burrill Causeway • sedimentation and pollution control devices • steep slopes remain vegetated • catchment approach to planning
Maintain air quality	• maximise vegetation • avoid heavy industry • avoid new residential areas in air drainage hollows

Local Issue	Potential Local Action
Continued agricultural use without subdivision	• avoid uses which would result in irreversible conversion of prime agricultural land • supply treated effluent • local production for local consumption • new ways of sharing land
Apparent depletion of fish stocks	• manage acid sulphate soil • control discharges to waterways • fishing industry continue to develop sustainable harvesting practices • avoid high usage in breeding areas • protect wetlands and seagrass areas • encourage tag and release in recreational fishing

The community also consider that resources such as the beaches, lakes, its cultural heritage and the outstanding local landscape are likely to be as highly valued by subsequent generations as they are by the current ones. Table 3.6 reflects this assumption.

Table 3.6 Valued Community Resources

Protection of waterways and foreshores as prime lifestyle and visitor assets	• maintain shoreline processes • public ownership in new areas • avoid overshadowing • careful choice of public access • retain views
Retain cultural heritage of the area	• protection of Aboriginal sites • provide for cultural tourism • protect Milton cultural landscape • enhance harbour area
Maintain high scenic quality for lifestyle and visitors	• improve landscape harmony in priority areas including CBDs • develop visual theme for each urban village • protect high quality and sensitive landscapes • manage green belts from scenic perspective • maintain farmland edge to Milton

The following table shows how equity within generations can be addressed.

Table 3.7 Access to Essential Services

Local Issue	Potential Local Action
Housing	• provide adequate housing options for all particularly disadvantaged groups • protect sites for specialist housing • encourage integrated housing design

Local Issue	Potential Local Action
Need for youth and aged facilities	• ensure open space is provided in design • locate some facilities in urban village areas • locate community facilities and recreation areas near transport routes and other services

The following table shows how conservation of biodiversity can be enhanced.

Table 3.8 Conservation of Biodiversity

Local Issue	Potential Local Action
Retention of natural bushland and lake ecology	• protect areas of threatened species habitat • protect special habitats such as the shoreline, rainforest, wetlands and seagrass areas • set aside significant areas of bushland to conserve representative sample of local fauna and flora • identify and protect links between bushland areas • manage harvesting in foreshores, estuaries and the ocean

The following table shows how the precautionary principle can be put into practice.

Table 3.9

Local Issue	Potential Local Action
Provide for growth without affecting environment or lifestyle	• protect suitable land for urban uses • avoid rural residential use on land suitable for urban use • balance employment generating uses with residential use • retain agricultural land resource
Avoid, mitigate or remedy potential impacts on the environment	• sewer all new urban areas • upgrade sewage treatment • minimise ocean outfall volumes • best practice effluent management for rural areas • limit population growth in sensitive catchments and subcatchments • develop small areas at a time to reduce sedimentation • rehabilitate degraded areas *Note: There are many other examples, these are just a sample*

The fifth principle relating to internalisation of environmental costs is an important one but its relevance at the structure planning stage is not easily explained. In a broader sense though, it is important that the community understand the potential economic and social burden on future generations of pursuing growth without thinking of long term costs and consequences.

3.4 PREDICTIVE MODELLING

Predictive modelling is one way of testing the likely impact of any proposed action. Modelling involves establishing a set of theoretical conditions which are thought to closely mirror natural processes.

Modelling can be used to predict changes against the existing situation or some preferred situation such as a sustainable future provided that the desired outcome can be quantified. The modelling process also helps to clarify what data needs to be collected to monitor sustainability.

Traffic Modelling

The TRACKS model has been used to trial traffic volumes on existing and proposed roads in the Milton-Ulladulla area. The accuracy results are considered to be consistent with the need for data at a structure planning scale. Further discussion is documented in the background study.

Water Quality Modelling

Unlike traffic planning the research data available to run accurate water quality models is generally inadequate even at structure plan scales.

Some modelling of the Burrill Lake and Narrawallee catchments has taken place to predict rural residential impacts.

Task of data specific to these catchments and high variability in data from other catchments have hindered progress and made conclusive results elusive.

The Council is working with the EPA and the developers of the LAKEQUAL Model to model the potential impacts of new urban development proposed by the structure plan.

The regular monitoring of water quality has been redesigned to measure parameters which can be used directly in the model.

The modelling will be incorporated into the workshop on monitoring to be held in late November 1996.

More specific data is also being collected by ERM Mitchell McCotter on water quality of wetlands adjacent to the proposed Narrawallee residential expansion. It is expected that results may be available in six months time.

Section Four

STRATEGY COMPONENTS

The development strategy or structure plan makes provision for a range of urban activities consistent with Milton-Ulladulla's anticipated future size (Figure 3.1). These include: residential areas; retail and commercial areas; tourism and hospitality facilities; industrial areas; community facilities; transport; open space network; rural resource areas; and utility infrastructure.

4.1 RESIDENTIAL AREAS

4.1.1 Demand Trends

The key determinants of the demand for residential land and facilities are population growth, dwelling occupancy; and household size.

Population Growth

By and large, the demand for urban land is directly proportional to size of the population and the consequent demand for residential purposes. In Milton-Ulladulla this has tended to represent between 50% and 60% of all urban land. Recent initiatives designed to encourage higher residential densities and a more efficient use of land are unlikely to have a significant influence on this figure. However, residential land will tend to accommodate more people in the new urban areas than has occurred in the past. As a result, assuming growth trends are constant, land will, in all probability, be consumed at a slower rate than in the past.

The reason for the proportion of urban land allocated to residential use remaining constant in the future is based on the assumption that higher residential densities do not generally result in increased land needs for associated facilities and services. Facilities such as shops, schools, health and welfare, open space and roads would tend to occupy the same amount of land, but will be more efficiently utilised. As a result, the land demand generated by new residential development will be similar to that in the past, and so land demand forecasts are likely to correlate with population forecasts in the same way as in the past.

Dwelling Occupancy Trends

Another major determinant of urban land demand is dwelling occupancy. Milton-Ulladulla started to become a significant urban area as a result of outsiders deciding to establish a holiday home near the beach and inland waterways. In 1971 the proportion of holiday homes was 43.0% of all dwelling stock. This declined to 31.4% in 1991 and the trend continues downward. On current trends, it is anticipated that by 2011 the proportion of holiday homes would reach a critical threshold of 20%, at which point it would continue.

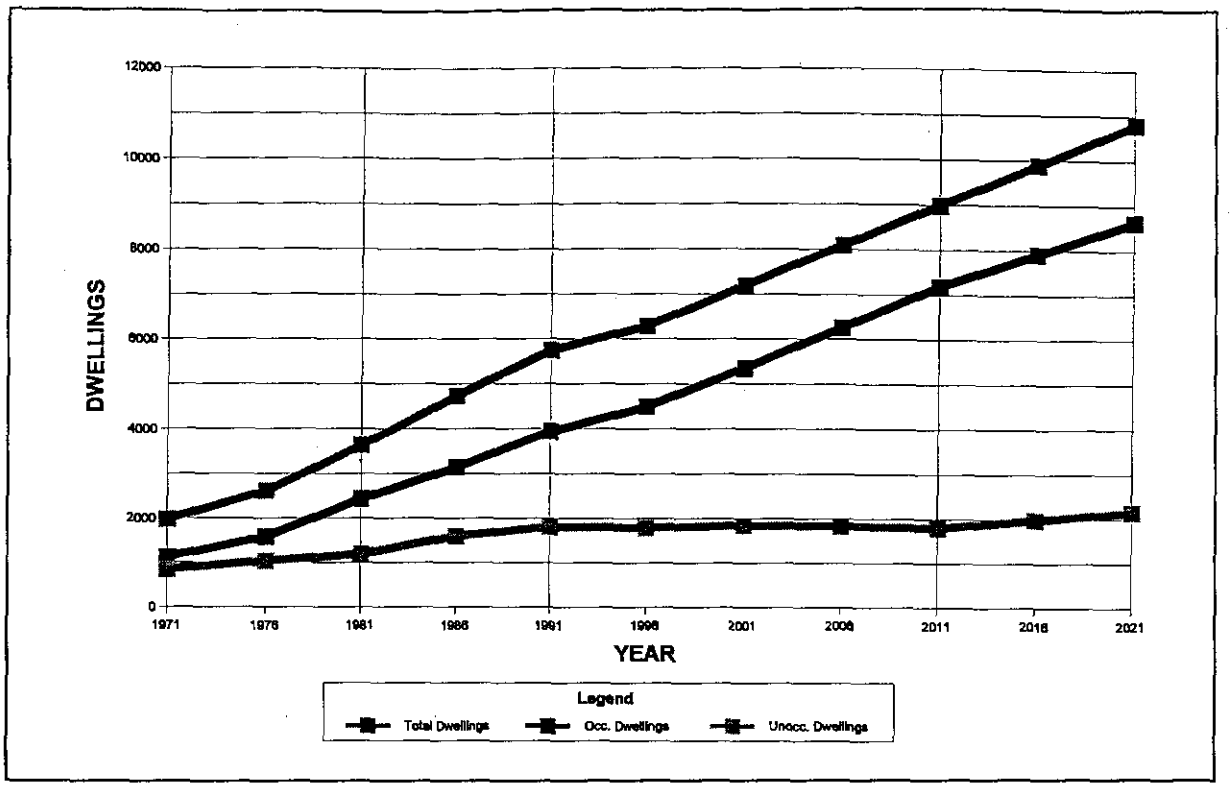


Figure 4.2
MILTON-ULLADULLA HOLIDAY HOME PROJECTIONS

Household Size Trends

Coupled with dwelling occupancy is household size, that is the number of people per occupied dwelling. Household size has declined dramatically from an average of 3.1 in 1971 to an average of 2.5 in 1991.

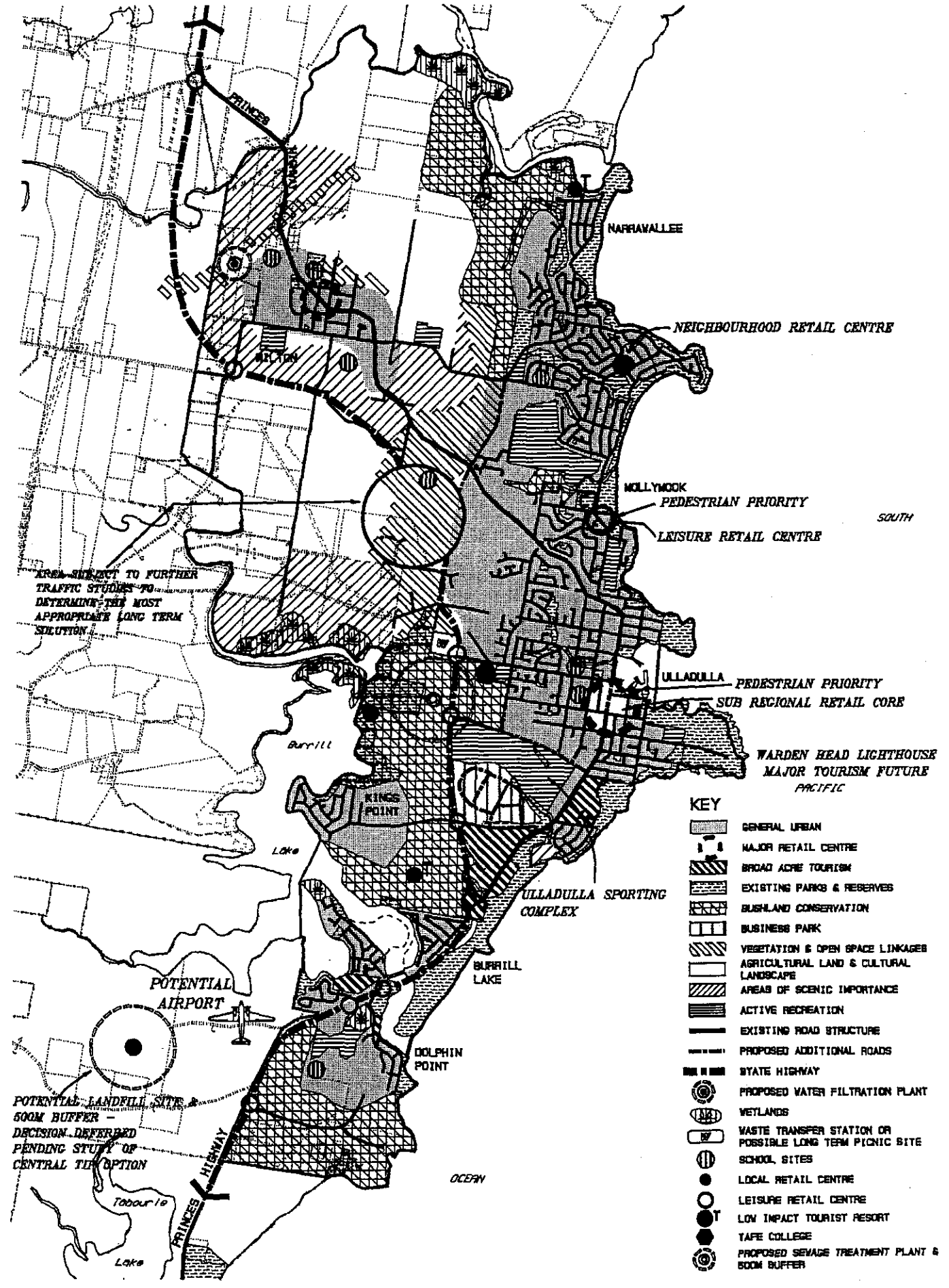
Dwelling Growth

Three key factors impinge on the demand for dwellings:

- A constant rate of population growth, as has been projected, means a larger numerical increase each year. Correspondingly, the number of dwellings needed each year grows.

- The population of Milton-Ulladulla is aging, resulting in smaller households and therefore lower occupancy rates, so that even without population growth, more dwellings would be needed to house the same population.

- Experience has demonstrated that increased affluence trends to lead to smaller households and therefore a lower occupancy rate, which in turn requires a larger number of dwellings to house the same number of people. Related to this is the fact that increased affluence leads to increased consumption of resources, including land. Therefore initiatives to increase dwelling densities may be offset to an unknown degree by the ability to pay for larger dwelling sites, assuming that purchasing power continues to grow relative to the cost of land and housing.



STRUCTURE PLAN

FIGURE 3.1

On this basis it is anticipated that the total number of dwellings will increase from the 1995 level of 6,293 to 10,790 by the year 2021. Correspondingly Milton-Ulladulla's permanent winter population is projected to increase from an estimated 10,890 in 1995 to 19,690 by 2021.

4.1.2 Development Objectives

The following objectives would form the basis of new residential development:

- Provide for a 'whole of life' approach to residential land use;
- Optimise the location of housing types relative to need;
- Foster the adoption of innovatory and environmentally aware standards from the datum of existing standards and policies;
- Respect intrinsic land characteristics and capability;
- Encourage diversity and interest in housing environments;
- Maximise opportunities for solar efficiency and minimise adverse climatic impacts; and
- Minimise traffic impact on residential amenity; and
- Minimise rural lifestyle residential development adjacent to urban areas.

4.1.3 Development Principles

The following principles would guide future residential development:

- Provide sufficient flexibility for the market to determine housing types within acceptable environmental and infrastructure capacities;

- Maximising population densities in the district's villages by increasing the proportion of medium density housing near centres, in areas of level terrain and near major open spaces;

- Provide for a variety of subdivision forms ranging from grid iron on level land (or where a heritage theme is considered important) to contour responsive serpentine forms;

- Provide for the majority of dwellings to be orientated to the north; and

4.1.4 Strategy Provision

The strategy identifies six key areas for residential expansion:

- West of Narrawallee;
- West of Mollymook;
- West of Milton;
- West of Ulladulla;
- East of Kings Point; and
- South west of Dolphin Point.

Other areas include South Ulladulla and the potential uban infill areas in Ulladulla.

Table 4.1
MAJOR RESIDENTIAL AREAS

Residential Area	Existing Vacant Lots *	Potential Lots Zoned *	Additional Potential Lots	Total Developable Lots
1: Narrawallee West	227	37	170	434
2: Mollymook West	115	614	59	788
3: Milton West	42	73	186	301
4: Ulladulla West	86	603	438	1127
5: Kings Point East	100	20	470	590
6: Dolphin Point South	20	170	175	365
7: South Ulladulla	29	42	182	253
8: Ulladulla Urban Infill	173	131	99	403
Total:	792	1690	1779	4261

*Note: Includes undeveloped/potential lots within existing residential areas

4.1.5 Rural Residential

About 13% of the current City population live in the rural area. Some do so because of a working relationship with the land, whilst others simply to enjoy the benefits of a rural lifestyle.

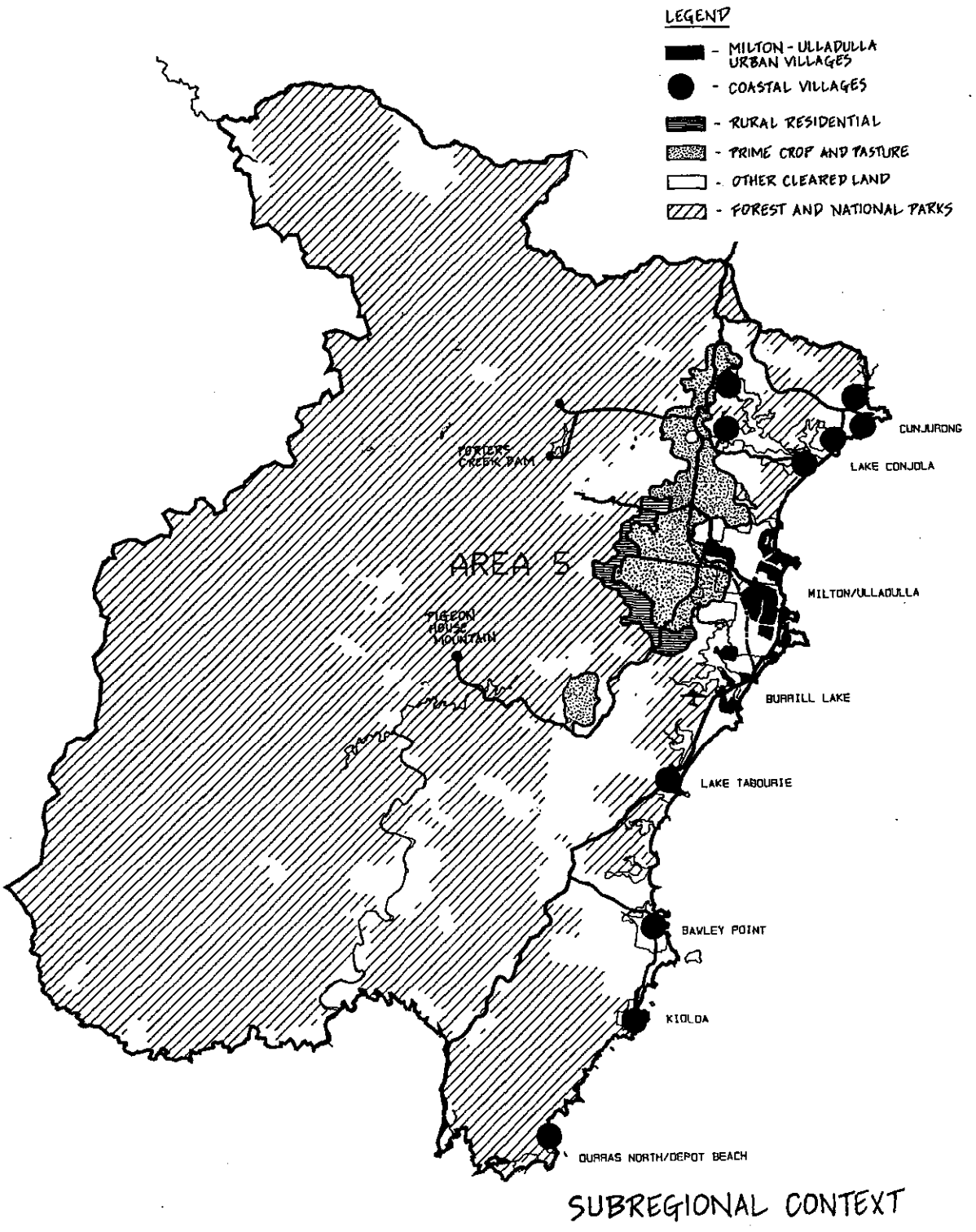
The Council has a policy of continuing to provide rural lifestyle opportunities as an alternative to urban and village lifestyles, provided the use can be achieved in a sustainable, cost efficient and socially acceptable way. The strategies developed to implement the policy involve the identification of rural lifestyle areas. Suitable land is defined through sieve analysis.

The draft Shoalhaven Rural Plan provides for a 1,000 plus hectare rural lifestyle area, four kilometres to the west of Milton (Figure 4.3). Two further areas at Pointer Road and Woodburn Road will be investigated in a five year review of the plan. It is expected that a density of about one lot per five hectares of land would be sustainable.

The Urban/Rural Fringe

There has been a tendency in the past to locate rural residential development on the fringe of urban areas. A number of landholders in the Milton/Ulladulla area have approached Council to continue this practice.

If rural residential development is to be provided in this way then the principles espoused by the community such as: the separation between villages, the protection of bushland and the protection of agricultural land and landscape would be compromised. If these principles were to be considered expendable then it would be wiser to provide for more



SUB REGIONAL CONTEXT

FIGURE 4.3

urban land than rural residential. Urban development has lower unit costs and higher benefits in all sectors (social, economic and environmental).

The conversion of rural residential to urban is difficult to achieve in most circumstances. Thus the continuation of rural residential development on the urban fringe is considered to be sub-optimal planning practice.

Development Policies

The following policies apply to rural residential development:

- Continue to provide rural residential opportunities outside Milton-Ulladulla Structure Plan area.
- Ensure green belt is not dominated by rural residential development.
- Plan for a "hard" edge between the urban and rural areas.

4.2 RETAIL AND COMMERCIAL AREAS

4.2.1 Retail and Commercial Trends

Retail

Currently Milton-Ulladulla acts as the retail focus for Area 5. With its total of 25,375 m2 of retail floorspace, it accounts for 87.7% of the total retail floorspace of the subregion, which currently totals 28,920m2. In accord with the population projections for Area 5 the demand for retail floorspace is projected to increase to 47,000 by the year 2021. Of this 41,220m2 is anticipated to be located in Milton-Ulladulla (Table 4.2 and Figure 4.4). On this basis Ulladulla's CBD would equate in size to the current Nowra CBD (excluding Nowra Fair).

Commercial

Currently Milton-Ulladulla has a total of 6,248m2 of non-retail commercial floorspace. Non-retail commercial facilities in the balance of Area 5 is negligible. In accord with the retail floorspace projections, non-retail commercial floorspace in Area 5 is projected to increase to 10,340 by the year 2021. Almost all of this is anticipated to be located in Milton-Ulladulla (Table 4.2).

Table 4.2
RETAIL AND COMMERCIAL FLOORSPACE PROJECTIONS

Indicator	1991	2001	2011	2021
Area 5: Permanent Winter Population	13,960	18,300	22,500	26,100
Area 5: Peak Summer Population	31,400	40,800	51,000	60,700
Area 5: Retail Floorspace	28,920	33,000	40,500	47,000
Area 5: Commercial Floorspace	6,300	7,500	9,200	10,700
Milton-Ulladulla: Retail Floorspace	25,375	28,900	35,500	41,200
Milton-Ulladulla: Commercial Floor space	15,680	17,900	22,000	25,500

Note: Commercial Floor space includes commercial & government offices & hospitality services (eg cafes, restaurants)

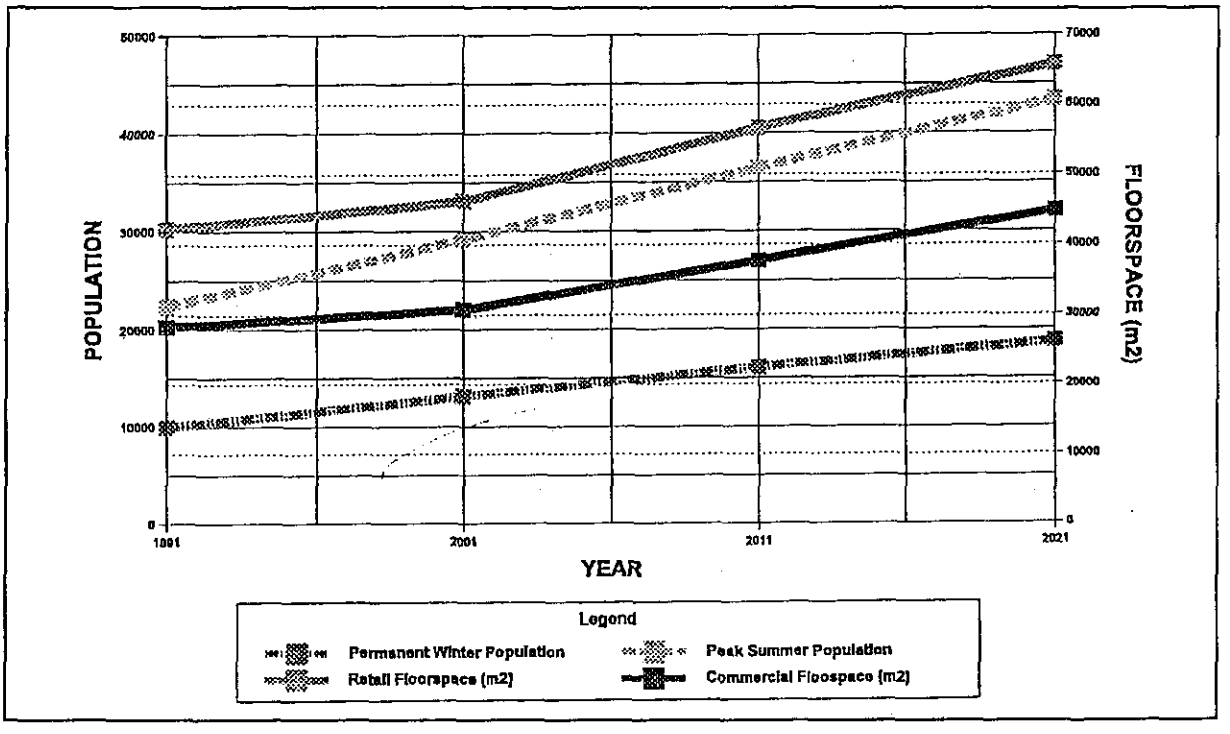


Figure 4.4
AREA 5 RETAIL AND COMMERCIAL FLOOR SPACE PROJECTIONS

4.2.2 Development Objectives

The development of Milton-Ulladulla's retail structure would observe the following objectives:

- Maintain the primacy of Ulladulla as the regional shopping centre;
- Maintain Milton as a secondary retail centre that acts as the retail centre for its local catchment, the rural lifestyle area to the west; and acts as a heritage theme retail centre for visitors;

- Develop the Mollymook 'golden triangle' as a leisure retail centre; and

- Maintain and develop a hierarchy of neighbourhood and local retail centres to service the needs of the resident and visitor populations.

4.2.3 Development Principles

- Develop the Ulladulla CBD retail centre as a one-stop, pedestrianised shopping centre, whilst recognising its current polarised function between the northern food and specialty outlets and the southern household and durable goods retailing;

- Encourage the development of a retail major (discount department store) to enhance the attractiveness of the Ulladulla CBD as a regional centre;

- Develop Milton as a heritage themed centre linked to restaurants, coffee shops, galleries and other hospitality services;

- Develop the Mollymook 'golden triangle' area as a small scale leisure retail centre with associated cafes and other hospitality services;

- Maintain the Mollymook neighbourhood shopping centre more or less at its current size;

- Develop small scale local centres, in association with local community facilities, to meet the retail needs of the resident and visitor populations in the expanding residential areas.

4.2.4 Strategy Provision

The strategy makes provision for the following retail/commercial centres:

- Ulladulla CBD;
- Milton centre;
- Mollymook neighbourhood centre;
- Mollymook leisure retail centre;
- West Ulladulla local retail centre
- Kings Point local retail centre;
- Burrill Lake local retail centre

The details of the retail, associated commercial and parking demand is summarised in Tables 4.3 and 4.4.

Table 4.3
MILTON-ULLADULLA RETAIL FLOOR SPACE PROJECTIONS

Retail Centre	1991	2001	2011	2021
Ulladulla CBD	20,260	22,400	26,500	31,000
Milton	2,180	2,500	3,000	3,500
Mollymook	2,020	2,500	4,000	4,500
Local Centres	1,115	1,500	2,000	2,200
Total	25,375	28,900	35,500	41,200

Table 4.4
RETAIL AND COMMERCIAL CENTRES (Potential FLOOR SPACE)

Retail/Commercial Centre	Retail FLOOR SPACE m2	Commercial FLOOR SPACE m2	Parking Space Demand
Ulladulla CBD	31,000	21,100	2,000
Milton Centre	3,500	2,200	220
Mollymook Neighbourhood	2,500	600	120
Mollymook Leisure Retail	2,000	1,200	115
West Ulladulla Local Centre	1,000	200	45
Kings Point Local Centre	200	0	10
Burrill Lake Local Centre	1,000	200	45
Total	41,200	25,500	2,555

4.3 TOURISM AND HOSPITALITY

4.3.1 Tourism Trends

The following trends will tend to influence the development of tourism and hospitality in Milton-Ulladulla:

- Growing demand for nature-based holiday experiences;
- Growing demand for soft adventure holidays;
- Growing demand for culture based tourism;
- Reduction in demand for traditional motel accommodation, particularly that located adjacent to major highways;
- On-going demand for budget self-catering accommodation; and
- Growing demand for authentic personalised quality accommodation..

4.3.2 Development Objectives

- Give the needs of tourism and hospitality a high priority in land use planning, particularly in relation to strategic sites adjacent to key natural attractions;
- Provide for a range of tourism experiences that are authentic and enriching;
- Ensure that the development of tourism does not exceed the ability of the resident community to happily accept the seasonal influx of visitors.

4.3.3 Development Principles

- Allow for and encourage tourism developments that give visitors a greater experience of Milton-Ulladulla and increase the economic base of the area;
- Develop a series of tourism precincts that have a particular focus, yet are fully supported by a range of ancillary facilities and services;
- Develop district themes for the area's key tourism precincts: Mollymook/Narrawallee, Ulladulla CBD/harbour; Burrill Lake/Dolphin Point and Milton;
- Ensure that the development of tourism does not exceed the carrying capacity of the district's natural attractions.
- Direct broadacre tourism development to the south Ulladulla area.

4.3.4 Strategy Provision

The strategy generally provides for a higher priority for tourism and hospitality in the district. This is particularly the case in the nominated tourism precincts (Table 4.5).

Table 4.5
TOURISM AND HOSPITALITY FACILITIES

Locality	Attractions	Accommodation	Hospitality	Support Facilities
Milton	*Heritage* Cultural Landscape	*B&B/Guesthouses*	*Cafes & Heritage* Restaurants	*Tourist Display* Board
Narrawallee	Beaches	Low Impact Resort Holiday Houses	Beach side Cafe	Signage
Mollymook	Beaches & Golf Course	Holiday Apartments	Restaurants Beach side-Cafes	Signage

Locality	Attractions	Accommodation	Hospitality	Support Facilities
Ulladulla: CBD	Harbour & Lighthouse	Holiday Apartments	Restaurants Wharf side Cafes	Tourist Information Centre Lighthouse Interpretive Centre
Ulladulla: South	Beaches Holiday Amusement Area	Holiday Cabins Caravan Parks	Beach side Cafes	Signage
Kings Point	Lake & Forest	Holiday Houses	Shop/Cafe	Signage
Burrill Lake	Beaches	Holiday Cabins Caravan Parks	Beach side Cafes	Tourist Display Board
Dolphin Point	Beaches	Holiday Cabins Guesthouse	Beach side Cafes	Signage

4.4 INDUSTRIAL AREAS

4.4.1 Industrial Trends

Industry in the Milton-Ulladulla area has tended to service the needs of the local population and has broadly focused on automotive, marine and housing construction activities. Industrial land is scattered in pockets of varying size throughout the district. The design standard of existing industrial areas tends to be poor. Currently the demand for industrial land is low.

4.4.2 Industrial Park Requirements

The development of an industrial park requires the maintenance of a number of locational and siting conditions over a significant period of time. Locational parameters tend to be polarised between proximity to certain source elements and relative remoteness from other factors. siting parameters primarily focus on the physical attributes of the site, together with access to transport and utility services.

Location Parameters

- ***Proximity to Markets:*** This is a major consideration, especially in the case of industrial activities with a strong population-servicing role. This is particularly the case in Milton-Ulladulla.

- ***Proximity to Sources of Raw Materials:*** This is an important factor in the location of heavy resource based industries such as an aluminium smelter. However, it is not an important factor in the Milton-Ulladulla context.

- ***Proximity to Workforce:*** Access to male and female workers with a range of skills and availability is an important determinant of industrial park location. The growing prevalence of part time employment in a range of industrial sectors makes this an increasingly important factor.

- ***Proximity to Industrial and Commercial Networks:*** The strong nexus that small scale industry has with other forms of manufacturing and supporting service industries makes this a highly significant locational factor.

- ***Relative Remoteness from Residential Development:*** Whilst an industrial park needs to be located in relative proximity to a potential workforce, current socio-environmental values require that it not be located on the doorstep of major residential areas. Residents are sensitive to the environmental downside of certain industrial and commercial activities such as noise, odours and visual forms inconsistent with residential areas.

- ***Relative remoteness from Areas of High Scenic Value:*** Although a pleasant landscape setting is considered desirable for an industrial park, the scale and from of traditional industrial development is generally inconsistent with the need to conserve areas of outstanding natural beauty. Such areas represent the key resource of tourism, the major economic motivator of Milton-Ulladulla.

The advent of information technology and the increasing potential for business and industry to interact with source material locations, product markets and industrial and commercial networks through the medium of cyberspace, is tending to reduce the importance of real space. However, space and location within that space remains an important consideration with regard to low technology and high bulk activities.

Siting Parameters

The following siting parameters are considered to be relevant in the Milton-Ulladulla context:

- ***Size:*** The site should be sufficiently large. Experience in developing countries demonstrates that, taking into account development and operational costs, the desirable minimum site area for most types of industrial parks is of the order of 12 hectares. However, in terms of production and administration, the optimum size tends to be in the vicinity of 40 hectares. According to French surveys, some 3% of industrial parks have a total site area within the range 30-50 hectares. Experience in the UK indicates that approximately 50% of industrial parks have an area of about 40 hectares (Lukovitch and Colman 1992).

- ***Transport Access:*** Road access to the industrial park should be direct from an urban arterial road. Sight distances at the point of access should be at least 100 metres, preferably 200 metres. Movement into and out of the park should not impinge in any way on the amenity of the residential areas.

- ***Access to Service Utilities:*** Access to an adequate treated water supply; high voltage electricity; Telecom/Optus networks; and a reticulated sewerage system are all important factors in the siting of an industrial park. Access to a reticulated supply of natural gas is also an advantage. Access to an existing water quality control facility or a suitable area of land in which such a facility can be established is an important consideration for industrial activity location.

- ***Access to Community Facilities:*** Access to certain community facilities is considered to be an increasingly important factor, given the changing structure of society. Such facilities include active and passive recreational areas, health facilities, child care and a local shopping centre.

- ***Visibility:*** For marketing purposes the industrial park should have a high degree of visibility from major transport modes, such as highways. A clear address point is considered essential to the viability of the park. It is crucial that the section of the park fronting the access highway be effectively landscaped to maximise visibility and that the built form is designed to a high standard of finish. Good visibility is also an important security consideration.

- ***Tree Cover:*** In association with 'visibility', tree cover is an important aesthetic adjunct to the park's setting. Since the majority of industrial enterprise managers tend to prefer cleared sites, it is crucial that remnant vegetation be left in significant stands within the park, together with a significant buffer adjacent to the park's periphery.

4.4.3 Development Objectives

- Provision of a range of industrial development options that cater for a spectrum of industrial uses that range from heavy fabrication and assembly to storage and information technology based activities;

- Consolidate the existing scatter of industrial land, much of it operating on existing use rights;

- Provide for the needs of start-up industry either in the form of small allotment or as leasable incubator industrial units; and

- Provide for the needs of low impact industry within the context of mixed development.

4.4.4 Development Principles

- Development of an attractive industrial/business park that would act as the flagship for the district to attract new industrial activities;

- Integrate the industrial/business park with the adjacent active recreational complex;

- Provide road access to the industrial park direct from Kings Point Road, an urban arterial road. Sight distances at the point of access should be at least 100 metres.

- Provide a range of lot sizes from 1,000m2 to 5,000m2 within the 40 hectare industrial/business park;

- Maintain sufficient buffers between mainstream industry and residential use (>50m).

- Provide water quality control ponds either within the industrial areas or immediately adjacent to them;

4.4.5 Strategy Provision

The strategy makes provision for the industrial areas in the current key industrial locations in Ulladulla and Milton that should be adequate for some 20 years (Table 4.6). The major additional industrial land is 20ha to the west of the current Ulladulla Industrial Estate.

Table 4.6
SUPPLY OF INDUSTRIAL LAND

Locality	Zoned Developed	Zoned Undeveloped	Proposed Additional	Total Available	Total
Deering Street	1.66ha	1.67ha	0.00ha	1.67ha	3.33ha
Camden/St Vincent Street	6.55ha	5.32ha	0.00ha	5.32ha	11.87ha
Princes Highway	6.31ha	4.01ha	0.00ha	4.10ha	10.32ha
Ulladulla Industrial Park	9.13ha	9.00ha	20.00ha*	29.00ha	38.13ha
Milton Industrial Area	1.35ha	0.81ha	1.66ha	2.47ha	3.82ha
Total	25.00ha	20.81ha	21.66	42.56	67.47ha

Note: Current industrial activities operating under existing use rights are not included.

4.5 COMMUNITY FACILITIES

4.5.1 Provision Status

The greatest gap in local community facility provision is in the Lake Entrance Villages of Kings Point, Burrill Lake and Dolphin Point. However these villages are less than 10 minutes drive from the Ulladulla CBD.

4.5.2 Development Objectives

- ***General:*** Recognise the social justice principles of equity and access for all residents of Milton-Ulladulla and ensure accessibility to community facilities and services is maximised regardless of income, price, employment opportunities, access to transport, physical disability, language, race and other prejudices and impediments;

- ***Education:*** Ensure that there are facilities and services in place to allow people of all ages, backgrounds and locations in the district to participate in educational endeavours to meet their social, vocational or personal development needs;

- ***Health Services:*** Work towards the highest standard of health achievable within the community through the provision of an optimal range of effective, accessible and equitable facilities and services;

- ***Community Support:*** Provide support services to children, youth, the aged, the disabled and other members of the community requiring special support;

- ***Law and Order:*** Provide for a range of facilities and services that provide protection to the community and develop and maintain a built environment that facilitates self-policing;

- ***Culture and Entertainment:*** Foster creative ways of enriching, celebrating and developing local communities to the benefit of the whole of Milton-Ulladulla;

- ***Religious Facilities:*** Ensure that members of all religious traditions are given the opportunity to practice their faith;

- ***Fire Management:*** Provide a range of fire management facilities and services and the development of a built environment that is responsive to the dangers of bush fire in the district; and

- ***Cemeteries:*** Provide for a range of burial options that meet the social and spiritual needs of the community.

4.5.3 Development Principles

- Community facilities should, for the most part, be developed in a hierarchy of clusters of mutually dependent facilities.

- Community facilities should be located to provide the most equitable access to members of the community.

- Proximity to retail and other commercial facilities would be an advantage to most community facilities.

- Community facilities should have adequate access from collector roads.

4.5.4 Strategy Provision

For the purposes of community facility provision the district is considered both as a whole and as separate villages. The proposed allocation of facilities, which is summarised in Table 4.7, are listed below:

- ***Education:*** Provision of a new high school at Milton and primary schools at Mollymook and Dolphin Point. Maintain libraries at Ulladulla and Milton.

- ***Health Services:*** Maintain and expand Milton Hospital to meet the growth in demand in the subregion. Provide new health centres in the expanding residential areas to the west of Ulladulla and in the Lake Entrance Villages to serve the needs of the local communities.

- ***Community Support:*** Maintain and where necessary expand the community support facilities at their current locations. Provide child care facilities in Mollymook and West Ulladulla.

- ***Community Security:*** Maintain and where necessary expand the courthouse and police station at their respective locations in Milton and Ulladulla.

- ***Culture:*** Maintain and expand cultural facilities in the Ulladulla CBD and Milton. Evaluate the feasibility and impact of a cultural/entertainment facility in Mollymook.

- ***Religious Facilities:*** Maintain and facilitate the expansion (where necessary) of existing churches and allocate community land for potential churches and other spiritual facilities in the expanding residential areas to the west of Ulladulla and the Lake Entrance Villages.

- ***Fire Management:*** Maintain and where necessary expand the fire management services of the district and ensure that bushfire prevention measures are adopted in all forms of development adjacent to the urban fringe.

- ***Cemeteries:*** Maintain and embellish the Sandridge Cemetery which has the capacity to meet the needs of the district for over 20 years.

Table 4.7
ALLOCATION OF COMMUNITY FACILITIES

Facility	Milton	Mollymook	Ulladulla	Lake Entrance Villages
Education	2 Primary Sch 1 Prim/High Sch 1 High Sch 1 Library	1 Primary Sch	1 Primary Sch 1 High Sch 1 Library	1 Primary Sch
Health	1 Hospital	1 Health Centre	1 Health Centre 1 Ambulance Stn	
Community Support	1 Child Care	1 Child Care	1 Youth Centre 1 HACC Centre 2 Child Care	1 Child Care
Law & Order	1 Court House		1 Police Station	
Culture & Entertainment	1 Theatre		1 Civic Centre 1 Cinema Twin	
Religion	4 Churches	1 Church	5 Churches	1 Church Site
Fire Management	1 Bushfire Station		1 Town Fire Stn	
Cemeteries		1 Cemetery		

4.6 RECREATION AND OPEN SPACE

4.6.1 Recreation Trends

For a number of years the local community has considered it has suffered from low recreational facility provision. This is partially endorsed by an assessment of standards. However, the current shortfall has the potential to be made more acute should insufficient facilities be provided in the future.

Changing Use Patterns

The usage patterns for recreational facilities tend to vary over time due to changing societal trends. The use of passive recreational open space areas are not generally associated with major shifts in emphasis due to the fact that such areas offer facilities, for which demand remains relatively constant, such as picnic/BBQ areas and scenic views. However, for active recreational open space there are often perceived to be uncertainties regarding demand for particular sports, rather than for sporting facilities in general. In the future there could be greater demand for sports such as basketball, baseball and even ice hockey. Because of these uncertainties, it is essential that a degree of flexibility be retained in sports field provision, so as to be in a position to respond to changing needs and aspirations in the future.

Sports Facility Standards

As a starting point for matching supply with demand, a set of theoretical standards were developed drawing from a number of relevant sources. These included the NSW Department of Sport and Recreation, the South Australian Urban Land Trust and the former National Capital Planning Commission (NCDC)(Table 4.8). However, since Milton-Ulladulla is the centre of a popular holiday area, an adjustment to the provision is considered justifiable to take account of peak season visitors. However, not all recreation facilities attract additional usage from visitors. Only the following five facilities are considered to be attractive to the average visitor during the summer and the spring and autumn sub-peaks: golf, lawn bowls, squash, swimming pools and tennis courts.

Matching Supply with Demand

The analysis of current supply and projected demand indicates that there will be significant future shortfalls in: basketball, cricket, hockey, lawn bowls, polocrosse, rugby league and union, soccer, squash and tennis (Table 4.8).

4.6.2 Development Objectives

- Provide and maintain a quality range of safe, attractive and affordable recreation and leisure facilities, which serve a suitable mix of multi-purpose, passive and active recreation needs of the community;

- Provide an open space system that links the ocean with the rural hinterland and provides a resource for passive recreation within the urbanised areas;

Table 4.8
SUPPLY AND DEMAND FOR RECREATION FACILITIES

Sports Facility	Standard	Demand	Supply	Shortfall
Athletics Track (400m)	*NAS*	1	0	1
Australian Rules Football (ovals)	1:20,000	1	0	1
Basketball (courts)	1:1,800	10	2	8
Cricket (ovals)	1:2,500	7	3	4
Golf (18 hole course)*	1:30,000	1	1	0
Hockey (fields)	1:2,500	7	0	7
Lawn Bowls (greens)*	1:2,000	9	5	4
Netball (courts)	1:1,800	10	12	0
Polocrosse (fields)	*NAS*	3	0	3
Rugby League/Union (fields)	1:3,000	6	2	4
Soccer (fields)	1:5,000	4	2	2
Squash (courts)*	1:2,500	8	4	4
Swimming (50 metre pool)*	1:17,500	1	1	0
Tennis (courts)*	1:1,800	11	6	5

Note: (1) NAS: No suitable standard
(2) Demand equates to 2021 projected population demand (Milton-Ulladulla: 19,690)
(3) Compensating adjustments made to: golf course, lawn bowls, squash, swimming pool & tennis courts.
(4) Demand figure registered if within 5% of standard.

4.6.3 Development Principles

- Provide a centralised active recreation centre that would cater for the full spectrum of sporting activity;
- Provide local active and passive recreational facilities to meet the needs of local communities;
- Develop an open space network that follows the district's ridges and creek lines and provides links between the neighbourhoods.

4.6.4 Strategy Provision

Active Recreation

The strategy makes provision for two major active recreational facilities, both located in Ulladulla, namely:

- West Ulladulla Sporting Complex; and
- Ulladulla Aquatic Complex.

Any residual demand not catered for in these key centres would be accommodated in the Milton area, potentially associated with Frogs Holla and the proposed Milton high school.

(1) West Ulladulla Sporting Complex

On the basis of extensive community consultation, consultants Keys Young have prepared a concept plan for the complex based on the following community preferred uses:

- Dedicated active recreation areas and associated facilities for the following outdoor sports: rugby league; cricket; athletics; polocrosse; skateboarding; netball; and basket ball (Table 4.9). This will provide for much of the future shortfall indicated in Table 4.8.

- An indoor multipurpose hall catering for the needs of: gymnastics; indoor soccer; aerobics and netball. Other sports could also be accommodated as the need arose, including: badminton; volleyball; basketball; cricket; square dancing; and taekwondo. The facility could also be used by schools for wet weather PE sessions.

- Licensed clubhouse associated with the multipurpose hall would include: change facilities for rugby league and cricket matches.

- Arts and cultural centre would contain dedicated studio and workshop space, galleries and associated amenities.

- Aboriginal cultural centre to be managed by the Aboriginal community and associated with the sports centre. It would include an Aboriginal museum; a hostel for approximately 100 people; a gallery for arts and crafts display; a meeting area and catering facilities.

The concept plan assumes that the centre's needs for future expansion would be met by the land currently occupied by the sewerage treatment plant.

(2) Ulladulla Aquatic Complex

The current Ulladulla 50m pool, located at the intersection of Green Street and Warden Street is to be transformed as follows:

- Heated six lane 50m competition pool;
- Heated landscaped leisure pool;
- Kiosk seating area; and
- Existing and augmented support facilities.

(3) Milton Centre

After taking into account the planned provision of sports facilities at West Ulladulla there would potentially be a need to provide facilities for the following sporting activities: Australian rules football, basketball, cricket, hockey, lawn bowls, rugby union, soccer, squash and tennis. These could be partially provided in an expanded West Ulladulla

Sports Complex utilising the former sewerage treatment plan site and/or in the Milton area. The projected facilities are shown in Tables 4.10, 4.11 and 4.12.

Table 4.9
WEST ULLADULLA SPORTING COMPLEX: FACILITY PROVISION

Sport	Requirement	Use Pattern	Sharing Capability
Rugby League	3 Fields (55mx146m) 1 Grandstand Change rooms Support facilities Lighting	1 field for exclusive winter use	With cricket & possibly athletics
Cricket	2 Synthetic wickets 1 Turf wicket Area for 1500 spectators Change rooms	Summer season (full weekends) Practice nets used evenings (3.30-7.30pm)	With rugby league
Athletics	1 400m track Field training & competition area Change rooms Lighting	Summer season	Potential to share with winter sports, however discus & shot put tend to damage ground
Polocrosse	2-3ha for fields Change rooms Fencing Large trailer parking area	Autumn & summer season (6 months)	Potential to share with cricket or athletics, however ground subject to hoof damage
Skateboarding	Dedicated 60m2 area Canteen/vending machine Lighting	Year round	With future roller blading area
Netball	Resurfacing of existing courts Change room extension	Winter season, weekends	With basketball
Basketball	2-3 courts	Year round	Will use netball courts

Source: Keys Young (1996)

Table 4.10
PROJECTED SPORTS FACILITIES IN ULLADULLA

Sports Centre	*Sports Facilities*
West Ulladulla Sports Complex:	• Netball/Basketball Courts (9) • Rugby League Fields (3) • Cricket Ovals (3) • Athletics Track & Field (1) • Polocrosse Fields (3) • Skateboard/Roller Blade Area (1) • Multipurpose Indoor Sports Centre (1) • Soccer Fields (2) • Hockey Fields (2)
Ulladulla Aquatic Complex:	• Competition Pool (50m) (1) • Leisure Pool (1) • Tennis Courts (4)
Central Ulladulla:	• Bowing Greens (3) • Squash Courts (4) • Indoor Cricket (1) • Ocean Pool (25m) (1)
West Ulladulla (Village Drive):	• Soccer Fields (2)
South Ulladulla	• Squash Courts (4)

Note: Provision assumes the Light House Oval is developed for housing

Table 4.11
PROJECTED SPORTS FACILITIES IN MILTON/MOLLYMOOK

Sports Centre	**Sports Facilities**
Milton Show Ground	• Basketball (2) • Cricket (1) • Rodeo (1) • Equestrian (1)
Frogs Holla	• Cricket Oval (1) • Australian Rules Oval (1) • Rugby Union Field (1) • Hockey Fields (2)
Milton Swimming Pool	• Competition Pool (25m) (1)
Mollymook Oval	• Cricket Oval (1)
Mollymook Golf Club	• 18 Hole Golf Course (1) • 9 Hole Golf Course (1)
Mollymook Bowling Club	• Bowling Greens (3)
Mollymook Surf Lifesaving Club	• Boats/Dinghies

Table 4.12
PROJECTED SPORTS FACILITIES IN LAKE ENTRANCE VILLAGES

Sports Centre	Sports Facilities
Kings Point	• Tennis Courts (3)
Burrill Lake	• Bowling Greens (3) • Squash Courts (4)
Dolphin Point	• 9 Hole Golf Course (1)

Passive Recreation

The strategy makes provision for a hierarchy of linked open space:

- Beaches and coastal reserves;
- Inland waterway and wetland reserves;
- Inland bush/flora and fauna reserves; and
- Open space corridors linking these reserves.

4.7 TRANSPORT AND PARKING

4.7.1 Transport Trends

The current situation is one of an almost total reliance on the private car for transport.The road network is heavily reliant on the Princes Highway for local circulation and access. This situation creates considerable congestion during the peak holiday periods. The existing parking provision is considered to be adequate with the notable exception of the peak holiday periods. There is a lack of facilities for berthing and mooring for recreational shipping. The Ulladulla airstrip option is judged by certain sections of the community to be worthy of consideration and the current cycleway system is disjointed.

4.7.2 Transport Objectives

- Ensure transport access to all the villages of the district through the provision of an integrated road and public transport network;

- Provide adequate parking in the major commercial centres meeting sub-peak demand;

- Maintain all viable navigable waterways in the district;

- Maintain the option of an air strip within easy access of Ulladulla; and

- Provide a comprehensive off-road movement network.

4.7.3 Transport Principles

Roads and Traffic

- Provide a hierachical system of roads reflecting current traffic and environmental planning and design criteria;

- Local street pattern of Milton-Ulladulla to serve three purposes:

  - circulation and access to centres of activity;
  - spatial definition and structure; and
  - point of address for home or business

Public Transport

- Facilitate the operation of a smale scale flexible low cost public transport; and

- Facilitate the operation of low-cost taxi services;

Parking

- Provide a system of off-road car parks to cater as a minimum for 90% of peak daily demand during the off-season in the Ulladulla CBD and Milton.

Harbours and Waterways

- Provide additional berths and moorings, whilst at the same time maintaining the quality of the marine environment.

Air Transport

- Provide an air transport facility, whilst maintaining the quality of the natural and built environment.

Of-Road Movement System

- Provide a system of pathways for safe off-road movement of pedestrians and cyclists focussing on central community facilities and recreational areas that is intregrated into a legible hierarchy that links into a potential trunk regional trail system.

- Provide strong inter village links segregated from traffic and providing flexibility for movement to schools, shops and recreational facilities.

- Provide safe and effective links into the Ulladula CBD.

4.7.4 Strategy Provision

The strategy makes provision for the following roads and traffic; public transport; parking; waterways; air transport; and off-road networks:

Roads and Traffic

- Southern Link Road to be developed as a genuine by-pass;
- Northern Link Road to be developed linking Mollymook with the Southern Link Road;
- East-west connector road to be constructed to the north of the West Ulladulla Sporting Complex;
- St Vincent Street to upgraded to act as an inner by-pass/collector road and provide access to the Ulladulla CBD (Figure 4.5); and
- Rural link road, connecting Wilfords Lane with Slaughterhouse Road, to be graded and sealed.

Public Transport

- Maintain the operation of Council's community bus in Ulladulla;
- Facilitate the operation of a smale scale flexible/at-call bus service for children and the aged; and
- Facilitate the operation of low-cost taxi services by developing adequate taxi bays in Ulladulla CBD, Milton and the Mollymook 'golden triangle'.

Parking

- Upgrade the West Boree Street public car park;
- Upgrade the East CBD car parking area;
- Upgrade the central Milton car parking area;
- Provide additional car parking in the Mollymook 'golden triangle'.

Harbours and Waterways

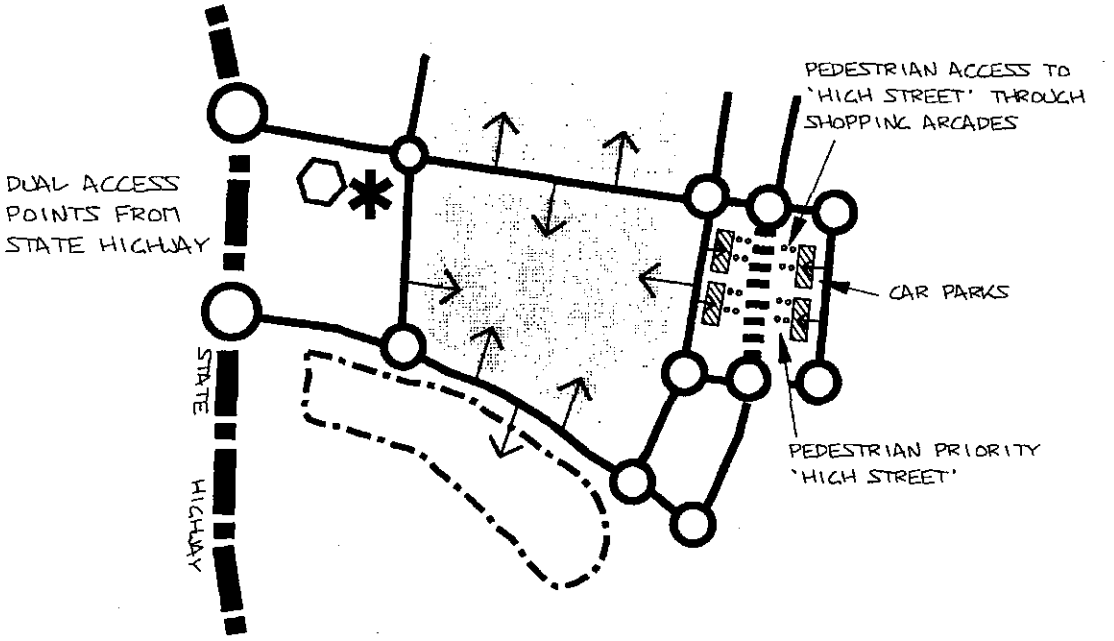
- Additional berths and moorings to be considered as part of the Ulladulla Harbour Management Plan; and
- A limited number of moorings to be provided in the Narrawallee Inlet.

Air Transport

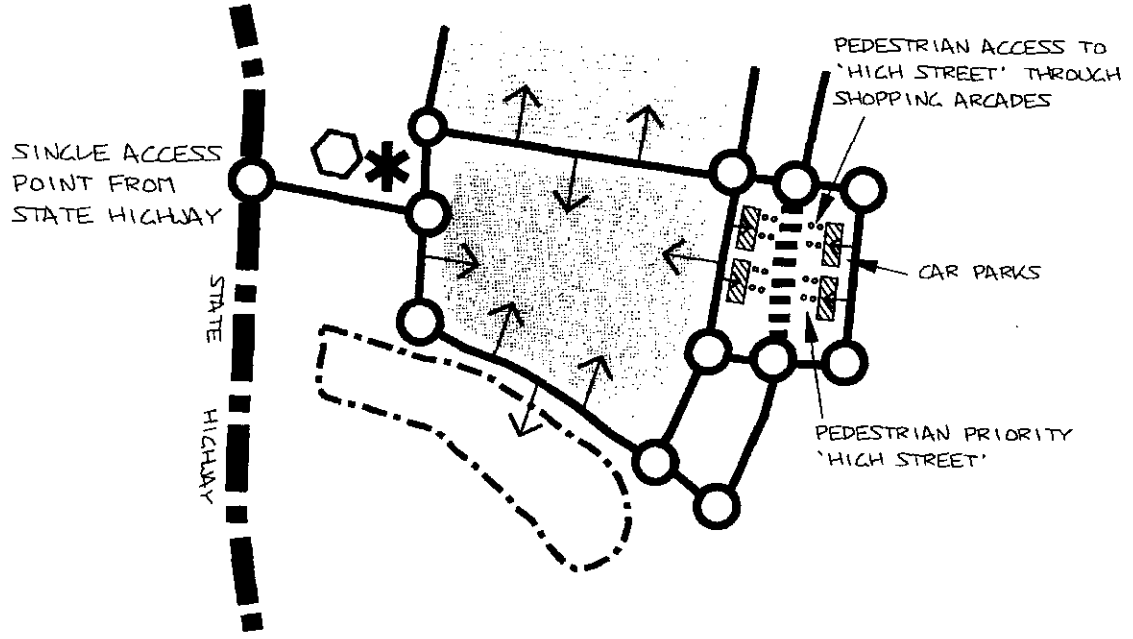
- Investigate the feasibility of constructing a sealed airstrip to the south of Burrill Lake, taking into account the flightpath restrictions caused by the development of Dolphin Point.

Off-Road Movement System

- Cycleway system to be extended to connect with the West Ulladulla Sporting Complex;
- Coastal footpath system to be developed; and
- Riding trail/bridlepath to be developed linking the West Ulladulla Sporting Complex with the rural land to the west.



CBD ACCESS: OPTION A



CBD ACCESS: OPTION B

ULLADULLA CBD ACCESS OPTIONS

FIGURE 4.5

4.8 UTLITY INFRASTRUCTURE

4.8.1 Utility Provision Trends

The current utility infrastructure system has the capacity to accommodated the demands of a population of up to 25,000 before major servicing thresholds are crossed and significant augmentation to headworks and transport systems will be required. Three major infrastructure components will need to be replaced/ introduced in the short to medium term. These are:

- Relocation of the sewerage plant from south Ulladulla to a new site to the west of the urban area;
- Development of a water filtration plant to the west of Milton; and
- Closure of the current land fill site and the development of a new facility to the south west of Burrill Lake.

4.8.2 Development Objectives

Water Supply: All new development within the Milton-Ulladulla district must be connected to the area water supply;

- ***Sewerage:*** All new development within the Milton-Ulladulla district must be connected to the area sewer and sewage treatment system;

- ***Electricity:*** All new development within the Milton-Ulladulla district must be connected to the electricty grid;

- ***Stormwater:***All new major development must provide water quality control measures either on site or adjacent to the site.

4.8.3 Development Principles

- ***Water Supply:*** Provide water supply to all areas up to a height of 90metres AHD.

- ***Sewerage:*** Urban form and subdivision patterns to facilitate the efficient routing of trunk sewers;

- ***Electricty:*** Adoption of the principles of maximum reasonable undergrounding for 11kV and low voltage reticulation within new neighbourhoods;

- ***Communications:*** Sensitive siting of Telsta/Optus mobilenet transmitters and the undergrounding of pay television cabling

- ***Stormwater:*** Adoption of terrain features for surface retention and erosion control consistent with contemporary stormwater management.

4.8.4 Strategy Provision

The strategy makes provision for the following infrastructure facilities:

Water Supply

- Develop a water treatment plant to the west of Milton.

Sewerage

- Develop a new sewerage treatment plant and effluent water reticulation system for agricultural usage, located between Milton and Ulladulla; and

- Redevelopment of the existing sewerage treatment plant site for playing fields as part of the West Ulladulla Sporting Complex.

Electricity and Communications

- Maintain existing easements for transmission lines and identify additional service alignments and facility sites for the future augmentation of the network.

Stormwater

- Development of stormwater retention basins in all major residential, commercial and industrial land subdivisions.

4.9 VISUAL LANDSCAPE

On the basis of the analysis of Milton-Ulladulla's landscape Visual Management Units (VMUs), outlined in Section 2.4 of the Background Study, proposed visual management principles are put forward for the following key areas:

- Coastal Woodlands - West Ulladulla;
- Existing Residential subdivision - West Ulladulla;
- Future Residential Subdivision - Coastal Woodland Unit;
- Southern Link Road;
- Rural Slopes; and
- Princes Highway landscape treatment.

4.9.1 Coastal Woodland - West Ulladulla

This unit has been somewhat degraded due to a large development which has removed much roadside tree cover. It is highly visible from the highway and if heavily treed would provide a much needed visual buffer between Milton and Ulladulla. Any further development in this unit should be well set back off the highway and totally screened (unseen).

Up grade from a 3 to a 2 visual management level. A suggested list of species for the Coastal Woodland Unit is provided in Table 4.13.

Native Species

Botanical Name	Common Name
Eucalyptus saligna	Blue Gum
Eucalyptus botryoides	Bangalay
Eucalyptus pilularis	Black butt
Eucalyptus maculata	Spotted Gum
Flindersia australis	Crows Ash
Syncarpia glomulifera	Turpentine
Lophostemon confertus	Brush Box
Angophora	Gum Myrtle

4.9.2 Subdivision - West Ulladulla

Existing residential subdivisions - West Ulladulla.

Existing subdivision areas need upgrading in terms of:

(a) increased native road reserve planting and private property boundary planting;

(b) screening of existing houses from major roads;

(c) undergrounding of electricity; and

(d) maintain vegetation links with adjacent creeks, gullies and ridges in the rural slopes unit and urban areas.

4.9.3 Future Residential Subdivision - Coastal Woodland Unit

Future residential subdivision should be developed according to the following principles:

(a) site new subdivisions where they cannot be seen from main roads; and

(b) maintain as many existing trees as possible to retain the coastal woodland landscape pattern.

4.9.4 Southern Link Road

The formation of the Southern Link Road should conform with the following principle:

- maintain 100 metre complete tree cover on each side of southern link road.

This allows:

- total screening of potential future subdivision; and
- a corridor of coastal woodland to be maintained running north-south from Narrawallee Creek down to Burrill Lake (southern portion of study site)

4.9.5 Rural Slopes

Much of the character of this unit is derived from the vast open nature including low broad hills, heritage homesteads, with mature trees within the gardens and forested backdrop. It is recommended that it needs to be upgraded from a 2 to a 1 visual management level. The following guidelines are recommended to achieve the upgrading:

(a) Boundary planting on much of the road reserves and private land (see suggested *trees for planting in Rural Slopes Unit).*

(b) Maintain an appropriate distance between homesteads ie 500 to 1,000 metres.

(c) Roof lines should be hipped, gable, early Australian gambrel etc not flat or skillion.

(d) Materials - corrugated iron and slate are appropriate roofing materials
Walls - bricks which blend with traditional bricks
- *weatherboard*
- stone

(e) Paint colours - in historic areas, paint colours should blend into the environment .
Roofs (iron) - natural, light to slate grey, light stone, Homestead Red or mid green
Walls - light to medium shades of cream, stone, tan or ochre; these colours can be used on brick or cement rendered buildings
Trim - deep Brunswick Green, Indian Red, Prussian Blue.

(f) Oasis planting - various methods may be employed by using oasis planting:

- complete screening of homestead
- partial screening
- strong backdrop planting

A list of suggested trees for the rural slopes units included in Tables 4.14 and 4.15.

(g) Ridge Planting - planting of large exotic or native trees species should be carried out over the ridge just north of Milton. This would reinforce the prominence of this ridge as a major land mark as one drives towards Milton from the north.

(h) Creek Line Planting - should seek to link waterways such as Croobyar Creek, Woodstock Creek and Burrill Lake with coastal woodland and Narrawallee Creek.

(I) Regional Bypass Route - strategic planting along this route in Rural Slopes Unit should seek to maintain the pattern of the rural landscape by planting in areas of long straight stretches to break up linear nature of road, maintain existing rural views, paint structural materials in colours which blend with environment.

(j) Fences - post and wire.

(k) Signage - low key, small in size, natural colours and materials, ie timber.

(l) Road verge - use broad scale drains where possible and maintain a neat edge between gravel/bitumen road and grass.

Table 4.14 Suggested Introduced Species for the Rural Slopes

Botanical Name	Common Name
Araucaria cunnighaniana	Hoop Pine
Araucaria heterophylla	Norfolk Island Pine
Cupressus torulosa	Bhutan Cypress
Fraxinus	Ash
Liriodendron tulipifera	Tulip tree
Magnolia sp. (grandiflora is the large one)	Bull Bay Magnolia
Quercus robur	English Oak
Platanus sp.	Plane
Populus nigra "italica"	Poplar
Tilia europa	Lime
Sophora japonica	Japanese Pagoda tree
Erythrina indica	Coral Tree
Phoenix canariensis	Date Palm
Pinus sp.	
Cinnamomum camphora	Camphor Laurel
Ulmus sp.	Elm
Jacaranda mimosifolia	Jacaranda

Table 4.15 Suggested Native Species for the Rural Slopes

Botanical Name	Common Name
Araucaria bidwillii	Bunya Pine
Eucalyptus saligna	Blue Gum
Eucalyptus botryoides	Bangalay
Eucalyptus pilularis	Black Butt
Eucalyptus maculata	Spotted Gum
Flindersia australis	Crows Ash
Syncarpia glomulifera	Turpentine
Lophostemon confertus	Brush Box
Casuarina sp.	
Ficus sp.	
Melia azederach	White Cedar
Brachychiton acerifolius	Illawarra Flame
Acmena smithii/syzygium	Lilly Pilly
Livistona australis	Cabbage Tree Palm
Pittosporum sp.	
Callitris	Cypress Pine
Agonis	Weeping Willow Myrtle
Angophora	Gum Myrtle

A suggested species list for creeks in the Rural Slopes Unit is provided in TABLE 4.16.

Table 4.16 Suggested Native Species for Creeks in Rural Slope Units

Botanical Name	Common Name
Casuarina sp.	River Oak
Syzygium australis	Creek Lilly Pilly
Pittosporum sp.	
Callitris	Cypress Pine
Acacia decurrens	Black Wattle

4.9.6 Princes Highway Landscape Treatment

Previous studies have investigated:

1. Milton streetscape and gateways, including important vistas; and
2. Ulladulla Landscape Character Units and gateways, including important vistas.

The Princes Highway generally requires the highest level of management because of the volume of people who travel along it (both local and tourist) and the fact that many important vistas and landscapes can be seen from it. Some of these landscapes are important in a regional and national sense.

The following recommendations apply to the Princes Highway, commencing with the northern entrance to Milton.

1. Continue an avenue of poplars from Little Forest Road/Princes Highway to the bridge at Croobyar Creek.

2. Develop a rainforest theme planting between Croobyar Creek and the top of the ridge (Mt Pleasant). Typical trees may be fig species etc. These species should be planted in both road reserves and on private property.

3. Develop an entrance sign adjacent to Corks Lane/Princes Highway and rainforest theme planting on the eastern approach to the CBD. Views to the south of Milton - rural districts - should be maintained. Therefore, planting on the western side of Princes Highway should take this into account.

4. Milton Streetscape - see Milton Streetscape Plan of CBD. The main street tree planting is Magnolia soulangiana "nigra" along Princes Highway.

5. Area between the Hospital and the Caravan Park should be planted extensively with native or exotic species to act as a bold entrance into town. Large trees, such as fig species, would be appropriate ie Ficus hilli; trees such as these were once a feature of this stretch of road.

6. Develop entrance signage adjacent to intersection of Slaughterhouse Road and Princes Highway. This is the most suitable spot for a well designed sign to encompass Milton's heritage status. The backdrop of Turpentines, Gum Trees and the Caravan Park with its Coral Trees should be reinforced.

7. Maintain and enhance a buffer between Milton and Ulladulla to promote the visual character of each urban area it is necessary to create a buffer between each one. Land form does not do this adequately. To do this effectively any future development should be well set back from the highway so it is not seen. This would mean planting a dense vegetative screen so that eventually it would look similar to the remnant forest on the northern side of the highway. Native species are preferable to exotics in this area.

8. Develop an entrance feature on Ulladulla's northern threshold, a mixture of dense forest type planting and avenues of trees may be appropriate to gradually lead the motorist into Ulladulla.

Section Five

THE VILLAGES

The objectives, principles and land use components of the structure plan are pulled together and fleshed out in terms of how it impacts in each of the villages: Milton, Narrawallee, Mollymook, Ulladulla, Kings Point, Burrill Lake, Dolphin Point and the rural areas

5.1 MILTON

5.1.1 Key Issues

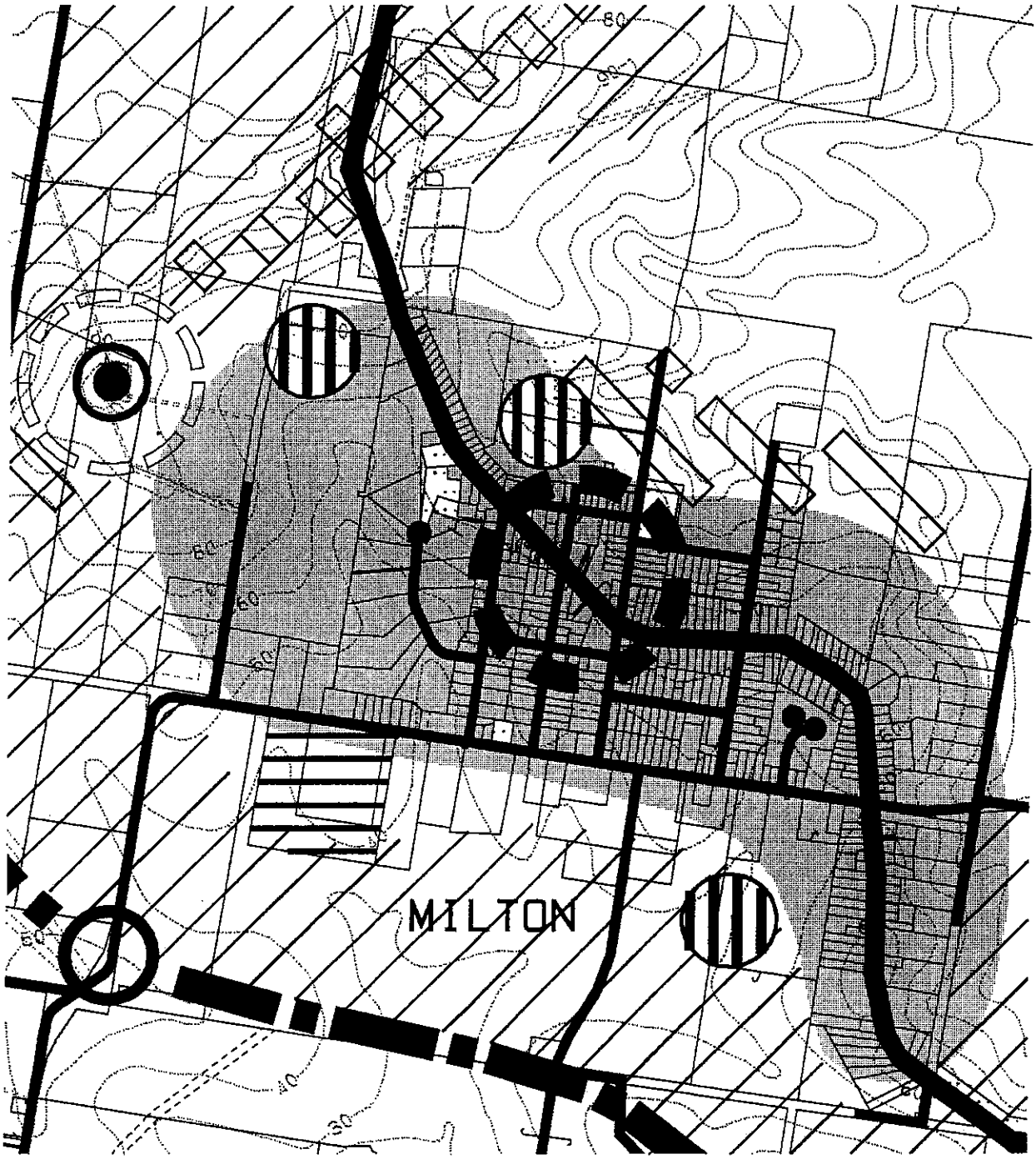
The key issue for Milton is to enhance its heritage qualities and create a viable and sustainable function for the town without compromising its small village character and atmosphere.

Table 5.1
MILTON SWOT ANALYSIS

STRENGTHS	**WEAKNESSES**
• Hilltop setting • Heritage building ensembles • Agricultural setting/ambience • Proximity to tourist foci • Distinctive character • Hospital	• Small retail catchment • Loss of function and civic facilities • Heavy through traffic • Mixed visual presentation • Limited expansion areas
OPPORTUNITIES	**THREATS**
• Cultural/heritage tourism • Boutique hotel • Guesthouses/ B&B • Antique shops & galleries • Restaurants & coffee shops • Arts & crafts • New residential area	• Decline of dairy industry • Increasing through traffic • Excessive heritage pastiche • Eclipsed by Ulladulla and coastal villages

A Vision for Milton

The residents have reclaimed Milton. The highway traffic is gone: diverted to the west of the township. Travellers on the bypass will see Milton as a heritage ridge-top village, not much larger in area than today, except for an extension to the west where urban sized lots developed on the original formal pattern will replace a larger scale subdivision planned since 1985. The edge of the urban village is clearly defined and separated from



KEY

- GENERAL URBAN
- MAJOR RETAIL CENTRE
- EXISTING PARKS & RESERVES
- VEGETATION & OPEN SPACE LINKAGES
- AGRICULTURAL LAND & CULTURAL LANDSCAPE
- SCHOOL SITES
- AREAS OF SCENIC IMPORTANCE
- ACTIVE RECREATION
- EXISTING ROAD STRUCTURE
- STATE HIGHWAY
- PROPOSED WATER FILTRATION PLANT

MILTON VILLAGE

FIGURE 5.1

the highway by the rich green pasture of the Milton farmland. Visitors attracted to spend some time in Milton will be greeted by a rainforest gateway and unique signage, reflecting the cultural heritage and culture of the township.

The town centre is part of a heritage precinct, reinforced by heritage colours, arts and craft centres, heritage guesthouses and relaxed pavement cafes set within a leafy urban ambience. A sustainable range of retail outlets cater for the material needs of the 5,000 or so residents of Milton and its rural hinterland, which include farmers both traditional and new; rural-residential settlers as well as the occupants of the northern coastal villages.

The haemorrhaging flow of public facilities to Ulladulla has been stemmed and its functional role maintained. Adequate banking and postal services are available and the hospital precinct will continue to be the centre of the subregion's health care and aged facilities.

5.1.3 Development Opportunities

The development opportunities that have been identified for Milton include:

- Designation of a heritage precinct for central Milton
- Development of personalised small scale tourist accommodation: boutique hotel/guest houses/B&Bs
- Development of specialty retailing: arts & crafts, galleries
- Development of hospitality services: restaurants/cafes/coffee shops

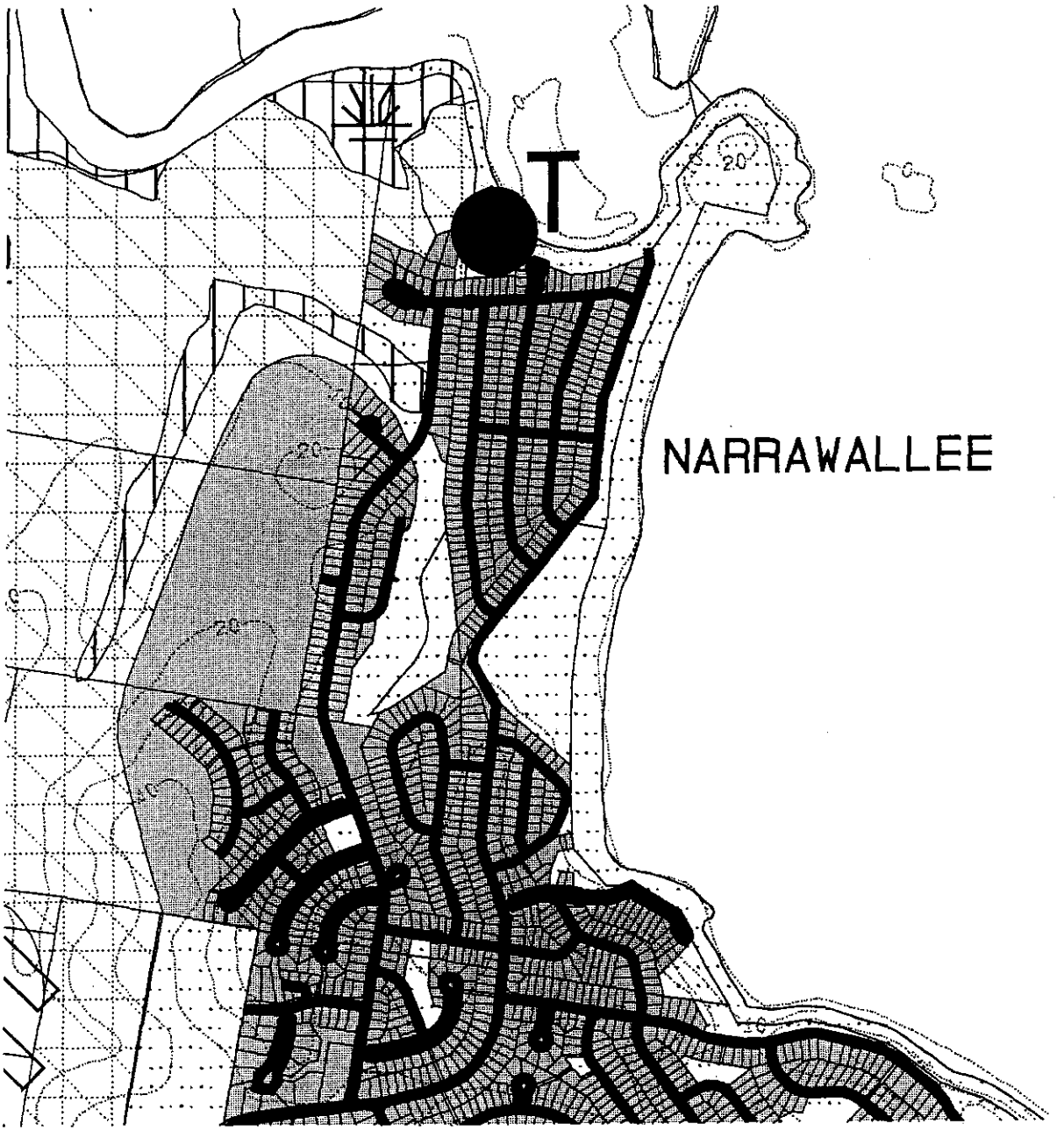
5.2 NARRAWALLEE

5.2.1 Key Issues

The key issue for Narrawallee is to maintain its ocean-side character and to maintain the physical separation from Milton.

Table 5.2
NARRAWALLEE SWOT ANALYSIS

STRENGTHS	**WEAKNESSES**
• Coastal setting • Undulating Topography • Forested ridge lines • Natural beach and inlet	• No community focus • Illegible urban form • Mixed visual presentation • Poor sediment controls
OPPORTUNITIES	**THREATS**
• Low impact resort at Narrawallee Inlet • Boat anchorage at Narrawallee Inlet • Holiday apartments • Guesthouses/ B&B	• Extension of urban area to the west • Destruction of Garrads Lagoon • Minor bush fire



KEY

- GENERAL URBAN
- EXISTING PARKS & RESERVES
- BUSHLAND CONSERVATION
- EXISTING ROAD STRUCTURE
- WETLANDS
- T LOW IMPACT TOURIST RESORT

N

NARRAWALLEE VILLAGE

FIGURE 5.2

A Vision for Narrawallee

Narrawallee will continue to provide a residential and holiday home lifestyle, predicated on its award winning natural beach and its mangrove lined inlet. The environmental mistakes of the past have been rectified and Garrards Lagoon forms the centre piece to an attractive tree studded residential valley. A small residential area to the west has been developed, retaining most of its natural tree cover. Walking and riding trails provide recreational links to the bushland conservation area to the west.

5.2.3 Development Opportunities

The development opportunities that have been identified for Narrawallee include:

- Low impact resort at Narrawallee Inlet
- Boat anchorage at Narrawallee Inlet
- Holiday apartments
- Guesthouses/ B&B

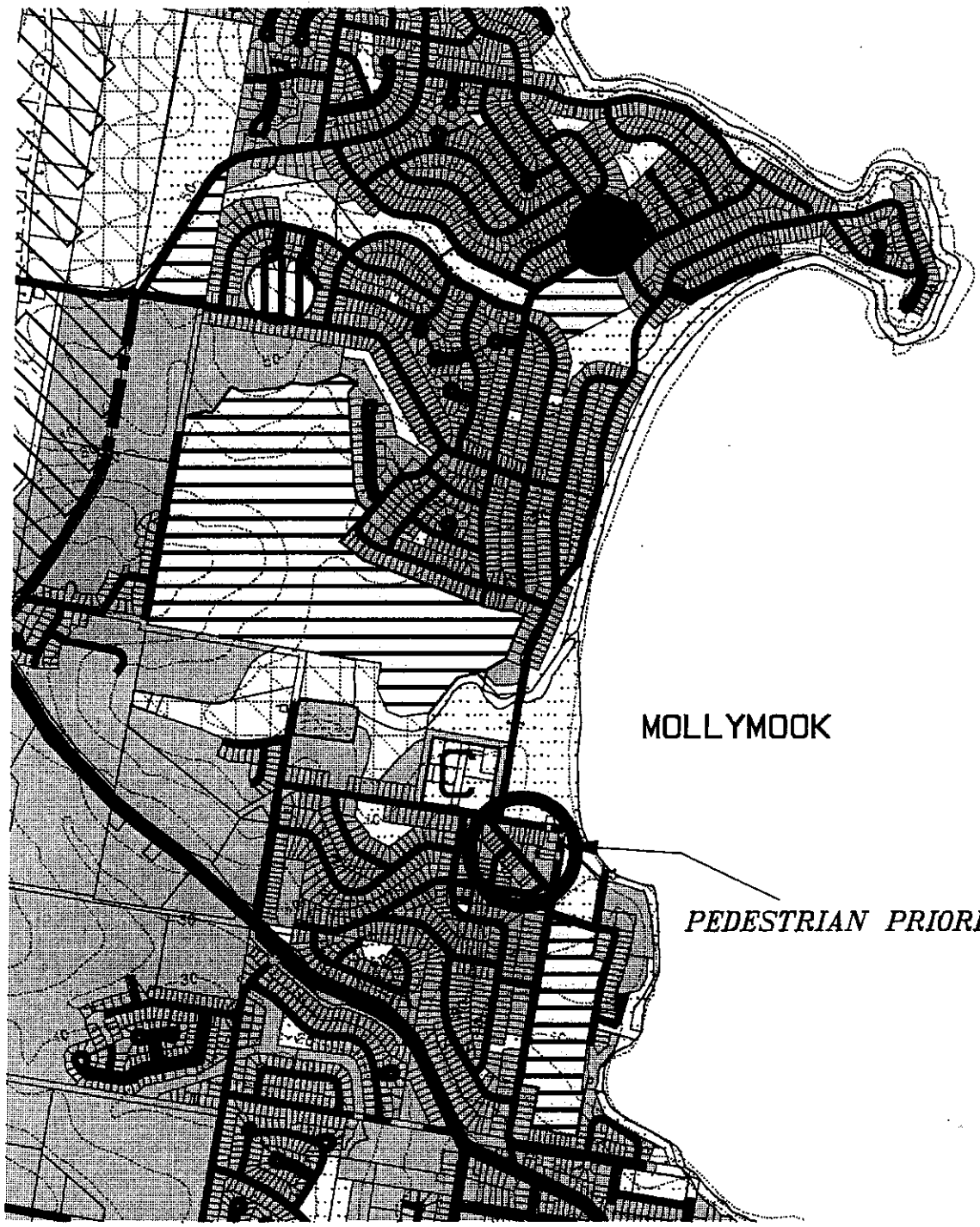
5.3 MOLLYMOOK

5.3.1 Key Issues

The key issue is to develop a holiday apartment precinct, whilst at the same time maintaining the amenity of the area for its residents.

Table 5.3
MOLLYMOOK SWOT ANALYSIS

STRENGTHS	**WEAKNESSES**
• Attractive bay and beaches • Attractive topography • Attractive golf courses • Quality accommodation • History as holiday destination • Favourable market position • Well known destination	• Underutilised key sites • Lack of adequate beach side hospitality services • Lack of public transport
OPPORTUNITIES	**THREATS**
• Boutique hotel • Serviced holiday apartments • Leisure retail • Restaurants & beach cafes • Swimming pool • Pedestrian priority precinct • Tennis facilities	• Over suburbanisation • Traffic congestion • Deficient parking



KEY

- GENERAL URBAN
- EXISTING PARKS & RESERVES
- BUSHLAND CONSERVATION
- VEGETATION & OPEN SPACE LINKAGES
- ACTIVE RECREATION
- EXISTING ROAD STRUCTURE
- PROPOSED ADDITIONAL ROADS
- SCHOOL SITES
- LOCAL RETAIL CENTRE
- LEISURE RETAIL CENTRE

MOLLYMOOK VILLAGE

FIGURE 5.3

A Vision for Mollymook

Mollymook is still renowned for its spectacular beach, which provides a recreational focus for both resident and visitor. Surfing remains a highly popular recreational activity. The Silvan quality of the residential areas has been enhanced. The trend towards more sophisticated visitor accommodation has continued, with a wide choice of fully catered and self catered facilities available. The accommodation is fully supported by hospitality, entertainment and other recreational facilities. The "golden triangle" has remained the hub of Mollymook's hospitality and entertainment attracting patrons both during the day and late into the night. Pedestrians have priority within a sensitively landscaped leisure precinct.

Residential expansion has been effected by redevelopment at higher densities rather than by "greenfield" development. The residential intensification has been harmoniously achieved through sensitive and imaginative design of built form and urban landscaping. High rise remains an alien development form in this village.

5.3.3 Development Opportunities

The development opportunities that have been identified for Mollymook include:

- Boutique hotels
- Holiday apartment complexes
- Leisure retail & hospitality services
- Swimming pool

5.4 ULLADULLA

The relatively large Ulladulla area has four focus areas: Ulladulla Harbour; Ulladulla CBD; South Ulladulla and West Ulladulla.

5.4.1 Focus Area 1: Ulladulla Harbour

Key Issues

The key issues associated with Ulladulla Harbour essentially revolve around its underdeveloped status, silting and pollution and its capacity to cater for increasing demands for recreational boat berthing and mooring.

Table 5.4
ULLADULLA HARBOUR SWOT ANALYSIS

STRENGTHS	WEAKNESSES
• Attractive setting • Heritage associations • Active fishing fleet • Open views from Highway	• Saltation & pollution • Underutilised west/north shores • Limited access • Wason Street retail strip • Limited berths & moorings • Lack of public facilities
OPPORTUNITIES	**THREATS**
• Active involvement of fishing fleet in tourism • Marina for recreational boats • Launch ramps & jetties • Western amphitheatre • Harbour side hospitality • Sail/Motor boat club	• Contracting fishing fleet • Erosion of harbour structures • Harbour saltation • Potential storm damage • Harbour side congestion • Over development of tourist-oriented facilities

A Vision for Ulladulla Harbour

The harbour provides the focal point to the district. The Milton-Ulladulla bypass has enabled the harbour and its foreshore to be fully integrated with the town centre. It remains an attractive vibrant working harbour. Its dual roles of a functional harbour and a recreational/symbolic focus have been harmoniously balanced. The working fishing fleet and on-shore processing atmosphere of the harbour has not been relegated to the role of a totally artificial, purely tourism-oriented wharf-side attraction. It remains a living, breathing, organic, functioning fishing harbour, presenting the visitor with an authentic experience. Nevertheless, recreational boating has expanded and new facilities provided. Foreshore landscaping links the retail, civic and leisure areas to the harbour. The CBD has repositioned itself to face the harbour and is thriving as a result.

Strict environmental controls on stormwater and high standards of water quality management in new urban development, as well as a co-operative effort by harbour users have significantly improved water quality in the harbour.

Development Opportunities

The development opportunities that have been identified for Ulladulla Harbour include:

- Extension of harbour and development of a marina.
- Development of an amphitheatre on western harbour shore
- Development of elevated walkway
- Redevelopment of Wason Street retail strip

5.4.2 Focus Area 2: Ulladulla CBD

Key Issues

The fundamental issue governing the optimum development of Ulladulla's CAD is the development of the Ulladulla by-pass. The second major issue is the polarised nature of the retail centre.

Table 5.5
ULLADULLA CBD SWOT ANALYSIS

STRENGTHS	**WEAKNESSES**
• Attractive harbour vistas • System of shopping arcades	• Underutilised retail outlets • Gun-barrel main street • Steep hill and poor architectural form • Polarised retail centre • Limited retail range • Perceived shortage of parking • Seasonal based economy • Lack of public transport • No link to harbour
OPPORTUNITIES	***THREATS***
• New retail major: Woolworths/Coles • Specialty shop expansion • Pedestrian priority precinct • New civic square • New retail/hospitality plaza • Fitch's Corner Development • Harbour Walkway	• By-pass delay • Vehicular access • Deficient parking

A Vision for Ulladulla CBD

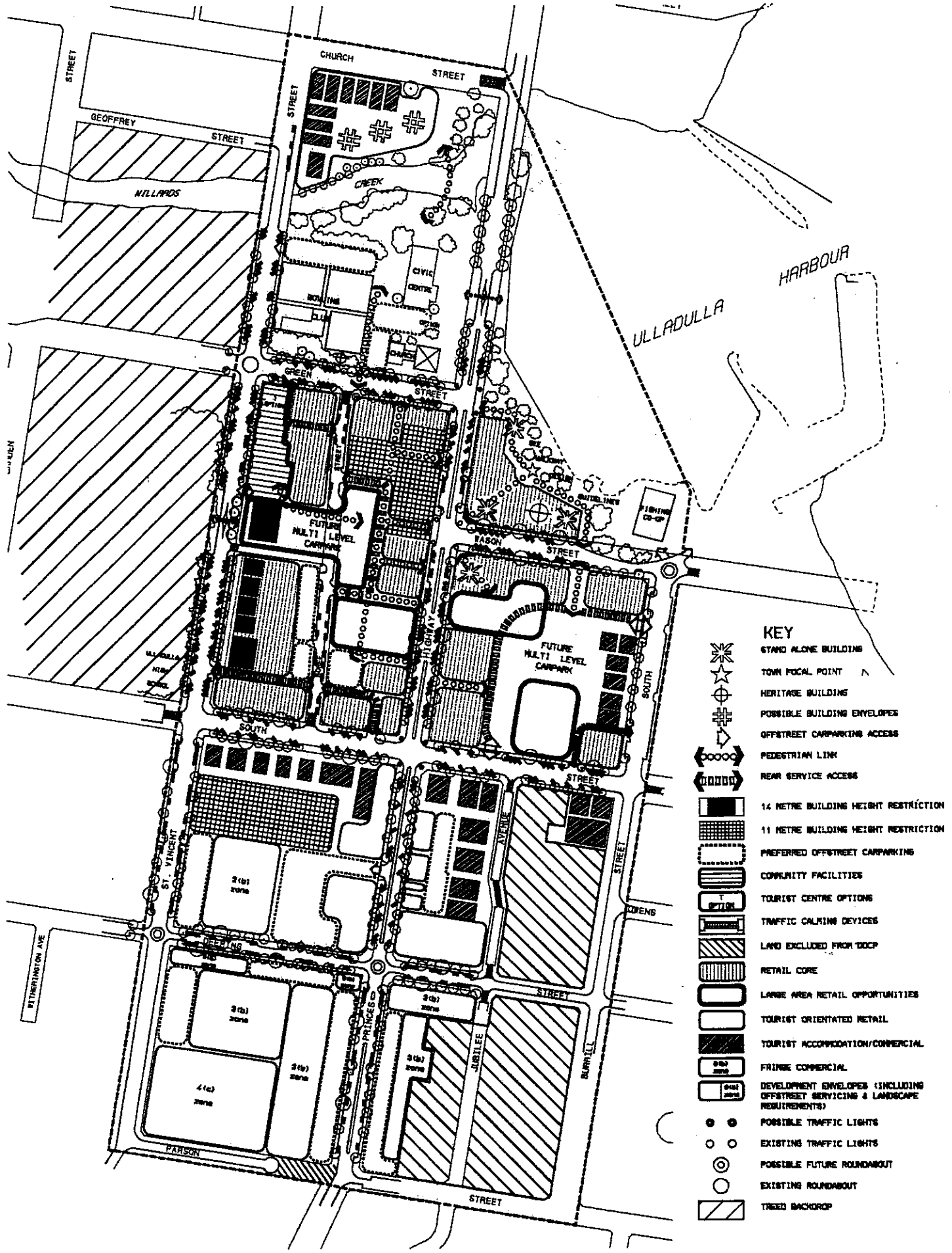
The town centre strategy has been implemented and the local economy has continued to benefit. Residents and visitors entering the area find it easy to locate parking and to access the area as a result of a major change in traffic management. Most retail and commercial facilities are within easy walking distance of car parks.

The town centre is consolidated into the area north of South Street. The introduction of national retail chains has provided a wide choice of merchandise and reduced the degree of escape expenditure. The CBD is a pedestrian friendly area with easy access between Boree Street and the retail areas to the east of the highway. The once busy highway has been transformed into a pedestrian priority area.

The harbour walkway provides access to leisure retail and hospitality facilities which integrate the harbour area with the CBD. The urban design of the town centre is a fusion of sensitivity and excitement, authentically reflecting its role as a maritime holiday service centre. The design of the two/three storey buildings is complemented by the sensitive use of hard surfacing and the wide use of large scale deciduous street trees, providing a protective canopy in summer and allowing filtered sunlight in winter. Buses and other forms of public transport move people in and out of the precinct.

Alternative Vision

The Ulladulla CBD has been divided into two parts: a traditional retail precinct centred



ULLADULLA CBD

FIGURE 5.4

on Deering Street and the highway; and a leisure retail precinct located in the former CBD, between Green Street and Wason Street.

The traditional retail precinct contains a number of large scale retailers. This centre relies on vehicular traffic into and out of the area, with pedestrian access within the complexes. The retailers are clustered together such that there is a need to only park the car once.

The former CBD is transformed into a leisure retail and hospitality precinct. The area abounds with a wide range of speciality shops focusing on the needs of patrons on holiday, who have the time and inclination to browse and compare. It is supported by a range of food and beverage outlets, entertainment, civic and cultural facilities.

Development Opportunities

The development opportunities that have been identified for the Ulladulla CBD include:

- Pedestrian priority precinct : Princes Highway (Green St/ South St)
- New retail/hospitality plaza and development of 2 levels of sub-plaza parking at South Street Car Park
- Development of Feitch's Corner for leisure retail & hospitality
- Development of a new civic square on the Civic Centre's harbour frontage

5.4.3 Focus Area 3: South Ulladulla

Key Issues

The key issues are the relocation of the sewerage treatment plant, the quality of the industrial estate and the southern point of entry to Ulladulla.

Table 5.6
SOUTH ULLADULLA SWOT ANALYSIS

STRENGTHS	**WEAKNESSES**
• Remnant forest backdrop • Direct Highway access • Proximity to ocean and beaches	• Sewerage treatment plant • Poor quality of industrial area • Highway industrial strip • Poor entry statement • Pedestrian access • Lack of public transport
OPPORTUNITIES	**THREATS**
• Recreational complex • Business park • Broadacre tourism development • By-pass	• Sewerage plant remaining in situ • Lack of industrial demand • Loss of remnant forest

A Vision for South Ulladulla

Residents of Milton-Ulladulla take pride in the transformation of this area. The concerted effort to beautify the southern approaches to the CBD and the old Princes Highway has

paid off. The area has become an economic success storey, providing leisure facilities for visitors and employment for residents.

The sewerage treatment plant has been relocated, allowing development within the buffer area and removing the dispiriting effects of pungent sewage odour. The hi-tech business/industrial park is continuing to attract investors to the area, seeking a high quality environmental setting for their enterprise. The attractively landscaped West Ulladulla Sporting Complex provides high standard sports and recreational and Aboriginal cultural facilities for the resident and visitor. It continues to play host to major sports tournaments, providing a valuable sports tourism component to Milton-Ulladulla's business portfolio.

The previous stark building forms, extensive patches of bare ground and the proliferation of unco-ordinated signage have been replaced by sensitively planned and designed landscaping and sympathetic tourist and industrial architecture.

Development Opportunities

The development opportunities that have been identified for South Ulladulla include:

- Business park development
- Regional sporting complex
- Broadacre tourism development: cabins, go-kart circuit, or theme park
- Development of quality entry statement

Key Issues

The key issues in west Ulladulla are the establishment of attractive residential areas with a community focus, whilst at the same time maintaining significant stands of remnant forest.

Table 5.7
WEST ULLADULLA SWOT ANALYSIS

STRENGTHS	**WEAKNESSES**
• Remnant forest backdrop • Highway access	• Proximity to bypass • Pedestrian access • Lack of public transport
OPPORTUNITIES	**THREATS**
• Expansion of residential area • Neighbourhood Centre • Local Sporting Centre	• Loss of remnant forest

A Vision for West Ulladulla

This new residential area to the west of Ulladulla has been developed, that is sensitive to the terrain and vegetation of the area. Great care has been taken to conserve significant stands of forest trees, which have been incorporated in public recreation reserves and in road reserves. In certain locations larger residential allotments have

been created to encourage the retention of forest trees. The area has developed a character and identity of its own. It is served by a small community/retail centre. Walking and riding trails provide recreational links to adjacent bush land and the Milton cultural landscape to the west.

A deep forest buffer separates this area from the Milton-Ulladulla bypass which forms its western edge. This does much to mitigate the visual and noise impacts of the highway. Water quality is maintained via a system of small lakes and sediment traps along the main water courses.

Development Opportunities

The development opportunities that have been identified for west Ulladulla include:

- Neighbourhood centre

5.5 KINGS POINT

5.5.1 Key Issues

The key issue in this precinct is the question of development along the lake foreshore and the effects of urban encroachment into tall forest vegetation and its associated fauna habitats.

Table 5.8
KINGS POINT SWOT ANALYSIS

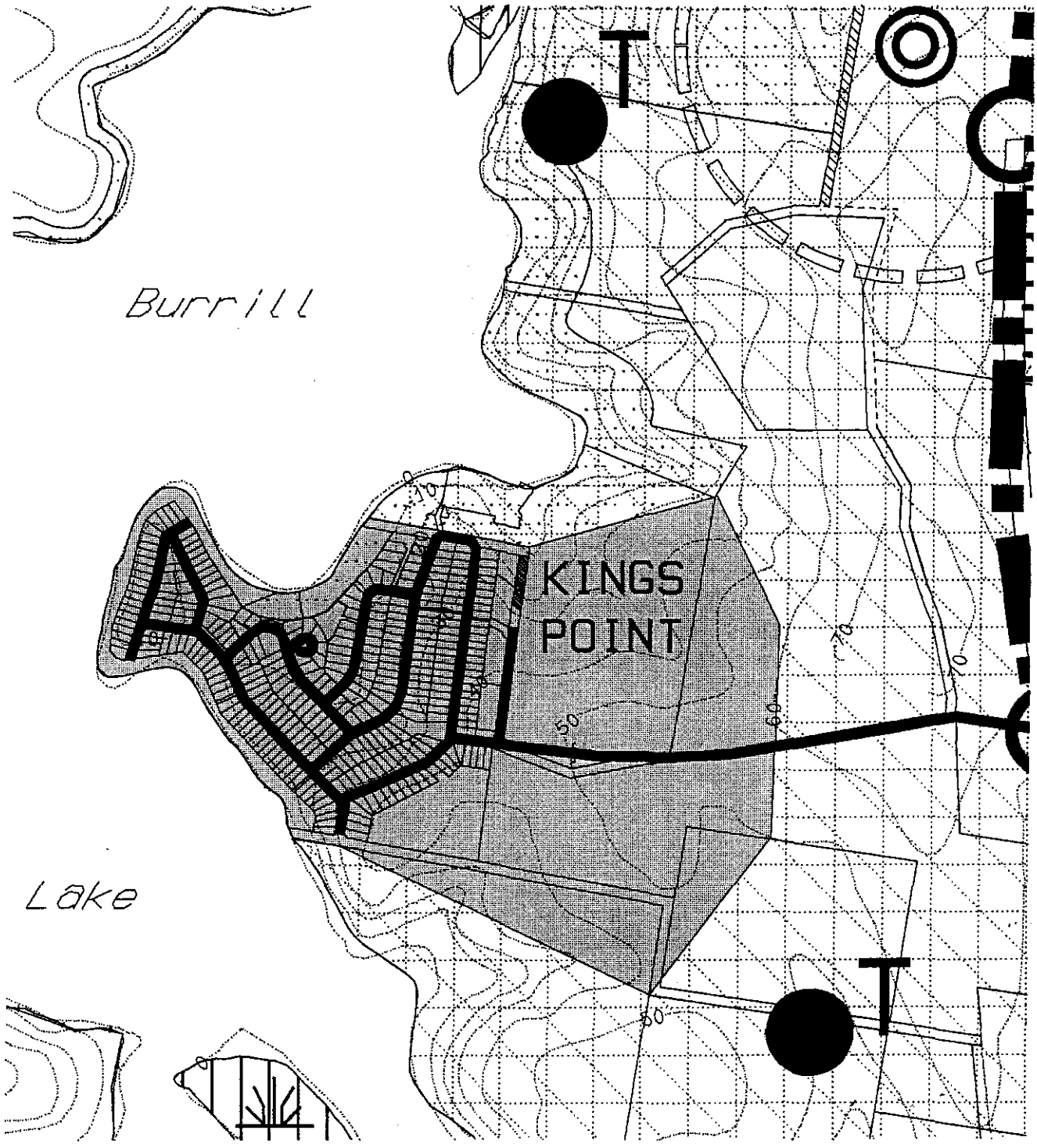
STRENGTHS	**WEAKNESSES**
• Lake frontage • Relaxed atmosphere • Attractive topography and trees • Recreational identity	• Burrill Lake siltation • Lack of public facilities • Lack of public transport • Single access road
OPPORTUNITIES	**THREATS**
• Residential expansion • Low impact tourism resort • Community/local shopping centre • Lakeside bushland park	• Siltation of Burrill Lake • Loss of remnant forest • Lake pollution • Bush fire

A Vision for Kings Point

Kings Point is now a larger village, but the change is not readily apparent. In character it remains the "village of trees", being surrounded by forest and water. At the centre of the settlement is the village store and associated community facilities. The enlarged village has transformed the village store into a highly viable commercial concern.

Water skiing, power boat use and sailing continue to be popular activities on Burrill Lake, but usage levels have been kept to levels which do not impact negatively on the residential amenity of Kings Point.

5.5.3 Development Opportunities



KEY

- GENERAL URBAN
- EXISTING PARKS & RESERVES
- BUSHLAND CONSERVATION
- EXISTING ROAD STRUCTURE
- STATE HIGHWAY
- WETLANDS
- T LOW IMPACT TOURIST RESORT
- PROPOSED SEWAGE TREATMENT PLANT & 500M BUFFER

KINGS POINT VILLAGE

FIGURE 5.5

The development opportunities that have been identified for Kings Point include:

- Residential expansion
- Low impact tourism resort
- Community/local shopping centre
- Lakeside bushland park
- Development of quality entry statement

5.6 BURRILL LAKE

5.6.1 Key Issues

The key issue in this precinct is the question of development along the lake and ocean foreshores.

Table 5.8
BURRILL LAKE SWOT ANALYSIS

STRENGTHS	**WEAKNESSES**
• Lake frontage • Relaxed atmosphere • Attractive topography • Recreational identity	• Causeway/bridge • Burrill Lake saltation • Poor construction quality • Underutilised • Heavy through traffic • Lack of public facilities • Lack of public transport
OPPORTUNITIES	**THREATS**
• Ulladulla airstrip • Low impact tourism resort • Coastal bushland park	• Siltation of Burrill Lake • Lake pollution

A Vision for Burrill Lake

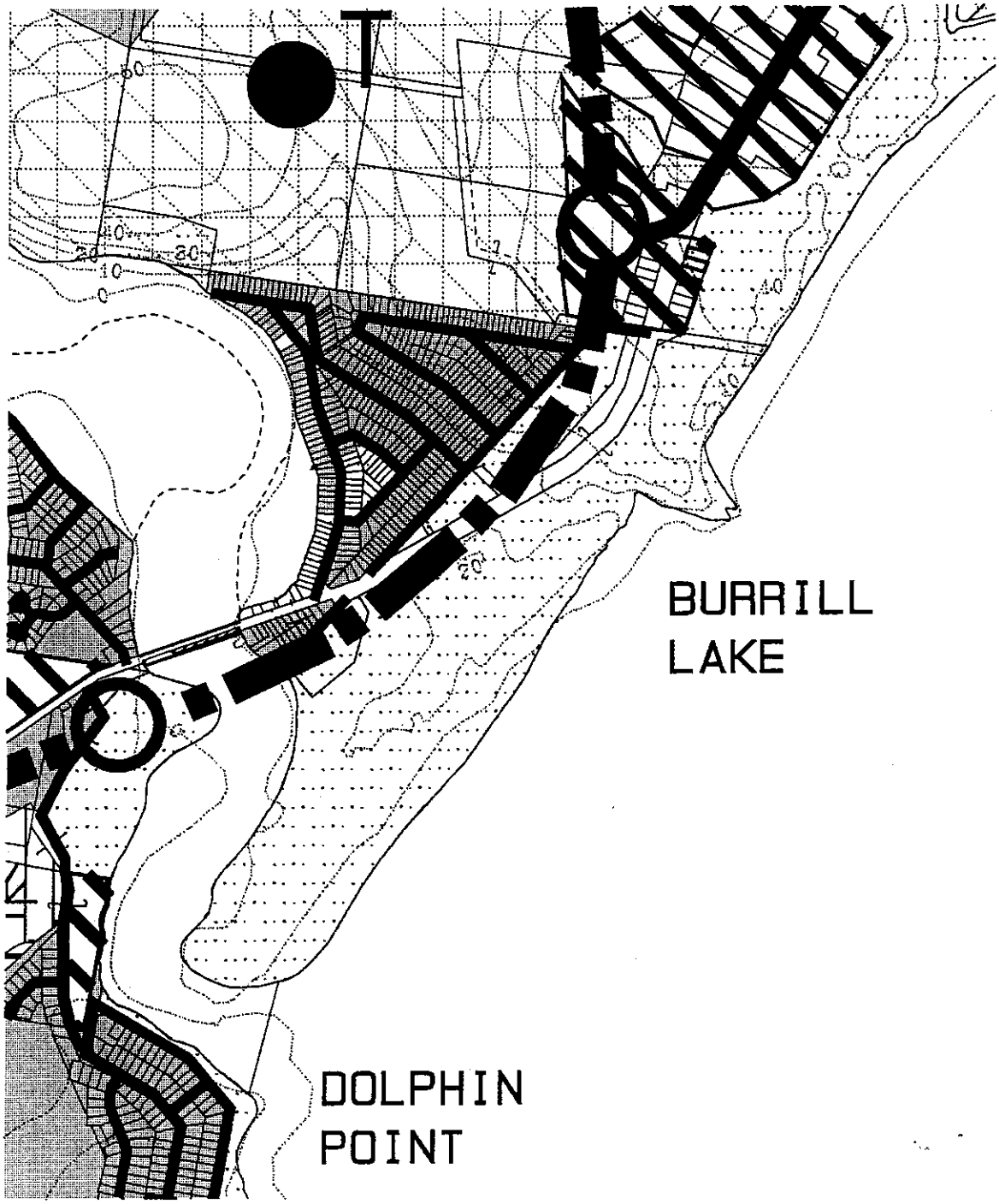
A new bridge straddles the entrance to Burrill Lake, allowing tidal flows and flood waters access to the full width of the entrance channel. A new leisure retail centre has developed on higher ground to the south, leaving the foreshores as a recreation area. Some redevelopment has occurred but the character of the area has been retained. Visitors continue to be attracted to the area, taking advantage of the low cost family style accommodation, safe swimming, quality fishing and sailing.

5.6.3 Development Opportunities

- Ulladulla airstrip
- Low impact tourism resort
- Development of quality entry statement

5.7 DOLPHIN POINT

5.7.1 Key Issues



KEY

- GENERAL URBAN
- BROAD ACRE TOURISM
- EXISTING PARKS & RESERVES
- BUSHLAND CONSERVATION
- EXISTING ROAD STRUCTURE
- STATE HIGHWAY
- WETLANDS
- T LOW IMPACT TOURIST RESORT

BURRILL LAKE VILLAGE

FIGURE 5.6

The key issue in this precinct is the question of development along the ocean foreshores and the loss of remnant forest to the south.

Table 5.10
DOLPHIN POINT SWOT ANALYSIS

STRENGTHS	**WEAKNESSES**
• Ocean and lake frontage • Relaxed atmosphere • Recreational identity	• Poor construction quality • Underutilised • Heavy through traffic • Lack of public facilities • Lack of public transport
OPPORTUNITIES	**THREATS**
• Residential golf course development • Low impact tourism resort • Coastal bushland park	• Ulladulla air strip • Loss of remnant forest • Impact on wetlands

A Vision for Dolphin Point

Significant development of this quiet coastal village has occurred. The nine hole golf course is in full use, as is the new primary school. A new road connects Dolphin Point to the highway passed the neighbourhood/retail/leisure centre. Development further south is constrained by a public reserve, which provides passive recreation opportunities for residents. A quality, low impact tourist resort near Lagoon Point, complements the character of the reserve, which is no longer scarred by eroding beach access trails and inappropriate vehicular use.

Visitors entering the Milton-Ulladulla area from the south are greeted at Dolphin Point by a purpose designed gateway treatment, which both slows highway traffic and extends a hospitable welcome.

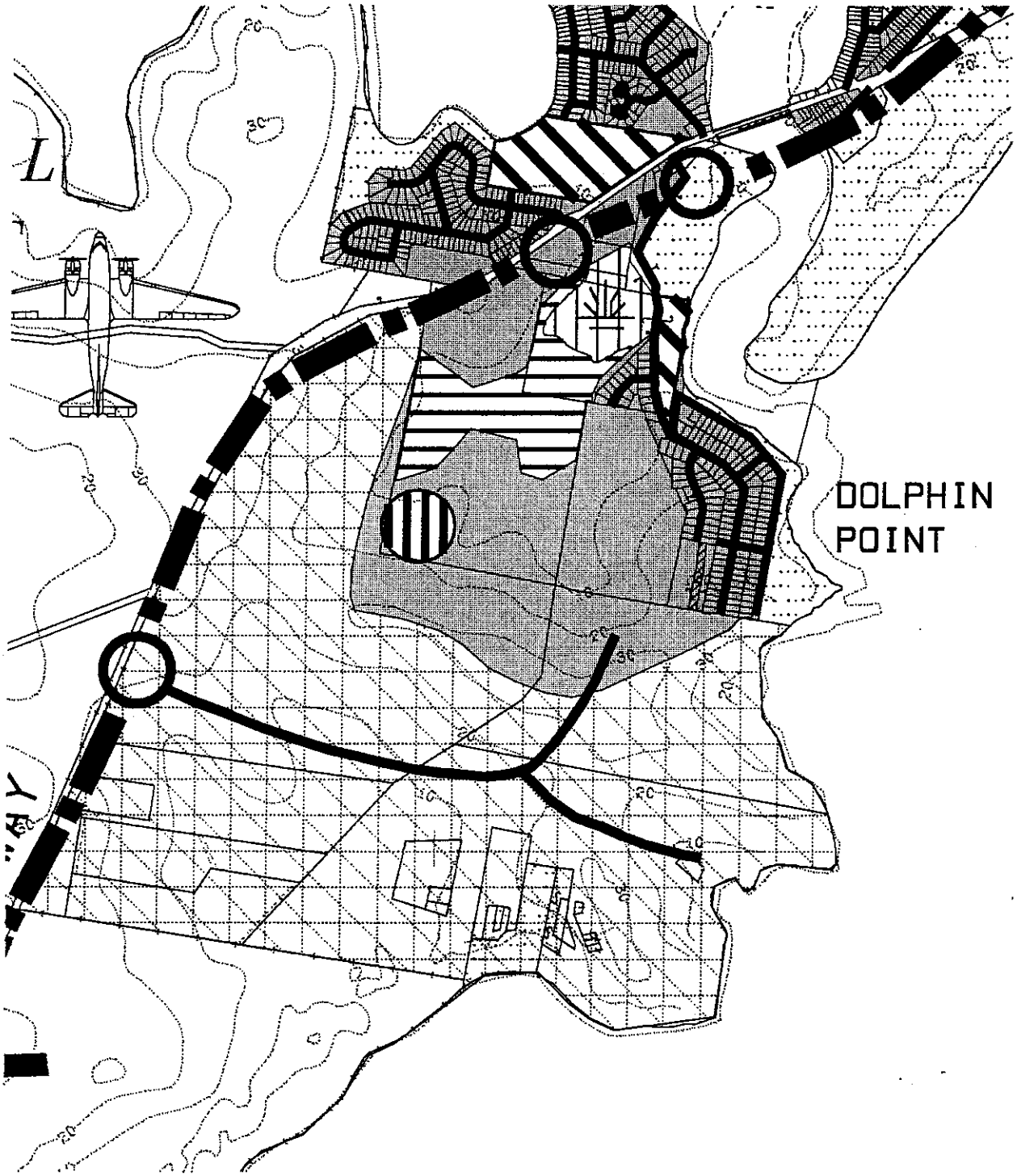
5.7.3 Development Opportunities

- Development of a residential golf course
- Low impact tourism resort
- Development of quality entry statement

5.8 RURAL AREAS

5.8.1 Key Issues

The key issues for the rural area are the further fragmentation of prime crop and pasture land; the severance of land for major urban utility infrastructure; the need to conserve areas of high scenic value; and the maintenance of the biodiversity of remnant forest.



KEY

- GENERAL URBAN
- BROAD ACRE TOURISM
- EXISTING PARKS & RESERVES
- BUSHLAND CONSERVATION
- ACTIVE RECREATION
- EXISTING ROAD STRUCTURE
- STATE HIGHWAY
- WETLANDS
- SCHOOL SITES

DOLPHIN POINT VILLAGE

FIGURE 5.7

Table 5.11
RURAL AREAS SWOT ANALYSIS

STRENGTHS	**WEAKNESSES**
• Rich monzonite pasture • Heritage homesteads • Scenic landscape • Flora and fauna habitats	• High agricultural land cost • Open Milton landscape • Rural/urban edge friction • Extensive rural subdivision • Poor rural roads
OPPORTUNITIES	**THREATS**
• Farmstay accommodation • Agricultural diversification • New Milton High school • Sewerage plant agricultural use of effluent water	• Rural residential • Urban expansion between settlements • Dairy industry contraction • Increased rural/urban conflict • Milton By-pass • Infrastructure corridors

The rural areas can be divided into agricultural areas and green belt areas.

5.8.2 Agricultural Areas

The current community places a high value on the agricultural land surrounding Milton township and extending to the limit of the monzonite intrusion.

The key perspectives are:

- the value as a short term agricultural resource particularly the benefit of continuing dairy operations to the community
- the importance of rich productive soils to future generations
- the heritage value of the cultural landscape
- the scenic quality and its importance to the lifestyle of the district and as a tourism resource.

A Vision for the Rural Area

The essential quality of the Milton cultural landscape has been conserved. The homesteads of original settlers are maintained and appreciated by visitors and urban residents. Agriculture is a mix of traditional grazing enterprises, efficient and sustainable dairy farms and a myriad of horticultural activities meeting the needs of local residents. The productivity of the land is maintained by reticulation of urban waste water throughout the farming area.

The creeks are lined with local species and oasis landscaping softens the rural residential development of the eighties and nineties.

The vibrant cultural landscape with its guesthouses, working riding and cycling trails and small farm produce outlets is a sought after tourist destination.

Development Opportunities

- farm stay accommodation
- new crops on broadacre agricultural land
- orchards and market gardens on small agricultural allotments
- agricultural value adding domestic scale industries
- sewerage plant agricultural use of effluent water

Planning Policies

- encourage short term uses which are compatible with the long term protection of the agricultural resource and cultural landscape.

5.8.3 Green Belt Areas

Green belts provide a visual and functional break between the urban villages and the agricultural areas/cultural landscape.

Vision

"Maintain an area of forest and pasture land which provides a scenic and functional buffer between the urban villages."

There are two distinct forms of green belt in the structure plan area:

- forested areas of scenic importance
- pastoral areas of scenic importance

Forested Areas of Scenic Importance

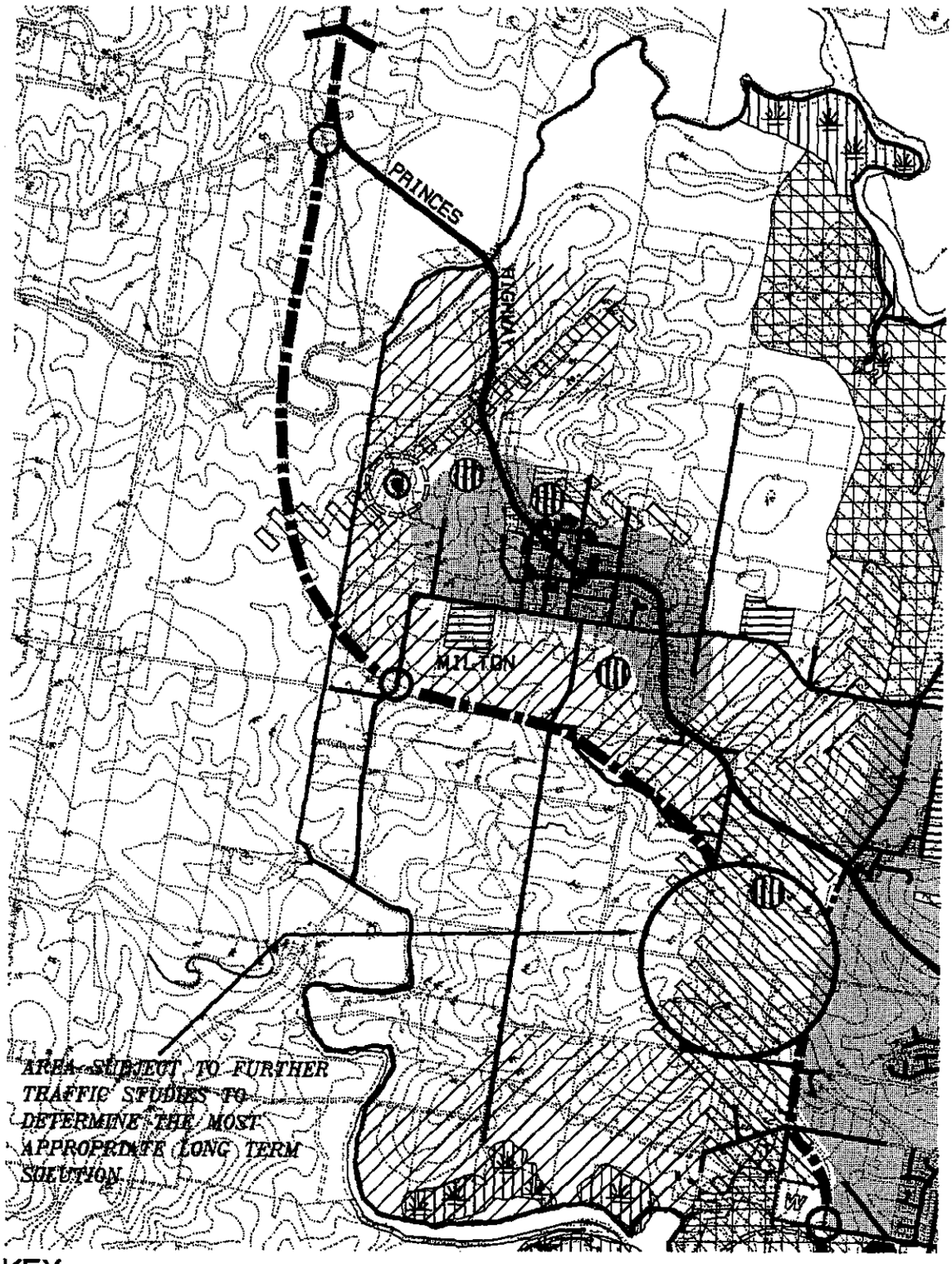
This green belt area is located to the west of Narrawallee, Mollymook and Ulladulla with smaller areas to the north and north-west of Milton.

The key perspectives are:

- reinforcement of forested habitat links between major habitat areas to support the ongoing biodiversity of the area; and
- visual separation between the urban villages.

Development Opportunities

- community and associated uses compatible with the function of the area
- passive and informal recreation
- ecotourism and edu-tourism



KEY

- GENERAL URBAN
- MAJOR RETAIL CENTRE
- EXISTING PARKS & RESERVES
- BUSHLAND CONSERVATION
- VEGETATION & OPEN SPACE LINKAGES
- AGRICULTURAL LAND & CULTURAL LANDSCAPE
- SCHOOL SITES
- AREAS OF SCENIC IMPORTANCE
- ACTIVE RECREATION
- EXISTING ROAD STRUCTURE
- PROPOSED ADDITIONAL ROADS
- STATE HIGHWAY
- PROPOSED WATER FILTRATION PLANT
- WETLANDS
- W — WASTE TRANSFER STATION OR POSSIBLE LONG TERM PICNIC SITE

N

RURAL AREAS

FIGURE 5.8

- utility infrastructure plant and networks required by the urban villages.

Pastoral Areas of Scenic Importance

This green belt area is located to the north-west, west, south and east of Milton.

The key perspectives are:

- maintenance of the pastoral cultural landscape in the immediate vicinity of Milton
- maintenance of a "hard" edge to Milton
- maintenance of a visual and functional buffer between the proposed Milton bypass and the Milton township.

Development Opportunities

- farm stay accommodation utilising existing buildings
- new crops on broadacre agricultural land
- orchards and market gardens on small agricultural allotments

Section Six

PLAN ALTERNATIVES

The structure plan is based on an informed interpretation of the community's desired future for Milton-Ulladulla. It represents a balance between two extremes of minimal or marginal development and a maximum or total capacity level of development. These alternatives are fleshed out and evaluated in the following sections.

6.1 THE ALTERNATIVES

Alternative 1: Minimal Development

This alternative is broadly based on the level of development provided by the current LEP. If all opportunities are taken up, this alternative would accommodate an ultimate population of some 18,000. This option essentially maintains the status quo.

Alternative 2: Maximum Development

The second alternative assumes that almost all the land in the district is in fact capable of being developed. It would result in the creation of one continuous urban form which links Ulladulla and Mollymook to Milton, links Ulladulla with Kings Point and would result in the fusion of the lake entrance villages into one entity. It also assumes there would be a new settlement located within the agricultural area to the north of Burrill Lake. This option would have the potential to accommodate an ultimate population of the order of 45,000.

These alternatives (and how they compare with the existing situation and the preferred strategy) are depicted in graphic form in Figure 6.1.

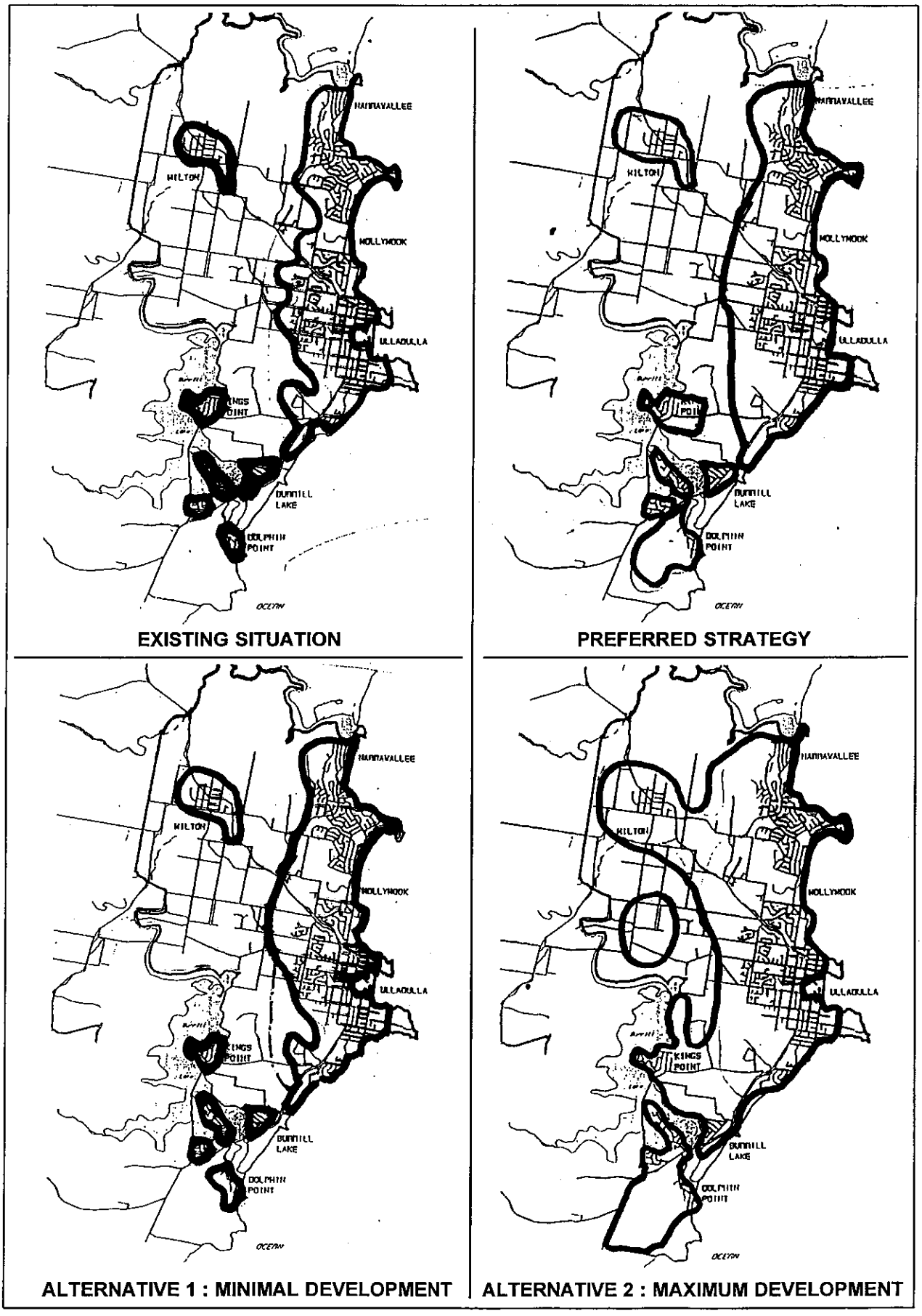
6.2 ALTERNATIVE EVALUATION

The two alternatives have been evaluated according to the development principles espoused by the community, supplemented by consideration of utility infrastructure provision. This evaluation is summarised in Tables 6.1 and 6.2.

Principle 1: Keeping Our Lifestyle

In the minimum development option, many avenues have already been foreclosed, yet the basic village structure remains largely intact. However, the current trend for rural residential development on the fringe of the urban areas has the capacity to seriously undermine this situation.

The fact that the centralised maximum development option would leave only minimum open space (if any) between the villages would mitigate against the maintenance of separate villages with individual characters and sense of place.



DEVELOPMENT OPTIONS FOR MILTON - ULLADULLA

FIGURE 6.1

Principle 2: Balancing the Natural and Built Environments

The minimum development option generally maintains key areas of prime crop and pasture, maintains cultural landscapes, generally maintains natural habitats and accepts a transformation of the visual environment. This alternative respects topographical constraints and areas of wetland.

The maximum development alternative would result in a total loss of prime crop and pasture, the district's cultural landscapes severely compromised, its natural habitats almost totally lost and accepts the total transformation of the visual environment. This option would take development to the physical limit, although it generally avoids areas of wetland.

Principle 3: Making Money Locally

The minimum development option provides little scope for economic growth through residential and tourism development. However, the district's natural resource assets, such as its prime crop and pasture and its remnant forests, would remain intact.

The maximum development alternative, on the other hand, would provide a major injection of shorter term economic benefits through residential development and the longer term benefits which accrue from the creation of a larger local market. This, however, would be at the expense of the district's natural resource assets, such as its prime crop and pasture land.

Principle 4: Sharing with Visitors

The minimum development option would continue the low key nature of tourism development in the district, with its focus on budget family accommodation and holiday houses. It would maintain the character of the district's major natural attractions. This option would provide minimum scope for higher value tourism development, lacking the critical mass for the provision of higher levels of visitor support facilities and services.

Alternatively, the maximum development option would transform the district into an urban tourism precinct. Much of the character and charm that currently draws visitors to the area would be diminished. The potential for eco-tourism and cultural tourism would also be minimised.

Principle 5: Moving Around the Area

The minimum development option would essentially result in the continuation of the status quo. A low level of development would make the complete by-pass of Milton-Ulladulla less tenable, and would diminish the viability of any significant upgrade of public transport.

The major benefit of the maximum development option would be the larger population base that would make a higher level of public transport more feasible and make the complete by-pass of Milton-Ulladulla a necessity. The corollary of this would be higher traffic volumes on the local network, and reduced opportunities for off-road movement networks, because of the general loss of open space.

Principle 6: Maintaining A Co-operative Community

The minimum development alternative would maintain very much the community structure which exists at present. However, it would not achieve the higher population thresholds that would justify higher levels of community facility provision.

On the other hand the maximum development option would result in a radical change to the existing community structure, but would provide the necessary critical population mass that would justify higher levels of community facility provision.

Principle 7: Utility Infrastructure

The minimum development option would result in minimal augmentation to water supply, the relocation of the sewerage plant (as planned) and the maintenance of a generally unsatisfactory urban drainage system (Figure 6.2).

The maximum development option, on the other hand, would result in the major augmentation of the water supply, the relocation of the sewerage treatment plan (as planned) with sewerage loading at or above effluent absorption capacity, with urban drainage a major problem.

6.3 CONCLUSIONS

The minimum development option, is predicated on many of the values espoused during the community visioning exercise. Essentially perpetuating the status quo, this option maintains the district's natural environment in a state that is not under undue pressure. It, however, lacks the critical community size which would lead to economic growth and justify higher thresholds of community and infrastructure facilities and services.

The maximum development alternative is almost completely at odds with the majority of values considered important by the community. It would achieve a critical community size that would support a higher threshold of commercial and community facilities and services. However, the larger population base could pose problems of higher unemployment, were the population size to exceed the capacity of the local economy to employ them. This centralised approach could be at the expense of the economic viability of the coastal villages of the sub region. The major loser would be the quality of the natural environment and cultural landscape of the district. To achieve this end, almost the entire prime crop and pasture land (an irreplaceable finite economic resource) would be lost, as would almost all of the remnant vegetation communities and their associated fauna habitats.

On balance it can be said with some certainty that neither of these alternatives, particularly the second one, would return the same benefits to the Milton-Ulladulla community as the preferred strategy.

Table 6.2 Evaluation of Plan Alternatives Against Infrastructure Needs

Servicing Constraints	Plan Alternative 1 Minimum Development	Plan Alternative 2 Maximum Development
Water	No Augmentation	Major Augmentation
Sewerage	Sewerage Plant to be relocated /augmented	Sewerage Plant to be relocated /augmented
Drainage	Urban drainage generally unsatisfactory	At/above effluent absorption capacity Urban drainage a major problem

Note: Electricity supply and reticulation is not considered to be a major constraint.

Table 6.1 Evaluation of Plan Alternatives Against Community Principles

Community Principles	Alternative 1: Minimal Development	Alternative 2: Maximum Development
1. Keeping Our Lifestyle • safeguarding identity & character of villages • enjoying a relaxed, friendly and stimulating atmosphere	• basic village structure remains largely intact • fringe rural residential development a negative feature	• loss of individual identity and character of villages • loss of relaxed, informal atmosphere
2. Balancing the Natural & Built Environments • *keeping the current* landscape balance • safeguarding the livability of villages	• areas of prime crop & *pasture maintained* • natural & cultural landscapes maintained	• loss of prime crop and *pasture land* • loss of natural and cultural landscapes
3. Making Money Locally • diversify business & industry based on existing lifestyle • building on & protecting valued cultural assets	• little scope for economic growth • natural and cultural economic assets maintained	• creation of a larger local market • residential development a prime engine of economic growth • loss of natural & cultural economic assets
4. Sharing with Visitors • developing tourism which maintains our lifestyle • *attracting visitors who* share our values about the special nature of Shoalhaven	• low key nature of tourism development & activity *maintained* • little scope for higher value tourism development	• transition to an urban tourism precinct • *transformation of natural* & cultural visitor attractions

Community Principles	Alternative 1: Minimal Development	Alternative 2: Maximum Development
5. Moving Around the Area • developing a more diverse & integrated transport system • developing a transport system which specifically meets the needs of older & younger people	• low impetus for the development of public transport • low demand for complete Milton-Ulladulla bypass • maintenance of manageable traffic volumes on local network	• greater demand for improved public transport system • high impetus for complete Milton-Ulladulla bypass • high traffic volumes on local network
6. Maintaining a Cooperative Community • enabling community public forums • providing co-ordinated community services & facilities	• existing community structure remains largely intact • little impetus for higher threshold community facilities	• greater demand for higher order community facilities • radical change to existing community structure

Section Seven

IMPLEMENTATION

The structure plan represents the first concrete stage in developing a desired future for Milton-Ulladulla. It fleshes out a situation that would take between twenty and twenty-five years to realise. In order to maintain an orderly and consistent pattern of growth, which can be efficiently supported by urban infrastructure, there is a need to stage development in periods of five to ten years at a time. On this basis the next step would be the formulation of a local environmental plan (LEP) for Milton-Ulladulla.

7.1 DEVELOPMENT PLANNING AND PRIORITIES

Since residential development accounts for over 60% of urban land uses, its phasing will tend to set the pace for the structure plan's realisation. The development of residential areas would be phased taking into account the need to keep pace with the provision of urban infrastructure and the need to maintain the character and identity of the urban villages. The proposed indicative phasing of the Milton-Ulladulla's key residential areas is tracked in Table 7.1.

Table 7.1
INDICATIVE PHASING OF RESIDENTIAL DEVELOPMENT (New Dwellings)

Residential Area	2001	2006	2011	2016	2021	2026	Total
1. Narrawallee West	100	100	100	100	30		**430**
2. Mollymook West	100	200	150	120	120	100	**790**
3. Milton West				50	100	150	**300**
4. Ulladulla West	200	200	200	200	200	130	**1,130**
5. Kings Point East			90	150	150	200	**590**
6 Dolphin Point South	100	100	100	70			**370**
7 South Ulladulla			50	50	100	50	**250**
8. Ulladulla Urban Infill		50	50	100	100	100	**400**
Total	**500**	**650**	**740**	**840**	**800**	**730**	**4,260**

Major Project Priorities

For the structuring of Milton-Ulladulla to be successful, a number of major projects would need to be put in place in a co-ordinated sequence. The major projects identified in the structure plan are listed in Table 7.2, together with the responsible organisation and priority/timing.

Table 7.2
PRIORITISED DEVELOPMENT OF MAJOR PROJECTS

Project	Responsibility	Priority/Timing
Transport:		
• St Vincent Street Functional Upgrade	Council	Immediate
• Ulladulla Bypass (Northern Link Road)	Council/RTA	Short Term
• Ulladulla CBD Pedestrian Priority Area	Council/Mainstreet	Short Term
• Mollymook Pedestrian Priority Area	Council	Medium Term
• Milton Bypass	Council	Medium/Long Term
• Ulladulla CBD Parking	Council/Mainstreet	Short Term
• New Burrill Lake Entrance Bridge	RTA	Long Term
• Ulladulla Airport	Council	Long Term
Tourism Development:		
• Flagship Hotel/Convention Centre	Private Sector	Short Term
• Active Leisure Facility	Private Sector	Short/Medium Term
• Built Attraction	Private Sector	Short/Medium Term
Commercial Development:		
• Retail Major in Ulladulla CBD	Private Sector	Short/Medium Term
• Local Retail Centres	Private Sector	Medium/Long Term
Business and Industry:		
• Expanded and Upgraded Business/Industrial Park	Council	Short Term
• Local Enterprise Nodes	Council/Private Sector	Short/Medium Term
Community Facilities:		
• Dolphin Point Primary School	Dept School Education	Short Term
• Milton High School	Dept School Education	Medium Term
• Mollymook Primary School	Dept School Education	Medium/Long Term
Recreation:		
• Ulladulla Indoor Aquatic Centre	Council	Short Term
• West Ulladulla Recreation Complex	Council	Medium Term
Utility Infrastructure:		
• Water Treatment Plant	Council	Immediate
• Relocated Sewerage Treatment Plant	Council	Short/Medium Term

NOTE: Immediate 1-5 years. Short Term 5-10 years. Medium Term 10-20 years. Long Term 20+ years

7.2 MILTON-ULLADULLA LEP

An LEP for Milton-Ulladulla would provide zoning opportunities for approximately ten years (2006). The LEP would more accurately define some of the components of the structure plan and give them statutory teeth.

7.3 DEVELOPMENT CONTROL PLANS

On the basis of the Milton-Ulladulla LEP, a number of development control plans (DCPs) would be prepared for key areas in the district. These would most likely include:

- Ulladulla CBD/harbour;
- Milton;
- Mollymook hospitality core;
- West Ulladulla;
- Kings Point; and
- Burrill Lake/Dolphin Point

Section Eight

MONITORING

Monitoring is an crucial and integral part of the planning process. It is though monitoring that the community becomes aware of whether its desired future is being achieved and whether adjustments to policy and management procedures are required.

Monitoring also has a secondary benefit in providing an up-to-date information base for private and public economic, social and environmental decision making.

For a monitoring system to be effective it must:

- measure those things which the community believe are important;
- identify trends as clearly as possible;

provide easy access to information by way of regular reporting; and
be cost effective and respected.

8.1 SELECTING INDICATORS

Measuring every economic, social and environmental factor is just not possible. There is a trend towards measuring indicators which are those key factors which tend to mirror the health of a system.

Identifying indicators is a relatively new skill. Some will already be included in existing monitoring programs. For instance, the Council has an extensive water quality monitoring program which it reports annually in the State of the Environment Report. Also, the Commonwealth collects census data every five years.

It is unlikely that these existing programs will be comprehensive enough to fulfill the monitoring needs for this plan.

8.2 DESIGNING A MONITORING SYSTEM

A workshop has been planned for late November 1996 to identify an appropriate indicator list and to seek community support to establish a monitoring program. The same people who attended the workshop from Vision to Action will be invited to participate in the monitoring workshop.

The process used would simply entail asking a series of questions, such as:

- "What is important" - in this case those things which the community value have been translated into principles and objectives although public exhibition may result in a review of those.

- "How will we know if we are achieving our objective" or "How will we know if the outcome is consistent with our principles".

- "Is the proposed indicator easily and cost effectively measured".

- "Is the measurement repeatable and scientifically accepted".

- "Who will take the measurements, how often, and who will cover costs".

- "How will the information be distributed".

The answers to these questions will generate a community based monitoring system.

8.3 WIDER ISSUES

There may be a need to monitor more issues than the community believe are important. Two possible circumstances might be

- some legal responsibility eg the Local Government Act
- some measures of local sustainability.

There is also some benefit in designing the system to facilitate national and global sustainability.

8.4 MEASURING SUSTAINABILITY

The integration of social, economic and environmental issues is a key means to making progress toward sustainability so identifying indicators which measure the level of integration would seem to be important.

This requires not only a spread of indicators across social, economic and environmental sectors but also those which list whether two of the three sectors objectives are being met together and ultimately whether all three sectors objectives are being met. The monitoring system may take the form illustrated in Figure 8.1.

The greater the level of integration, the greater the proportion of indicators from any one sector which appear in the intersection between sectors and hence the greater the chance of sustainability.

8.5 POTENTIAL INDICATORS

Without pre-empting the outcome of the November workshop, a set of potential indicators has been developed that focus on the social, economic and environmental spheres as well as the infrastructure component of the structure plan.

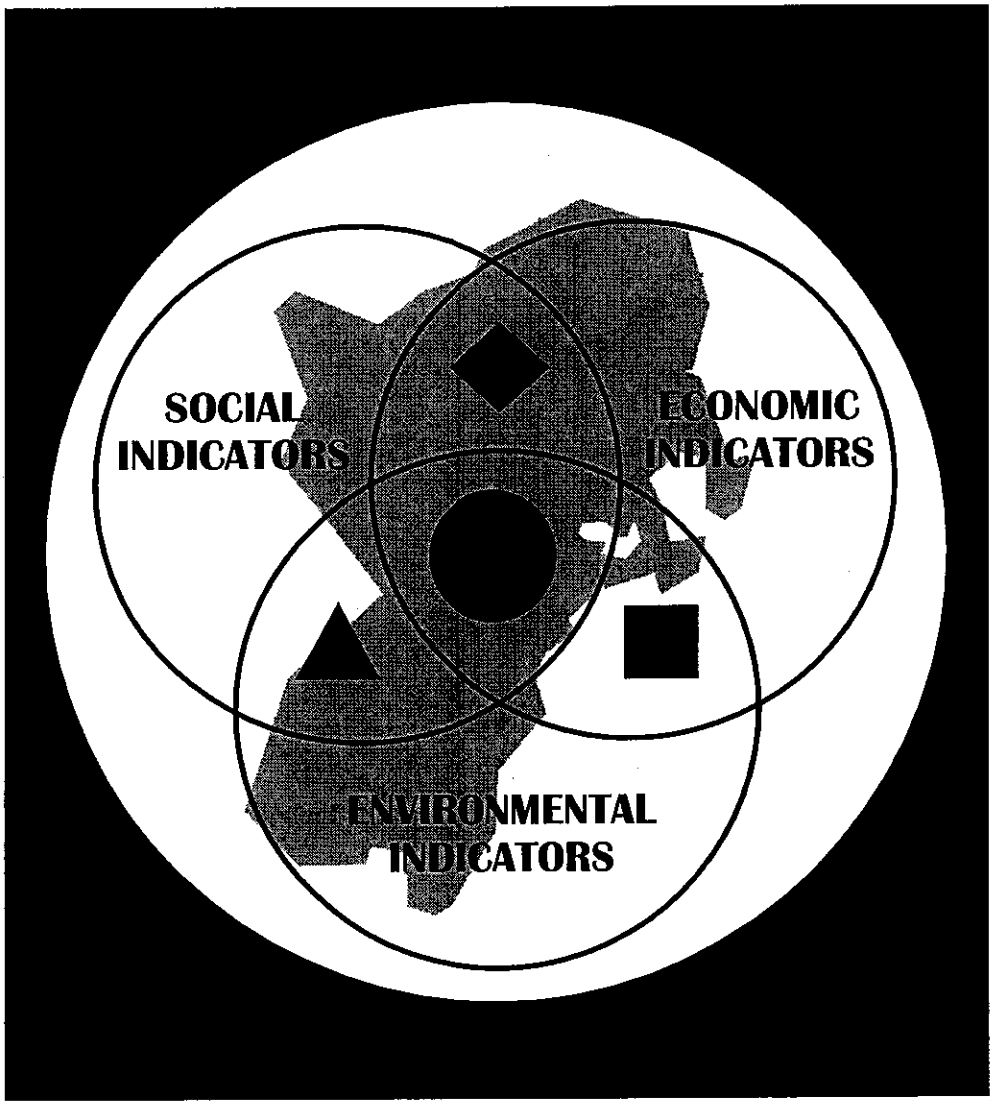
8.5.1 Social Indicators

The social well-being of Milton-Ulladulla can be measured in terms of unemployment levels; crime incidence reporting; public housing and aged care waiting periods; and youth homelessness.

- When the youth unemployment rate decreases by 0.5% for two consecutive years, as measured by the Commonwealth Employment Service;

- When the level of crime incidence reporting declines by 5% for two consecutive years, as measured by the NSW Police;

- When the waiting period for public housing is less than two years, as measured by the NSW Department of Housing;



● LOCAL SUSTAINABILITY INDICATORS
◆ SOCIAL JUSTICE INDICATORS
■ ECOLOGICALLY SUSTAINABLE DEVELOPMENT INDICATORS
▲ SUPPORTIVE ENVIRONMENTS INDICATORS

MEASURING LOCAL SUSTAINABILITY

FIGURE 8.1

- When the waiting period for aged care accommodation is less than one year, as measured by Council;

- When the number of homeless and at risk youth has declined by 10%, as measured by Council;

- When the level of reported substance abuse (excessive alcohol or drug consumption) is reduced by 5% for two consecutive years, as reported by Council.

8.5.2 Economic Indicators

The economic health of Milton-Ulladulla can be measured in terms of tourism; the retail sector and commercial sector; the dairy and fishing industries; and the general industrial sector.

Tourism:

Success of the tourism component of the plan can be measured by the following yardsticks:

- When the number of visitors to Milton-Ulladulla increases by more than 5% in each of two successive years, as measured by the Domestic Tourism Monitor;

- When the number of visitor nights remains constant or increases in each of two successive years as measured by the Domestic Tourism Monitor;

- When nights in commercial accommodation in Milton-Ulladulla increases by at least 3% annually over a period of three years, as measured by the Australian Bureau of Statistics;

- When demand for tourist accommodation leads to a successful development application which increases the total number of holiday apartments, as measured by Council; and

- When the estimated attendance at the 'Blessing of the Fleet' and 'Settlers Fair' respectively achieve a 10% annual increase in each of two successive years, as measured by the Milton-Ulladulla Tourism Association.

Retail Development:

The success of the retail component of the plan can be measured by the following yardsticks:

- When retail floor space in the Ulladulla CBD increases by 5% over a five year period, as measured by Council;

- When retail floorspace in Milton increases by 2% over a five year period, as measured by Council;

- When the ratio of non-food retail floorspace in the Ulladulla CBD exceeds 60%, as measured by Council;

- When annual retail turnover in the Ulladulla CBD and Milton increases by more than 3% in each of two successive years, as measured by Milton-Ulladulla Main Street;

- When leisure retail floorspace in Mollymook's golden triangle increases by more than 10% over a five year period, as measured by Council.

Commercial:

The success of the commercial component of the plan can be measured by the following yardsticks:

- When commercial office floorspace in the Ulladulla CBD increases by 5% over a five year period, as measured by Council;

- When office floorspace in Milton increases by 3% over a five year period, as measured by Council; and

- When the number of 'home activity' applications increase by 5% over a five year period, as measured by Council.

Dairy and Fishing Industries:

The success of the primary industry component of the plan can be measured by the following yardsticks:

- When the average size of dairy herd and average milk yield, as measured by the Milton Dairy Farmers Association; and

- Size of fishing fleet and value of annual export catch, as measured by the Ulladulla Fishermans Cooperative.

Residential Development:

The success of the housing industry sector component of the plan can be measured by the following yardsticks:

- When housing completions equal or exceed the anticipated annual average of 180 dwellings/annum, as measured by Council;

- When multiple unit development equals or exceeds 20% of total housing completions, as measured by Council; and

- When rural residential development represents less than 0.5% of annual house completions, as measured by Council.

General Industry:

The success of the general industry component of the plan can be measured by the following yardsticks:

- When industrial covered floorspace in the Ulladulla Business Park increases by 10% over a five year period, as measured by Council.

8.5.3 Environmental Indicators

The environmental health of Milton-Ulladulla can be measured in terms of water quality, air quality; soil conditions and biodiversity.

Water Quality:

The success of the water quality component of the plan can be measured by the following yardsticks:

- ***Faecal Coliforms:*** For primary contact waters (eg swimming and diving) the median value should not exceed 150 coliform organisms per 100 ml for a minimum of 5 samples taken at regular intervals not exceeding 1 month with 4 out of 5 samples containing less than 600 organisms per 100 ml.

- ***Dissolved Oxygen:*** This should not be permitted to fall below 6 mg/L or 80-90% saturation.

- ***Biochemical Oxygen Demand:*** Where a natural water body has a BOD greater than 5 mg/L it can be considered to be in poor health.

- ***pH Value:*** The acceptable range is 6.5-8.5. Marine waters should not be permited to vary by more than 0.2 units from normal values.

- ***Suspended Solids:*** Marine estuaries should be <20mg/L. Seasonal turbidity should not change by more than 10%.

- ***Conductivity/Total Disolved Solids:*** Higher than 'normal' conductivity and total disolved solids.

- ***Salinity:*** In fresh waters salinity should not be higher than 1500 us/cm. In estuaries and coastal waters salinity should not vary by more than 5% from background levels.

- ***Temperature:*** For warm water discharges to natural systems the maximum permissible increase in the natural temperature of any inland or marine water should not be greater than 2 degrees Celsius

- ***Nutrients:*** Total nitrogen should not exceed 0.5 mg/L; total phosphorous should not exceed 0.05 mg/L; and a nitrogen:phosphorous ratio (N:P) is less than 10 may facilitate the production of blue green algae; and if the N:P ratio is greater than about 20:1 the system is limited by phosphorous and if less than about 16:1 it is limited by nitrogen.

- ***Chlorophyll-a:*** Chl-a levels in freshwater lakes should not deviate from 2-10 ug/L; Chl-a levels in estuaries and embayments should not deviate from 1-10 ug/L; Chl-a levels in coastal waters should not deviate from 1 ug/L.

Air Quality:

The success of the air quality component of the plan can potentially be measured by the following yardsticks:

- Airborne Particulates.
- Airborne Lead.
- Airborne Carbon Monoxide.
- Airborne Odours.

Soil Conditions:

The success of the soil condition component of the plan can be measured by the following yardsticks:

- Erodibilty.
- Ground Water.
- Invertebrate Count.

Biodiversity:

The success of the biodiversity component of the plan can be measured by the following yardsticks:

- When there are no losses to recorded native flora species or when losses do not exceed 1% over a five year period.

- When there are no losses to recorded native fauna species or when losses do not exceed 1% over a five year period.

8.5.4 Infrastructure Indicators

Roads and Traffic:

The success of the roads and traffic component of the plan can be measured by the following yardsticks:

- When traffic volumes on any given section of road are less than 90% of peak capacity.

- When peak parking demand in any public car park is less than 90% of capacity during the off-season.

Water and Sewerage:

The success of the water and sewerage component of the plan can be measured by the following yardstick:

- When peak parking demand for water and sewerage is less than 80% of capacity during the peak season.

Electricity and Communications:

The success of the electricity and communications component of the plan can be measured by the following yardstick:

- When peak parking demand for electricity and communication services is less than 75% of capacity during the peak season.

8.6 MONITORING FREQUENCY AND OUTCOMES

8.6.1 Monitoring Frequency

To be effective there should be a major review of the state of the Milton-Ulladulla system every five years, coinciding with the release of the five yearly Census results.

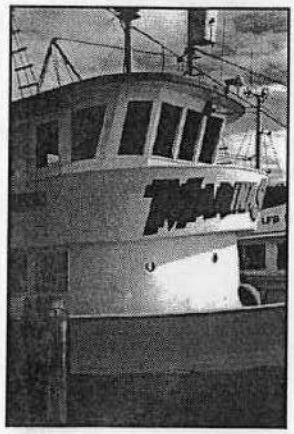
8.6.2 Monitoring Outcomes

The forum for the monitoring review process would be the visioning task force. Thus every five years the task force would meet and evaluate in both quantitative and qualitative terms what progress is being made towards the vision.

Table 8.1
MONITORING PERFORMANCE SCHEDULE

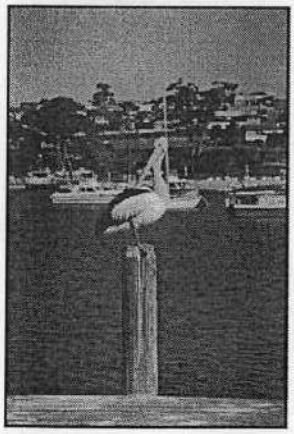
Performance Criteria	Period 1	Period 2	Period 3	Period 4	Period 5
Social Performance Criteria:					
Unemployment					
Housing Availability					
Incidence of Substance Abuse					
Crime Incidence Reporting					
Economic Performance Criteria:					
Tourism Development					
Retail Development					
Commercial Development					
Dairy & Fishing Industries					
Residential Development Industry					
General Industry					
***Environmental Performance* Criteria:**					
Water Quality					
Air Quality					
Soil Conditions					
Biodiversity					
Cultural Landscapes					
Infrastructure Performance Criteria:					
Roads & Traffic					
Water & Sewerage					
Electricity & Communications					

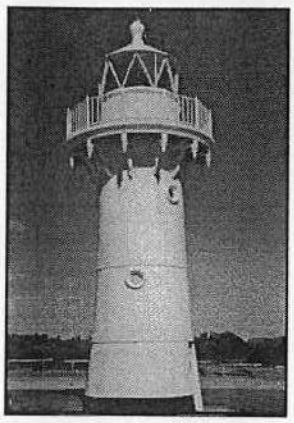
Note: Assumes major monitoring reviews occur every five years.



MILTON - ULLADULLA STRUCTURE PLAN

Volume 2
BACKGROUND STUDY





Planning Services Division
SHOALHAVEN CITY COUNCIL
in association with
Monaro Consultants Pty Ltd
YARRALUMLA ACT

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Section One

INTRODUCTION

1.1. PURPOSE

The Background Study and its supporting specialist reports represents the basis for the structure plan. It provides a profile of where Milton-Ulladulla is now; how it has got there; and where it is headed. It is an integral part of a three volume document, which comprises:

- Volume 1: Structure Plan: Strategy;
- Volume 2: Structure Plan: Background Study; and
- Volume 3: Structure Plan; Sumary Report.

The Background Study contains background data and assessment of the following:

1.2 CONDUCT OF THE STUDY

The Background Study commenced in July 1995 and was completed in April 1996. The study team comprised both Council staff and consultants working under contract to Council. Monaro Consultants took carriage of the mainstream study and was assisted by Council's professional and technical staff and specialist consultants.

Specialist Reports

The following specialist reports were produced to support the structure plan:

- "Preferred Urban/Rural Futures for Southern Shoalhaven: an ILAP Project", Centre for Resource Environment Studies (1966).

- "Flora and Fauna Assessment: Milton-Ulladulla Structure Plan", Kevin Mills and Associates (1995).

- "Aboriginal Archaeological Survey of Milton-Ulladulla", Tim Stone (1995)

- "Milton-Ulladulla Transportation Model", Transportation and Traffic Systems (1966).

Section Two

PHYSICAL SETTING

This section provides the basic physical context to the structure plan. It helps to establish the yardstick against which issues of future sustainability can be measured. The evaluation includes land form (geology, soils, topography and drainage); climate and microclimate; flora and fauna; landscape; as well as environmental quality.

2.1 LAND FORM

The current land form of the Milton-Ulladulla area is a product of its base geology, modified by variations in climatic conditions over millions of years.

2.1.1 Geology

The geological structure of the Milton-Ulladulla area comprises two basic units:

- sedimentary deposits, which dominate the eastern and southern portions of the area; and
- a volcanic intrusion that dominates the north-western quarter around Milton.

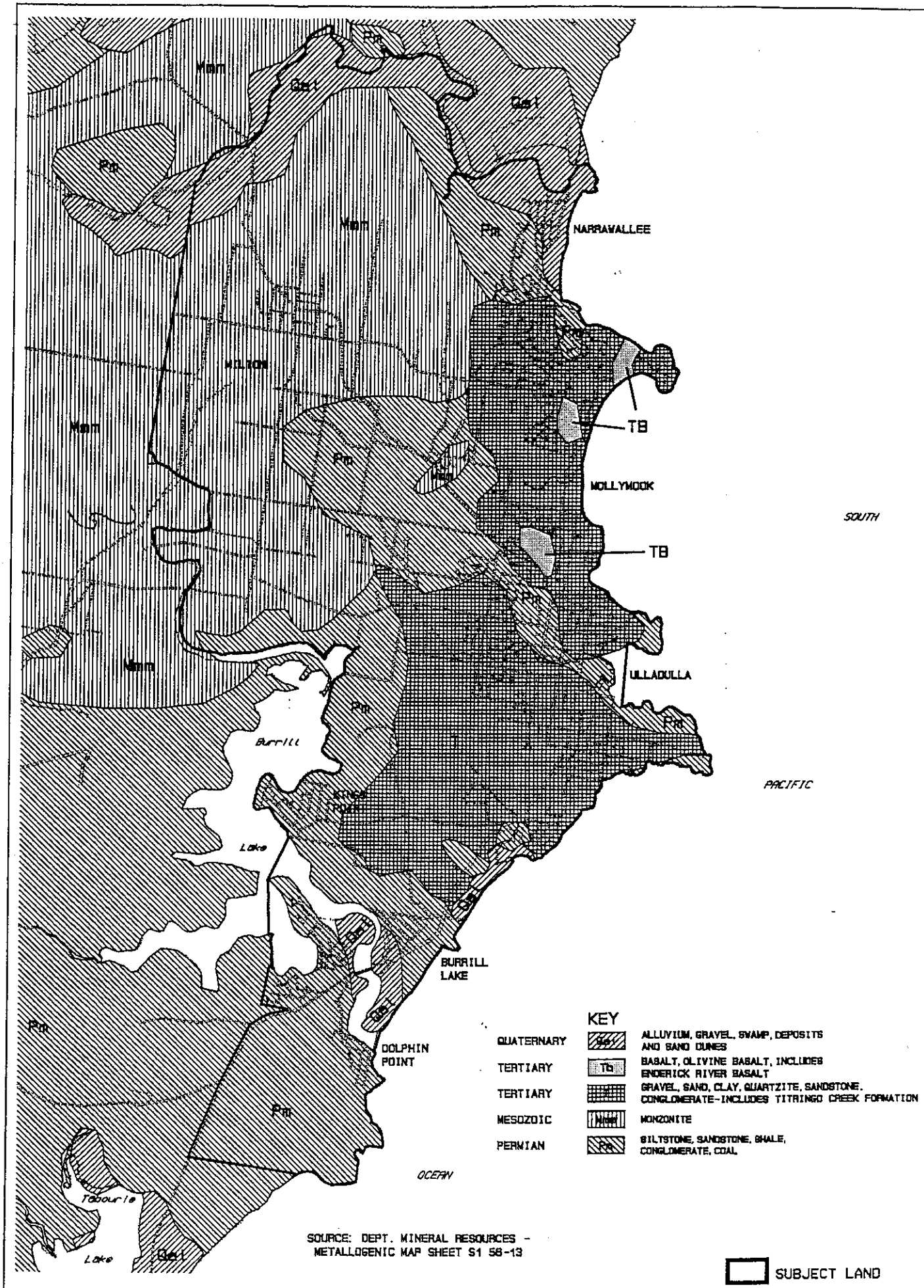
Sedimentary Deposits
The sedimentary deposits are predominantly Permian and Tertiary Age conglomerates, silty sandstones, clays and gravels (Figure 2.1). These are overlain in places by minor deposits of Quaternary Age and more recent sands around the entrances to Burrill Lake and Narrawallee Inlet.

Volcanic Intrusion
The Milton volcanic intrusion consists of Monzonite hypabyssal formations.

2.1.2 Soils

Sedimentary Soils
Soils developed on the sedimentary sandstone deposits tend to have low fertility and are prone to erosion, when disturbed. They vary in texture from sandy loams to loams. Water moves down slope through the topsoil layer above a band of clay, contributing to seasonal wetness within these soils. Similarly, soils associated with the sands of the dune areas tend to be low in fertility. A high water table is also present in these soils, causing surface seepage in low lying areas. These soils are susceptible to gully erosion during high flows in the watercourses, which can be aggravated when vegetation cover is removed.

Volcanic Soils
The Milton Monzonites have weathered to produce dark heavy textural soils. These soils constitute a very fertile agricultural resource rich in phosphorus and potassium. The importance of these Monzonite soils is emphasised by the fact that there is no other area of equivalent soil value between the flats of the Shoalhaven delta and a similar volcanic area near Tilba on the far South Coast.



GEOLOGICAL STRUCTURE

FIGURE 2.1

2.1.3 Topography and Drainage

Terrain
The geological formations of the area have been modified to produce today's land form by the dynamic action of the ocean and inland by the effects of sustained weathering (temperature variations, rainfall and wind). The area is given its basic form by a series of ridges which extend like fingers from the north-west towards the south-east. Where these ridges confront the power of the ocean they have been eroded to produce the three major headlands of the area: Bannister Point, Ulladulla Head and Warden Head, the most prominent of the three (Figure 2.2).

Drainage
The intervening low-lying areas are drained by Croobyar Creek to the north, Mollymook Creek, Millards Creek and Racehorse Creek, which enter the ocean passing through coastal dunal systems. The estuarine Burrill Lake, which defines the southern boundary of the area, is a drowned river valley formed by a rise in sea level after the last Ice Age.

Flood Prone Areas
Several areas within the study area are subjected to flooding, particularly on two types of land forms.

(I) ***Flood Plains***
Located north of Dolphin Point, Burrill Lake and an area between Milton and Narrawallee. These areas are subject to major flooding and flood heights may be accentuated, particularly at Burrill Lake, by tidal influence.

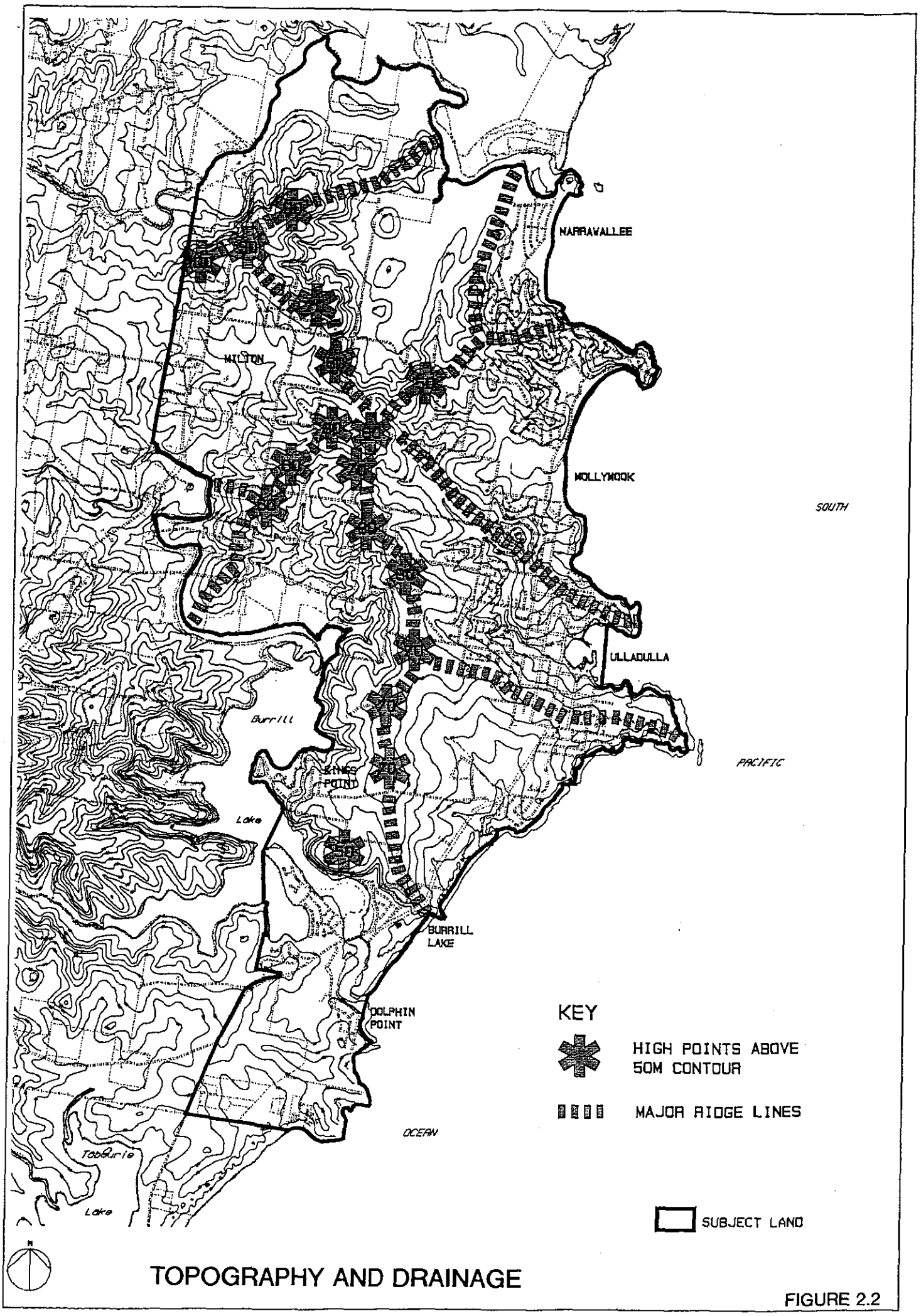
(Ii) ***Drainage Plains***
These areas are generally associated with tributaries above the flood and coastal plains. Areas such as these are mostly affected by overland flow of water rather than prolonged periods of inundation.

2.2 CLIMATE AND MICROCLIMATE

The area is characterised by warm summers and mild winters and receives reliable and adequate rainfall throughout the year.

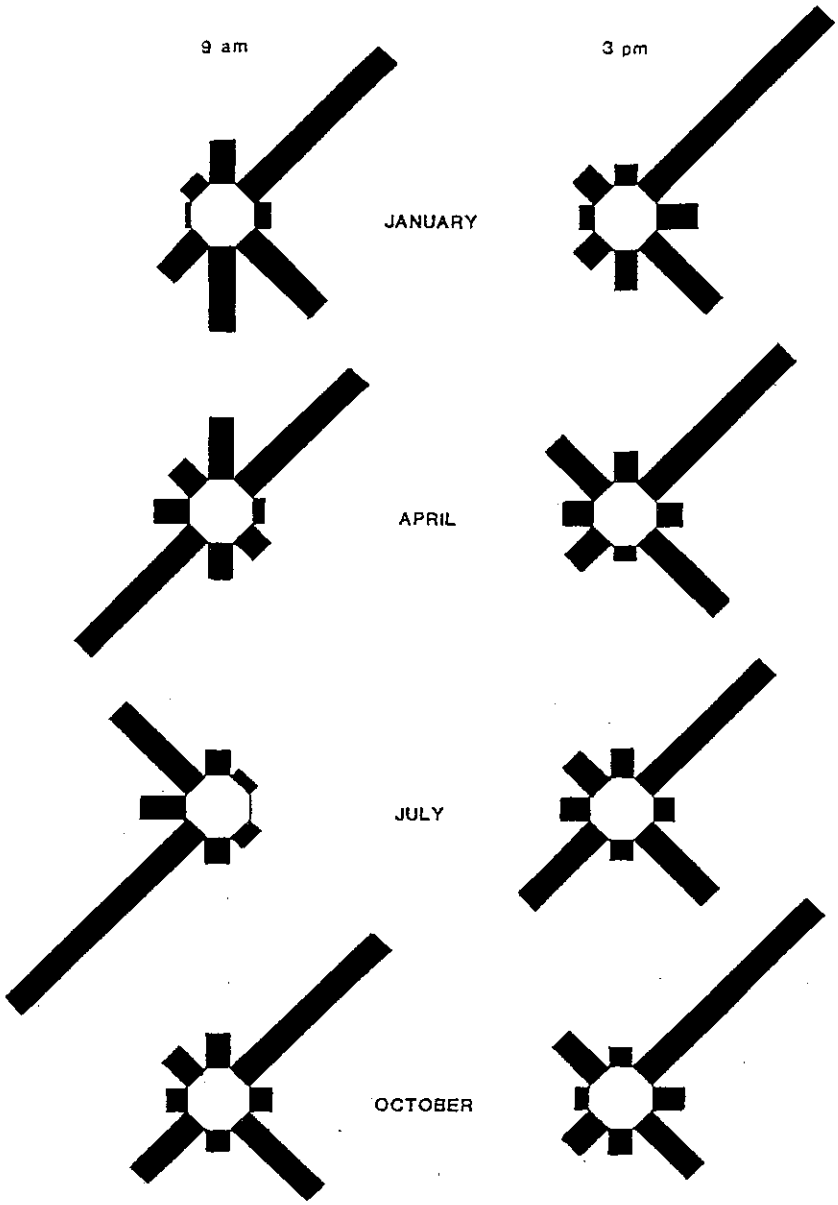
Temperature
The mean daily maximum temperature for both January and February is 24.3°c. Frosts in winter are not uncommon in the area (Figure 2.3).

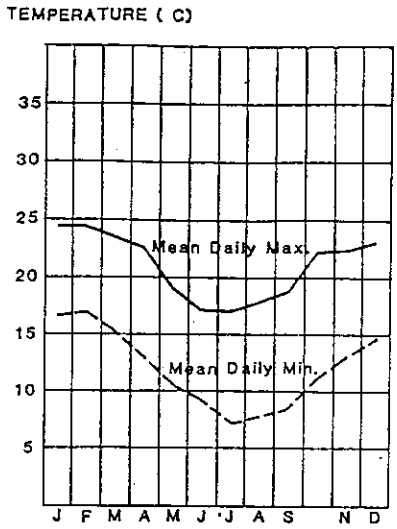
Rainfall
The median rainfall for individual months ranges between 43mm in September and 115mm in June. The annual average rainfall is 1,122mm. Heavy or protracted falls of rain in the area seriously erodes exposed soils and there are significant areas of soil in the study area, which are particularly susceptible to erosion if left bare of vegetation cover. On the other hand, rainfall is adequate to maintain grass cover on subdivision sites left exposed for extended periods prior to sale.



TOPOGRAPHY AND DRAINAGE

FIGURE 2.2





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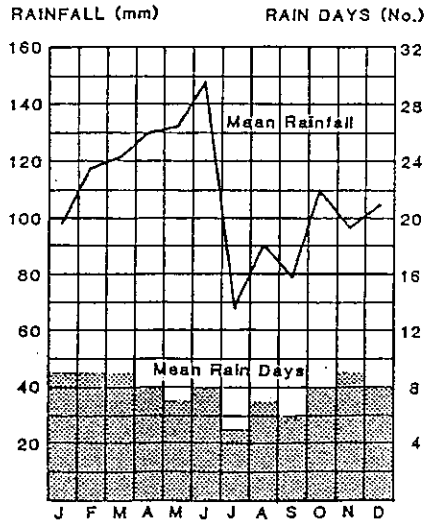
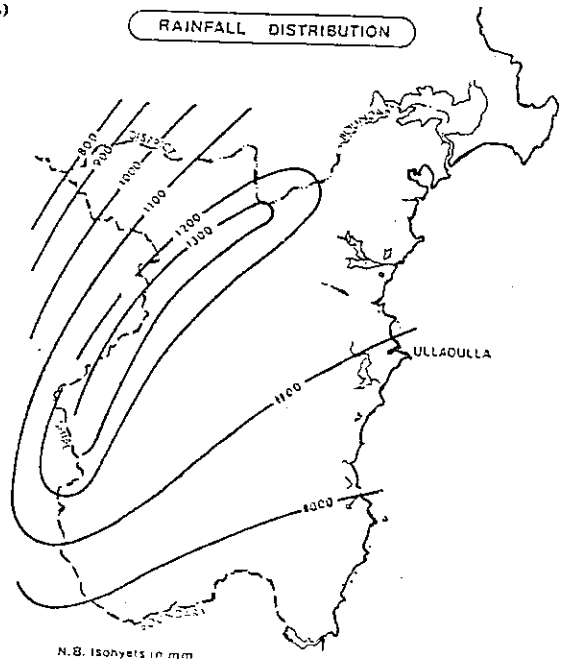


RAIN



KEY CLIMATIC FEATURES

FIGURE 2.3

Winds
During the spring and summer months the prevailing winds are on-shore from the north-east. In the autumn and winter this pattern tends to be maintained but is also counter balanced by the often chilled prevailing winds from the south-west. The highest velocity winds tend to be the on-shore north-easterlies in spring and summer. However, wind speeds rarely exceed 30 kilometres per hour. When high temperatures and strong winds coincide in summer, high rates of soil water loss by evaporation can occur.

2.3 FLORA AND FAUNA

A detailed assessment of the flora and fauna attributes was undertaken by consultant Kevin Mills and Associates.

2.3.1 Vegetation Communities

A survey of plant communities, species and an assessment of their rarity was undertaken by Kevin Mills in August and September 1995.

Range of Communities
There are twenty-four vegetation communities in the Milton-Ulladulla district. Twenty of these have been mapped. The remaining communities occur as very common bands of vegetation and could not be mapped individually, but instead were mapped as part of a larger complex. The plant communities range from Subtropical Rainforest on the Milton Monzonite to Coastal Spinifex Grassland and Mangrove Woodland associated with Burrill Lake and Narrawallee Inlet (Table 2.1, Figure 2.4).

Subtropical Rainforest (STR-RAF)
The dominant species include: Alphitoma excelsa, Dendrocnide excelsa, Streblus brumonianus, Toona ciliata, Clewdendrum tomentosum and Commersonia fraseri. This community occurs in small remnant patches on the Milton Monzonite around the Milton township on steep valley slopes and at the heads of gullies. They represent mainly regrowth, but they contain many of the species of the original forests.

Warm Temperate Rainforest (WTM-RAF)
The dominant species include: Acmena smithii, Glochidion ferdinandi, Eupomatia lamina and Rapanea howittiana. This vegetation community is restricted to small gullies at Burrill Lake. This simple rainforest type is usually dominated by just one tree species: Lilly Pilly Acmena smithii.

Littoral Rainforest (LIT-RAF)
The dominant species include Acumena smithii, Pittosporum undulatum, Eupomatia lauvina, Cassina australis and Glochidion fernandi. The main occurrence of littoral rainforest is on the southern side of Bannister Point, however, there are smaller and simpler swards elsewhere along the coast such as the headland at Narrawallee Inlet.

Table 2.1
Vegetation Communities in Milton-Ulladulla

Map Unit	Community Name	Occurrence	Area (ha)
STR-RAF	Subtropical Rainforest	Remnants on Milton-Monzonite	9.64
WTM-RAF	Warm Temperate Rainforest	Deep gullies around Burrill Lake	1.24
LIT-RAF	Littoral Rainforest	Primarily on south side of Bannister Point	2.45
SAL-SYN	Blue Gum Tall Forest	Remnants on Milton Monzonite	11.21
PIL-SYN	Blackbutt Tall Forest	Milton, Narrawallee and Burrill Lake	752.28
MAC-PIL	Spotted Gum Tall Forest	Slopes around Burrill Lake	14.37
BOT-BAN	Bangalay Forest	Coastal dunes and headlands	133.40
ROB-LON	Swamp Mahogany/Woollybutt Forest	Poorly drained lowlands	14.46
ACA-MEA	Wattle Forest	Regrowth on Milton Monzonite	1.94
SIE-GUM	Silvertop Ash/Bloodwood Forest	Sandy soils west and s-west of Ulladulla	92.26
SCL-FOR	Scribbly Gum Forest	Sandy soils in Ulladulla area	290.68
GUM-MAL	Bloodwood Mallee/Heathland	Exposed coastal plateaux of ridges	113.29
ALL-VER	She-Oak Shrubland	Exposed coastal headlands	9.87
SPI-BAN	Coastal Complex:		
	A: Spinifex Grassland	Lower foredune behind beaches	61.96
	B: Coastal Wattle Shrubland	Upper foredune behind beaches	
	C: Banksia Woodland	Hind dunes and coastal headlands	
	D: Casuarina Shrubland	Coastal headlands	
MEL-ERI	Paperbark Shrubland	Coastal water-logged sites	11.42
CAS-GLA	Swamp Oak Forest	Estuary fringes	23.30
AVI-JUN	Estuarine Complex:		43.24
	A: Mangrove Woodland/Shrubland	Burrill Lake and Narrawallee Inlet	
	B: Sea Rush Rushland/Herbland	Burrill Lake and Narrawallee Inlet	
TYP-TRI	Sedgeland/Reedland	One area south of Burrill Lake	0.57
LEP-MEL	Teatree Shrubland	S-W of Ulladulla and W of Lagoon Head	25.15
ZOS-HAL	Aquatic Herbland	Burrill Lake and Narrawallee Inlet	Not mapped
		TOTAL	**1612.73**

Source: Kevin Mills and Associates 1995

Blue Gum Tall Forest (SAL-SYN)

Dominant species of this community include: Eucalyptus saligna/Eucalyptus botryoides and Syncarpia glomulifera. This tall forest occurs on the edge of the Milton Monzonite, east of Milton forming quite a dense canopy. It is replaced by Eucalyptus pilularis on the adjacent sedimentary soils.

Blackbutt Tall Forest (PIL-SYN)

Dominant species include Eucalyptus pilularis, Syncarpia glomulifera and Eucalyptus gummifera. The Blackbutt Tall Forest community occurs on deep sandy and clayey sedimentary soils. It is extensive between Ulladulla and Narrawallee and occurs on the slopes to the east of Burrill Lake.

Spotted Gum Tall Forest (MAC-PIL)

Dominant species in this community include: Eucalyptus maculata, Eucalyptus pilularis and Eucalyptus botryoides. This community grows on the sedimentary soils on the steep slopes beside Burrill Lake.

Bangalay Forest (BOT-BAN)

This community is dominated by Eucalyptus botryoides and Banksia itegrifolia. The Bangalay Forest occurs on sand near the coast and along the main estuaries. In some places it also occurs on sand berm onto headlands, such as Lagoon Head and Narrawallee Creek. In such places its growth is often stunted.

Swamp Mahogany/Woolybutt Forest (ROB-LON)
This community varies from forest to woodland and is dominated by species of trees that grow in wet conditions. The main species are Eucalyptus robusta, Eucalyptus longifolia and Melaleuca linarifolia. This community occurs on land located near the coast with a high water table. There are stands near Narrawallee Creek and at Mollymook.

Wattle Forest (ACA-MEA)
This community is represented in the form of small clusters of trees dominated by Acacia mearnsii. Regrowth clusters of wattle occur in gullies on the Milton Monzonite soils in the vicinity of the Milton township and west of the bush land on the western outskirts of Ulladulla.

Silvertop Ash/Bloodwood Forest (SIE-GUM)
This community, which is dominated by Eucalyptus sieberi and Eucalyptus gummifera, varies from forest to woodland. It occurs on deep sandy soils in the Ulladulla area and is associated with the Scribbly Gum communities.

Scribbly Gum Forest (SCL-FOR)
This forest community is dominated by Eucalyptus sclerophylla, Eucalyptus gummifera and Allocasnarria littoralis. It occurs on deep sandy soils west and south-west of Ulladulla.

Bloodwood Mallee/Heathland (GUM-MAL)
This community is almost treeless, being dominated by Mallees and Shrubs, with the dominant species being Eucalyptus gummifera. It occurs on poorly drained soils south of Ulladulla.

She-Oak Shrubland (ALL-VER)
This community is dominated by Allocasuarina verticullata, Westringia fruticosa, Allocasuarina paludosa and Themeda australis. It occurs on clayey soils on exposed headlands. The main occurrence of the She-Oak shrubland is on Ulladulla Head.

Coastal Complex (SPI-BAN)
This comprises four discernable communities.

A: Spinifex Grassland dominated by Spinifex sericeus, it occurs on the upper part of the beach at the foot of the foredune, on active low sand dunes.

B: Coastal Wattle Shrubland dominated by Acacia sophorae, it occurs on the lower part of the foredune above the Spinifex grassland.

C: Banksia Woodland dominated by Banksia integrifolia, Monotoca elliptica and Correa alba, it occurs from the top of the foredune to the back of the foredune.

D: Casuarina Shrubland dominated by Casuarina glauca, Allocasuarina verticillata and Westringia fruticosa, it occurs on exposed coastal headlands and usually as a thick wind-pruned canopy.

Paperbark Shrubland (MEL-ERI)
Dominated by Melaleuca ericifolia and Casuarina glauca, this swamp community occurs on low-lying areas near the coast and near estuaries, for example Narrawallee Creek.

Swamp Oak Forest (CAS-Gla)
This community is a forest or woodland dominated by Melaleuca glauca, Baumea juncea and Juncus kraussii. It occurs along the edge of estuaries, often as a band of trees immediately adjacent to the narrow estuary. Good examples of this community occur on the banks of Burrill Lake.

Estuarine Complex (AUI-JUN)
This complex occurs adjacent to the tidal areas at Burrill Lake and Narrawallee Inlet and, to a lesser extent, on the other small creeks along the coast. It comprises two distinct communities:

A: Mangrove Woodland/Shrubland dominated by Avicennia marina and Aegiceras corniculatum. It occurs as shrubland, open woodland and low forest.

B: Sea Rush Rushland/Herbland (Saltmarsh) dominated by Juncus Kranssii, *Sarcocornia quinqueflora and Suaeda australis, it varies in its structure and* floristic composition.

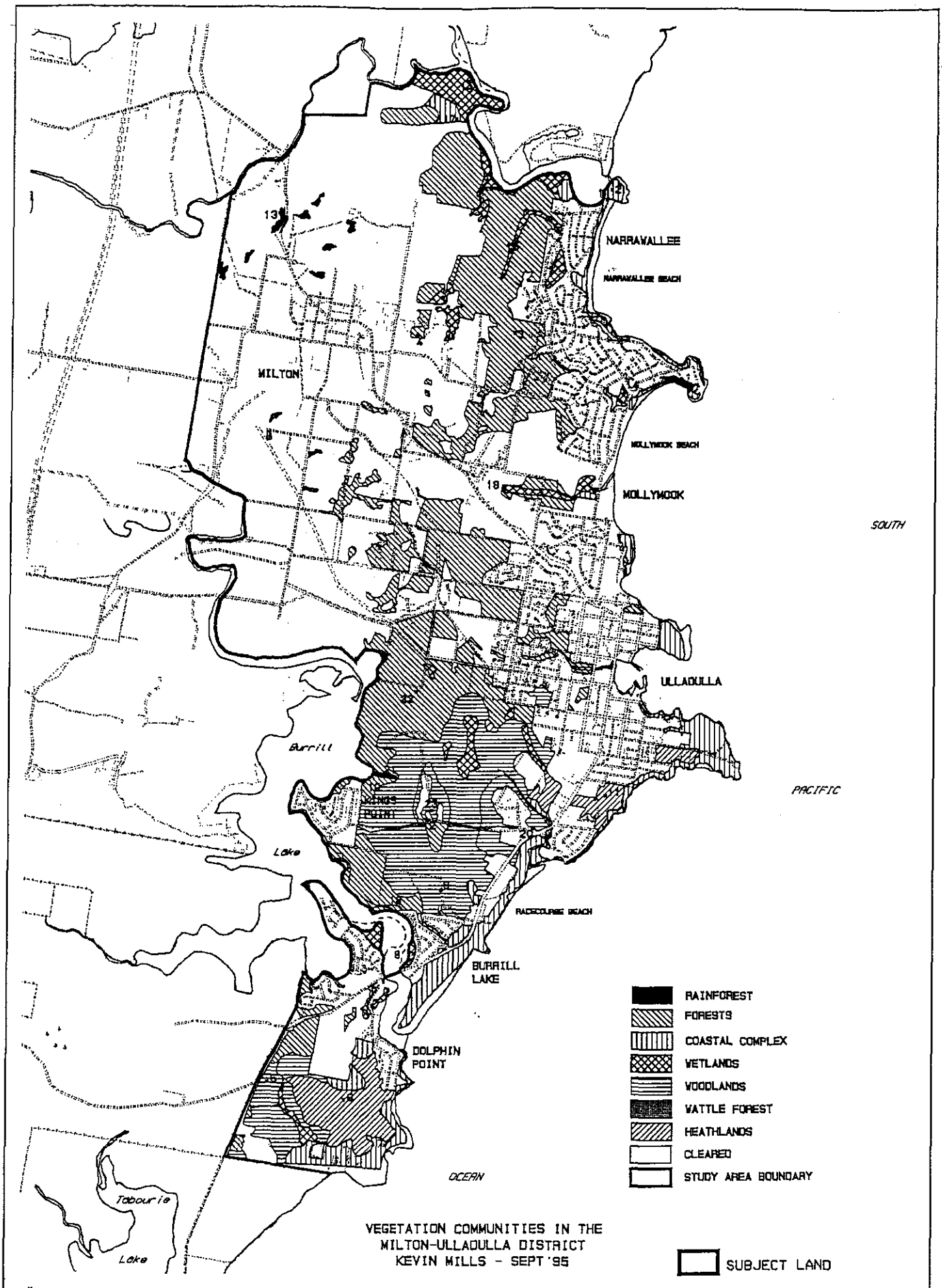
Sedgeland/Reedland (Fresh Swamp) (TYP-TRI)
This freshwater wetland community is dominated by Triglodrin procerum, Typia orientalis, Persicaria decipiens and Baumea articulata. It occurs in one place on the small creek south-east of the bridge at the Burrill Lake entrance.

Teatree Shrubland (Swamp) (LEP-MEL)
This shrubland and sedgeland community is dominated by Leptospermum polygalifolium, Melaleuca squarrosa and Melaleuca linariifolia. It occurs on poorly *drained sandy soil.*

Aquatic Herbland (Seagrass) (ZOS-HAL)
This seagrass community is dominated by Zostera sp and Haloplila ovalifolia. It occurs on the floor of Burrill Lake and Narrawallee Inlet, at least as far upstream as Croobyar Creek on Narrawallee Inlet.

2.3.2 Rare Plant Species

Several plant species which are rare or threatened (ROTAP species) are known to occur in and adjacent to the Milton-Ulladulla district. These are listed in Table 2.2. *In addition, a number of plan species are considered to have regional* significance (Table 2.3).



MAJOR VEGETATION COMMUNITIES

FIGURE 2.4

Table 2.2
Rare or Threatened (ROTAP) Plant Species in Milton-Ulladulla

Species (Family)	Risk Code	Habit and Occurrence
Grevillea barklyana Proteaceae	3RCa	This shrub species is scattered across the sandy soils south of Ulladulla, from the South Pacific Heathland Reserve to Kings Point Road.
Pseudanthus divaricatissimus Euphorbiaceae	3RCa	This prostrate shrub occurs in the South Pacific Heathland Reserve.
Thesium australe Santalaceae	3ECi	A small herb, this species was reported in 1911 to occur on Ulladulla Head.

Source: Kevin Mills and Associates (1995)

2.3.3 Rare Fauna Species

Fifteen endangered fauna species (Schedule 12 species) are known to occur in or near the Milton-Ulladulla area. Of these, three are classified as "threatened species" and include: the Southern Brown Bandicoot; Hooded Plover; and Little Tern. The following are classified as "vulnerable and rare species": White-footed Dunnart; Yellow-bellied Glider; Australasian Bittern; Osprey; Sooty Oystercatcher; Pied Oystercatcher; Glossy Black Cockatoo; Superb Fruit-Dove; Masked Owl; Powerful Owl, Olive Whistler; and Striated Fieldwren (Table 2.4). There has been no record of these species breeding in the area. Only the Pied Oystercatcher, Sooty Oystercatcher, Glossy Black Cockatoo and the Stiated Fieldwren are likely or possible breeders in the district.

Table 2.3
Regionally Significant Plant Species in Milton-Ulladulla

Species (Family)	Habitat and Occurrence
Abutilon oxycarpum Malvaceae	A shrub found on the edge of subtropical rainforest near Milton. It is apparently rare on the South Coast.
Amyema cambagei Loranthaceae	This is a parasitic shrub on *Casuarina glaucal*. It occurs at Narrawallee Creek and is rare south of Jervis Bay (three records).
Deeringia amaranthoides Amaranthaceae	This shrub occurs in subtropical rainforest near Milton. It is very rare in southern New South Wales. There are only three other records of the species in this part of the State.
Dendrobium teretifolium Orchid	This epiphytic orchid on *Casuarina glauca* occurs at Narrawallee Creek and Burrill Lake. It is uncommon in the region, depleted in the wild by collectors.
Gahnia filum Cyperaceae	A herb which occurs on the edge of saltmarsh on Narrawallee Creek estuary, this species is probably rare in the region.
Hakea salicifolia Proteaceae	This large shrub usually grows in forest. It occurs on the ridge west of Narrawallee, where it is at its southern limit of distribution.
Legnephora moorei Menispermaceae	A large vine in subtropical rainforest near Milton, this plant is very rare south of Jervis Bay.
Limonium australe Plumbaginaceae	A herb which occurs in saltmarsh on Narrawallee Creek estuary. Rare in southern New South Wales.
Maclura cochinchinensis Moraceae	This large vine or shrub is found in subtropical rainforest remnants around Milton. It is rare south of the Shoalhaven River.
Melia azedarach Meliaceae	This tree occurs in subtropical rainforest. It is at the southern limit of its range in the study area.
Notelaea ovata Oleaceae	Recorded in forest south of Narrawallee Creek, where it is at its southern limit of distribution. This shrub is apparently rare on the South Coast.
Persoonia laurina Proteaceae	This shrub is uncommon on the South Coast. It is at the southern limit of its range at Kings Point Road.
Platycerium bifurcatum Polypodiaceae	An epiphytic fern on *Casuarina glauca* at Narrawallee Creek. The species is uncommon to rare in the southern part of the State, depleted in the wild by collectors.
Sarcomelicope simplicifolia Rutaceae	A tree growing in subtropical rainforest, this species is rare south of Jervis Bay.
Schoenoplectus litoralis Cyperaceae	A sedge on Burrill Lake, where it is at its southern limit of distribution.
Telopea speciosissima Proteaceae	Where it occurs just south of Burrill Lake, this shrub is at the southern limit of its range.
Toona ciliata Meliaceae	This tree occurs in subtropical rainforest. It is at its southern limit in the study area.

Source: Kevin Mills and Associates (1995)

Table 2.4
List of Endangered Fauna Species in Milton-Ulladulla

Classification	Scientific Name	Associated Habitat	Breeding
Part 1: Threatened Species			
1. Southern Brown Bandicoot	Isoodon obesulus	GUM-MAL/PIL-SYN	Unknown
2. Hooded Plover	Thinornis rubricollis	SPI-BAN	Unknown
3. Little Tern	Sterna albifrons	SPI-BAN	Unknown
Part 2: Vulnerable and Rare Species			
1. *White-footed Dunnart*	*Sminthopsis leucopus*	*GUM-MAL/PIL-SYN*	*Unknown*
2. Yellow-bellied Glider	Petaurus australis	SIE-GUM/PIL-SYN	Unknown
3. Australasian Bittern	Botaurus poiciloptilus	AUI-JUN	Unknown
4. Osprey	Pandion haliaetus	ZOS-HAL	Unlikely
5. Sooty Oystercatcher*	Haematopus fuliginosus	SPI-BAN	Possible
6. Pied Oystercatcher*	Haematopus longirostris	SPI-BAN	Likely
7. Glossy Black Cockatoo*	Calyptorhynchus lathami	SCL-FOR/PIL-SYN	Possible
8. Superb Fruit-Dove	Ptilinopus superbus	STR-RAF	Unlikely
9. Masked Owl	Tyto novaehollandiae	PIL-SYN	Unknown
10. Powerful Owl	Ninox stenua	PIL-SYN	Unknown
11. Olive Whistler	Pachycephala olivacea	SCL-FOR/PIL-SYN	Unlikely
12. Striated Fieldwren*	Calamanthus fuliginosus	GUM-MAL	Possible

NOTE: Table includes all Schedule 12 species potentially present in or near Milton-Ulladulla
Source: Developed from Kevin Mills & Associates 1995

Potential Koala Habitats

Although there is no evidence of koalas currently living in the district, there are a number of potential habitats which contain both its primary food trees and those that are occasionally utilised. The total area of primary food tree habitats currently amounts to 926 hectares, with secondary food tree habitats occupying an area of approximately 394 hectares (Table 2.5).

Table 2.5
Incidence of Koala Food Trees within Vegetation Communities

Vegetation Community	Koala Food Tree
SAL-SYN Blue Gum tall Forest	**E saligna/E botryoides**, E tereticornis
PIL-SYN *Blackbutt Tall Forest*	***E pilularis***, *E globoidea*
MAC-PIL Spotted Gum Tall Forest	**E maculata**, E pilularis, E botryoides
BOT-BAN Bangalay Forest	**E botryoides**
ROB-LON Swamp Mahogany/Woollybutt Forest	**E robusta**
SIE-GUM Silvertop Ash/Bloodwood Forest	E piperita, E globoidea
SCL-FOR Scribbly Gum Forest	E globoidea
MEL-ERI Paperbark Shrubland	E robusta
Remnant trees around Milton	**E tereticornis**

NOTE: (1) Primary Koala food trees shown bold. (2) Identification of potential Koala habitats is a requirement of SEPP 44
Source: Developed from Kevin Mills and Associates 1995.

2.4 THE LANDSCAPE

The subregion from Durras to North Bendalong and west to the Budawang Range is renown for its scenic quality. The plateaux, escarpments and mountains of the Clyde Gorge ("The Budawangs") and the coastline are world class landscapes while the green pasture land and heritage landscape around Milton is widely known within Australia.

The landscape setting for the Milton-Ulladulla urban area has attracted holiday-makers to the area many of which eventually return to live in the area. Surveys suggest that the landscape is one of the principal attractions for visitors.

This section assesses the current landscape, addresses the need for an priority of visual management and makes recommendations on how these landscapes may be managed to retain overall landscape values.

2.4.1 Methodology

Council uses a method of landscape analysis which provides information to the community, planners and decision-makers on whether it is appropriate to enhance, maintain or further modify visual quality of particular landscapes.

It does this by:

- identifying discrete management units
- assessing the current visual status of the unit (in other words, the quality of the unit)
- determining the priority or importance of managing the landscape of that unit
- comparing desired status (quality) with actual visual status to demonstrate the appropriate degree of enhancement or identification
- providing guidelines on how to achieve the desired status.

2.4.2 Visual Management Units

Units are areas of relatively uniform visual characteristics, for example topography, vegetation pattern, development level, cultural features. These units are distilled from broader landscape character zones characterised by which in turn are devolved from visual sub regions. The Visual Management Units may be described as follows:

(a) Rural Slopes Visual Management Unit

This landscape unit is characterised by large, open, broad rectangular patterned paddocks with intermittent boundary planting of Coral trees and native species. Scattered over the area are single or clumped trees and large shrubs. These are generally remnant native eucalypts or wattles, where the wattles predominate in creek lines. Some 80% of homesteads contain oasis plantings of Pines, Figs, Corals and Poplars. Gently undulating topography and sweeping panoramic views are available from Milton and other high ridges. Significant remnant woodlands exist on higher and steeper slopes, especially between this unit and western Ulladulla. Roadside planting is noticeable (but not dominant) on Wilfords Lane and Woodstock Road.

Newer, modern style brick houses compete with older historic homesteads which hold key positions on hilltops and minor and major ridge lines and act as focal points in the landscape. Vastness of space between new and old houses has conserved the rural atmosphere and spatial distribution of houses in this unit. Croobyar Road (which is outside the study area) is a poor example of subdivision and housing integration in a similar Visual Management Unit. The general atmosphere is suburban. The areas surrounding Boolgatta and Kendal Dale are good examples of a relatively intact rural landscape.

Contours generally range between 0-40 metres in this unit forming most of the northern and western parts of the study site. The town of Milton sits on a ridge running north west-south east and separates the unit in two. Impressive views can be obtained of 80% of the unit from the Princes Highway.

(b) Coastal Woodland/West Ulladulla

This landscape unit comprises small, enclosed, informal landscape patterns, where large houses on large blocks are tucked away in a dense native woodland or back-dropped with native woodland. The topography is steep to gently undulating with framed rural views along roads and filtered views between trees to the west.

New planting is largely native vegetation (on boundaries) and a mixture of exotic and native in private gardens. Roadside planting is almost non existent and road verge treatment is poor. Generally, the homes have a modern flavour with Federation overtones. Small scale, cumulative, domestic tree clearing has taken away some of the charm of this unit, resulting in poor integration of homes into the forested environment.

The Ulladulla landfill to the south of this unit downgrades the general ambience. The water tower and telecommunications station dominate the unit, sitting in the heart of the area. The saw mill is a major feature on the Princes Highway to the north of the unit and a definite boundary to the east is suburban Ulladulla. Generally, a mixture of land uses exist in this unit.

Contours generally range between 40-80 metres and a major ridge bisects the unit north to south.

(c) Upper Rural Slopes

The Upper Rural Slopes landscape unit consists of the steeper rural parts of north and north-west Milton, where the land rises sharply from the flatter surrounding areas to the crest of the ridge. A mixture of open paddocks, remnant woodland and indigenous regrowth make up most parts of this unit. Prominent features on the north-west hill is the water tower, (an important cultural element in the landscape) and the Roman Catholic Church. The northern part of the unit consists of historic homesteads on broad rectangular patterned paddocks with intermittent boundary planting. Remnant vegetation features strongly in this unit, particularly a recently revitalized rain forest, just north of Milton School and the north-west portion of the dominant ridge. Generally, contours in this landscape unit range between 20-100 metres.

(d) Coastal Woodland - East Burrill Lake

This unit forms part of both Burrill Lake and the western part of Ulladulla. Upper rural slopes from the northern boundary and Burrill Lake Inlet and township from the southern units. The unit is bisected by a ridge running north-south.

Generally, a dense eucalypt forest over steep and gently undulating land makes up the unit. The integrity of the unit is relatively intact, save for a motor cross track to the south and ground disturbance on its outskirts.

(e) Coastal Woodland - Southern Coastal Fringe

This area consists of both open grassland paddocks and dense coastal forest, which extends to the eastern most boundary, the beach. The topography is gently undulating with a spur running east-west over the site. The area has generally retained its integrity aside from the grassland which was once forested. No development is visible from the highway.

(f) Coastal Woodland - Northern Fringe

This area is basically the forested buffer between the Milton cultural landscape and Narrawallee coastal village. The forest lies over a gently sloping ridge running north-south towards Narrawallee Creek. The tall Eucalypt species are typical of the vegetation in sand dune areas.

(g) Watercourses

These consist of creeks, lagoons, lakes, wetlands and other water bodies within the rural areas, and are important physical attributes of the area. Burrill Lake and Narrawallee Creek are important tourist areas both strongly enclosed by vegetation and landform components.

2.4.3 Visual Usage

Determining visual usage involves firstly classifying roads and other transport routes into four classes:

Level 1 (highest volume)	:	Princes Highway, proposed bypass route or link road etc
Level 2 (tourist and local feeder roads moderate volume)	:	Croobyar Road, Woodstock Road, Matron Porter Drive etc
Level 3 (local roads - low volume)	:	Wilfords Lane, Corks Lane etc
Level 4 (small access roads or streets lowest volume besides driveways)	:	Little Valley Way off Little Forest Road, Anker Avenue.

Maps of seen and unseen areas from each category are mapped.

2.4.4 Visual Sensitivity

Visually sensitive areas are:

Areas where the landscape is a critical component of the function of a particular use of an area	: National Parks, reserves and forests : including proposed new areas : major walking tracks or tourist areas
Areas of value to the community	: heritage and cultural landscapes : significant trees : the coastline and lake foreshores : other areas of special value
Areas identified as having high landscape value	: National Estate listed areas : National Trust landscapes : scenic preservation areas : environmental attributes : coastal protection scheme zonings : 7(d1) and 7(d2)

These areas are then mapped.

2.4.5 Current Visual Status

Each unit is allocated a current visual status from 1 to 4. The scores mean:

1. The unit has a high degree of visual harmony where natural and cultural components and the built form are highly compatible.

2. The visual harmony is disrupted but there is still general compatibility between built form and bio physical components.

3. The unit has a dominance of built form.

4. The unit displays a lack of visual harmony with incompatible natural and cultural components and visually obtrusive patterns, scale and colours of development.

These areas are then mapped.

2.4.6 Visual Management Priority

Visual priority is determined by merging visual usage (usually the more people who observe a landscape the more important it is to retain a high landscape quality) and visual sensitivity (which highlights the inherent value of landscapes some of which may be observed regularly by only a few people.

A landscape which is both seen regularly by high numbers of people and has a high level of sensitivity to change is obviously of high visual priority. A prominent mountain or cultural landscape near a highway are examples.

Conversely if an area is not seen from the highway or major transport or visitor area and has no particular significance or value to the community, then further modification of the landscape could be considered without affecting the sub regional landscape asset. A continuum between these two extremes is recognised.

These areas are then mapped.

2.4.7 Recommended Proposed Visual Management Levels

The recommended management level (1-4) of each visual management unit is determined by comparing the visual priority with current visual status.

What is current quality?	☛	What is recommended quality?	☛	How is change achieved - Guidelines

There are three possible scenarios. These are:

- the CVS and VMP are at comparable levels so guidelines will conserve or preserve landscape quality
- *the CV is lower than VMP so guidelines to enhance the unit are needed*
- the VMP is lower than CVS in which case some flexibility to modify the landscape is provided. The guidelines ensure any modification is limited to acceptable visual outcomes.

Figure (2.5) shows the management units identified for the structure plan study area and their recommended visual management. Any upgrading within VMUs should be carried out according to the character of that particular unit.

2.5 ENVIRONMENTAL QUALITY

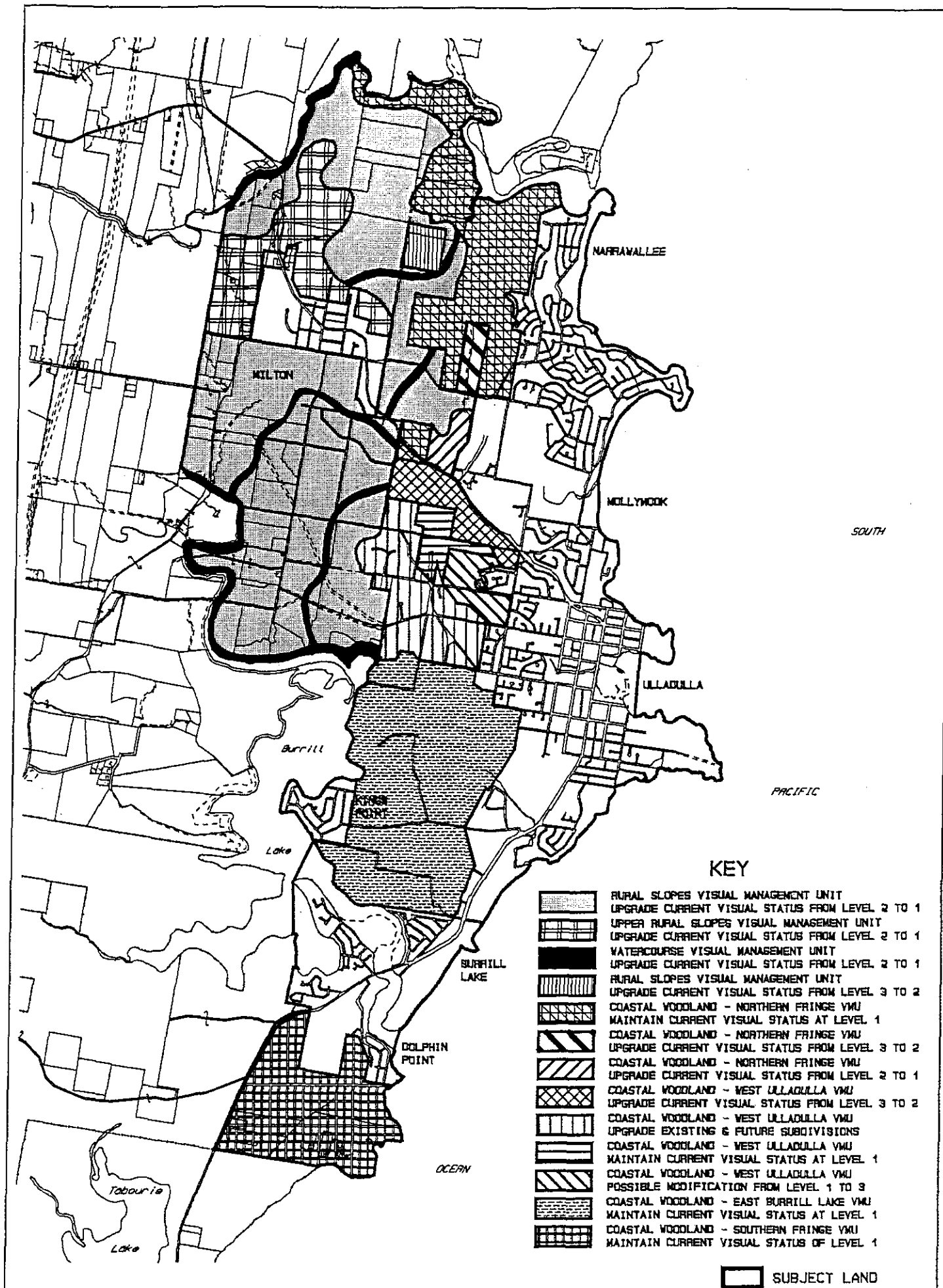
Council regularly monitors the quality of the district's major waterways: Narrawallee Inlet catchment; Millards Creek catchment; Racecourse Creek catchment; and Burrill Lake catchment.

2.5.1 Narrawallee Inlet Catchment

Narrawallee Inlet catchment comprises two main tributaries: Narrawallee Creek and Croobyar Creek. These creeks begin in mountainous State forest areas and then run through rich farmland before entering the ocean at Narrawallee Inlet. Large areas of the lower reaches of this creek system have been classified as State Environmental Planning Policy No. 14 Wetlands, thus giving protection to these areas.

Environmental History
A large percentage of the catchment has been cleared in the past, estimated to be 50-70% of the catchment (Bell and Edwards, 1980). Clearing activities would have caused some pollution to the receiving environment. Additionally, the rural activities in the catchment may have caused isolated incidents of faecal pollution and perhaps nutrient pollution, although no major empirical studies have been undertaken in this regard.

Pollution Indicators
Sampling in August and October 1992, indicated relatively high levels of faecal coliform at four test sites up-stream of the Narrawallee/Croobyar Creeks



MAJOR VISUAL MANAGEMENT UNITS

FIGURE 2.5

confluence. Of these sites two just up-stream of the Currawar/Yackunjerrah Creek confluence displayed reduced dissolved oxygen levels and lower pH values (Figure 2.6).

2.5.2 Millards Creek Catchment

Millards Creek is the main watercourse which flows into Ulladulla Harbour. The catchment is predominantly developed or developing urban areas and thus pollutant loads can be high. Studies undertaken in late 1991 of Ulladulla Harbour and the tidal sections of Millards Creek indicated:

- the existence of seagrass Halophila ovalis in most shallow areas of the harbour (with the exception of the sand bar at the mouth of Millards Creek);
- the occurrence of Mangroves and salt marsh plants within the tidal section of the creek; and
- some twenty species of fish common in estuarine environments, most were juveniles, suggesting the harbour and creek are used as nursery areas.

Council's testing of Millards Creek over recent years has shown contamination of the creek in various locations with faecal coliform bacteria. Research shows that urban development will add such bacteria to watercourses, particularly after rainfall.

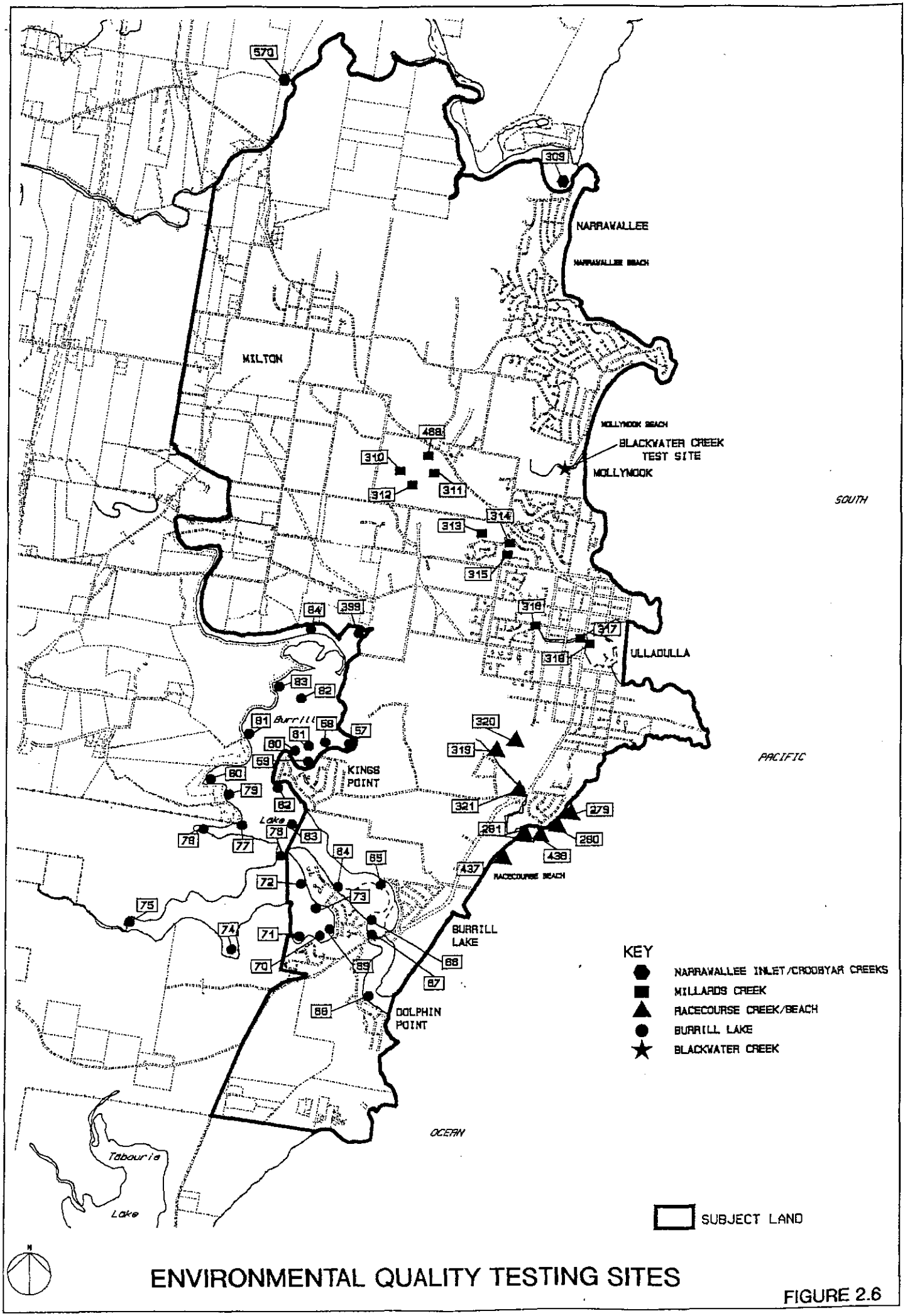
More intensive investigations have, however, revealed high levels emanating from an Environment Protection Authority licensed premises.

The Millards Creek catchment has also been affected by erosion and subsequent sedimentation of the creek and the harbour due to the amount of development being undertaken within the catchment.

Pollution Indicators

Faecal Pollution - As part of Council's monitoring of its own operations, 16 separate sampling runs for faecal coliform were performed both up-stream and down-stream of the Milton Sanitary Depot (at sites 310 and 312 respectively). High levels were occasionally recorded at both sites with the median values for sites 310 and 312 being 161 and 120 respectively. Thus there is very little difference between the two sites, with the up-stream site appearing to be a little worse than the downstream site. Additionally, regular inspections at the sanitary depot did not reveal effluent leaving the site. Inspections of the property up-stream did, however, reveal departures from the EPA licence conditions.

Council's routine monitoring of the catchment indicates high faecal coliform levels at various sites from time to time (Table 2.7).



ENVIRONMENTAL QUALITY TESTING SITES

FIGURE 2.6

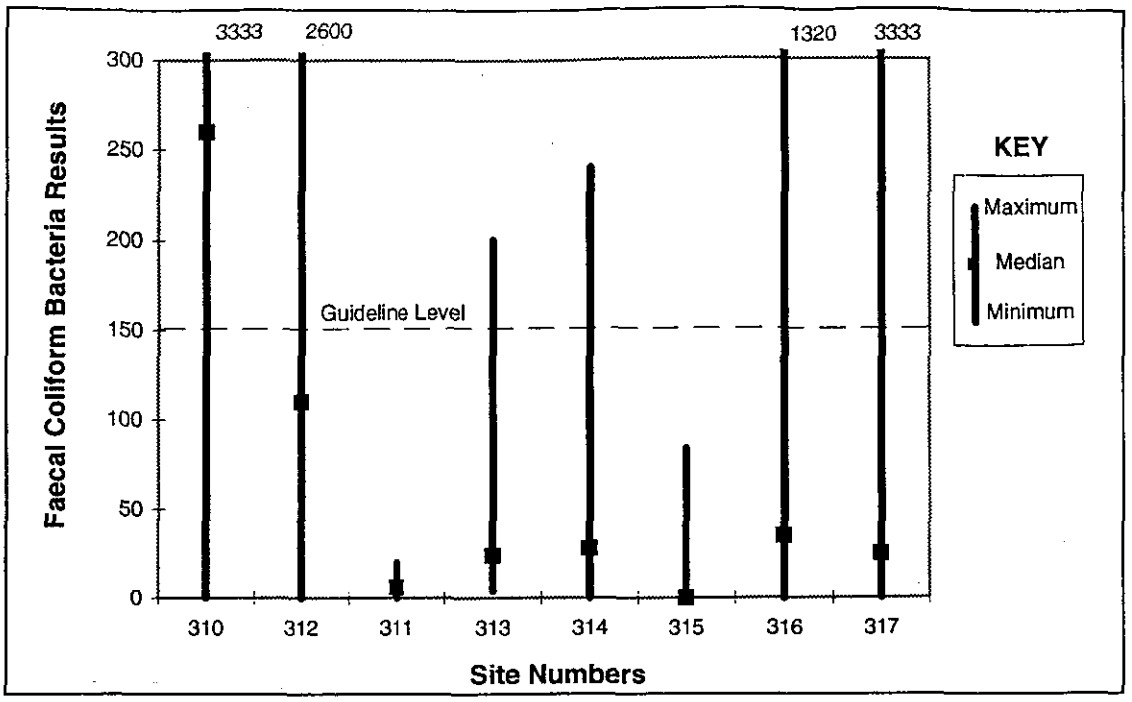


Figure 2.7
FAECAL COLIFORMS: MILLARDS CREEK: 1994/95

Oxygen Levels - Low dissolved oxygen levels (less than 6mg/L) were occasionally recorded at sites in the upper reaches of Millards Creek (sites 310, 311 and 312). Thus it appears that activities in this section of the catchment are occasionally impacting on the receiving environment. BOD tests at sites 310 and 312 in May 1992 did, however, show low levels thus indicating that discharges could be episodic.

pH - On all occasions when pH was tested, it feel within the acceptable range.

Nutrients - As other parameters tested have shown evidence of pollutants in the upper reaches of the creek, Council undertook some nutrient testing at the worst affected sites. Nutrients were, therefore, tested at sites 310 and 312 during August, October and December 1992. Such testing indicated extremely high nutrient levels at both sites.

Nitrogen - The sampling shows the total nitrogen values recorded were much higher at site 310 (directly downstream from the Milton Abattoir spray irrigation area) than at the site further downstream. This would tend to indicate that the high levels are coming from this property upstream.

Phosphorous - An examination of phosphorus results shows high levels at both sites. In this case results are higher at the down-stream site than at the up-stream site. This may be due to a natural variation in the waters or may be due to a cumulative impact from the abattoirs and the sanitary depot.

Metals, Pesticides and Other Pollutants - In April 1992, the sediments of the tidal section of Millards Creek were analysed for heavy metals, petroleum hydrocarbons and organochlorine pesticides. The levels of the chemicals found were below all international sediment criteria. Petroleum hydrocarbon levels were, however, elevated in some samples, probably as a result of wash-off from

roadways. Similar sediment studies on the sand bar at the mouth of Millards Creek also showed levels below international sediment quality criteria. There was no evidence of organochlorine pesticides within the sediments, a chemical used to spray sub-floor areas of houses to control termites. A relatively high level of phenol has, however, recorded in the sub-catchment up-stream of site 311, a known decomposition product of lignin in timber.

2.5.3 Racecourse Creek Catchment

Racecourse Creek drains a small section of Ulladulla township with the majority of the catchment constituting light industrial or residential development. Also included in this catchment are the waters of Racecourse Beach since treated sewage effluent enters ocean waters to the north of Racecourse Beach.

Environmental History

A small amount of testing for routine parameters has occurred in Racecourse Creek and results have generally been acceptable. Testing in the vicinity of the Ulladulla ocean outfall to the north of Racecourse Beach has shown faecal coliform levels to be high in close proximity to the ocean outfall, however, levels a short distance away are acceptable.

Pollution Indicators

Faecal Pollution - Faecal coliform levels in Racecourse Creek were acceptable during all sampling undertaken in 1992 except August. During August all sites exhibited elevated levels and since there was rainfall leading up to the sampling it is assumed the results were caused by diffuse sources of faecal pollution within the catchment.

Approximately weekly testing occurred of the waters in proximity to the Ulladulla ocean outfall. This routine monitoring confirmed that the bacteriological effect of the Ulladulla ocean outfall is localised. Within close proximity to the outfall (20 metres) levels are high and do not meet the criteria, however, a short distance away, levels are well within the acceptable guidelines (Table 2.7 and Figures 2.8 and 2.8a).

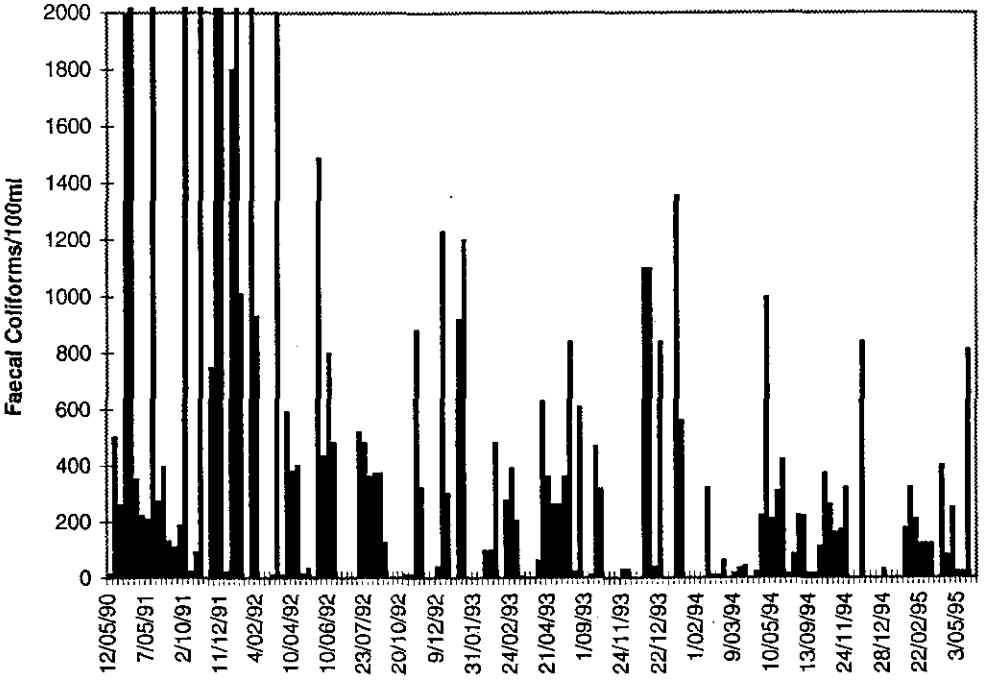
Table 2.7
Faecal Coliform Levels near Ulladulla Ocean Outfall

Site No.	Site Description	Yearly Median Faecal Coliform Level
279	20 metres north of outfall	320
280	20 metres south of outfall	190
436	End of rock shelf at north of beach	4
281	Most northerly part of Racecourse Beach	3
437	500 metres down Racecourse Beach	8

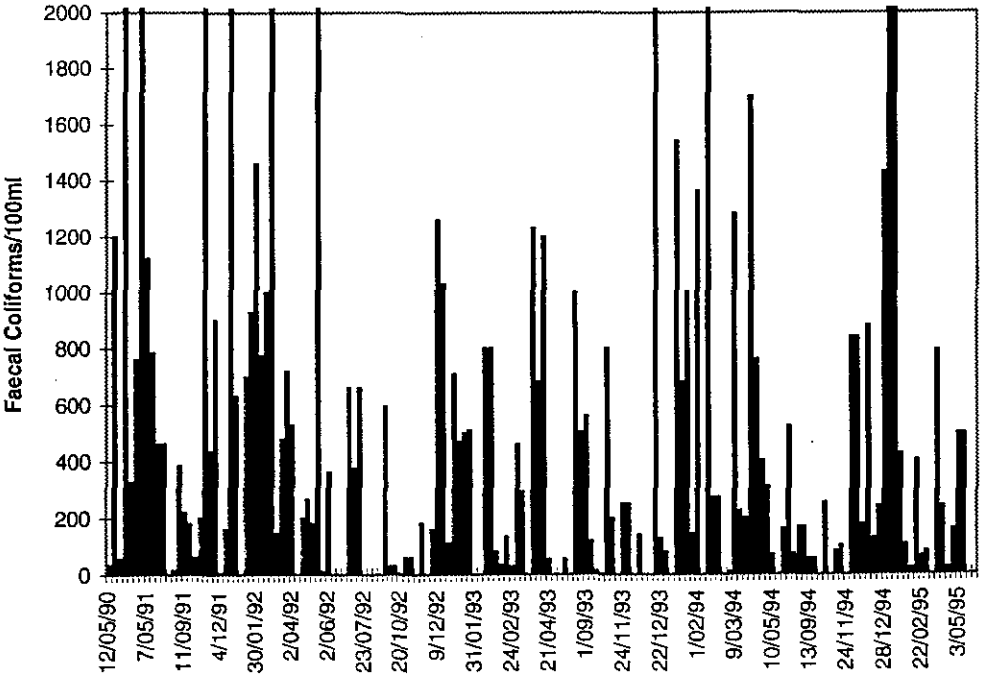
Source: City of Shoalhaven 1992

pH - Acidity levels within Racecourse Creek was always in the acceptable range for all sampling undertaken during 1994/95. Some lower levels have been associated with periods of low flow.

Faecal Coliform Levels at Site 279 - 20m North of Ulladulla Ocean Outfall



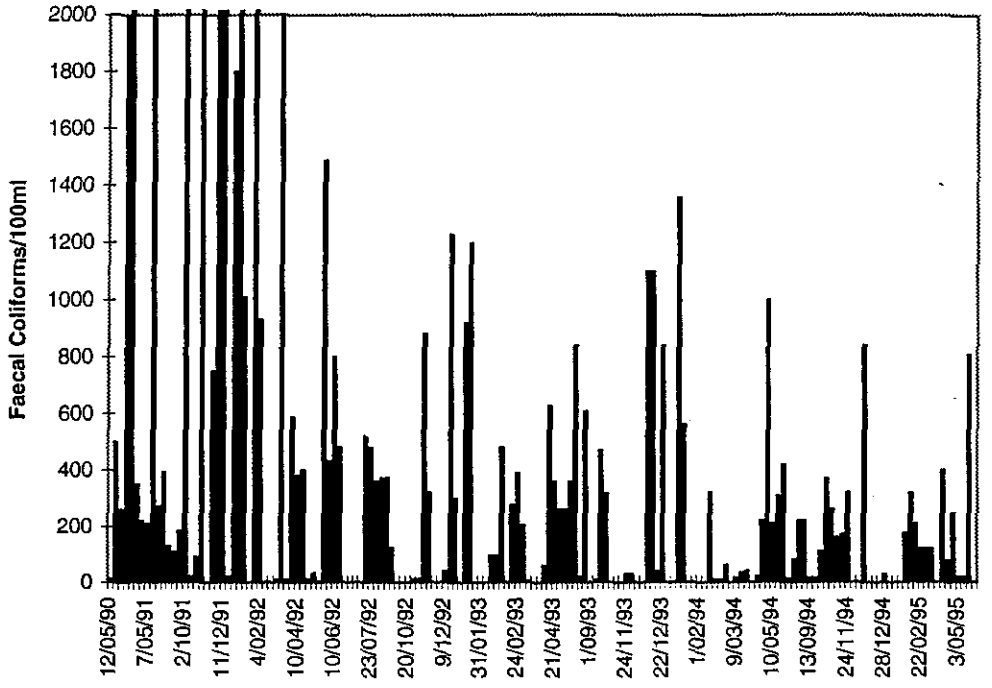
Faecal Coliform Levels at Site 280 - 20m South of Ulladulla Ocean Outfall



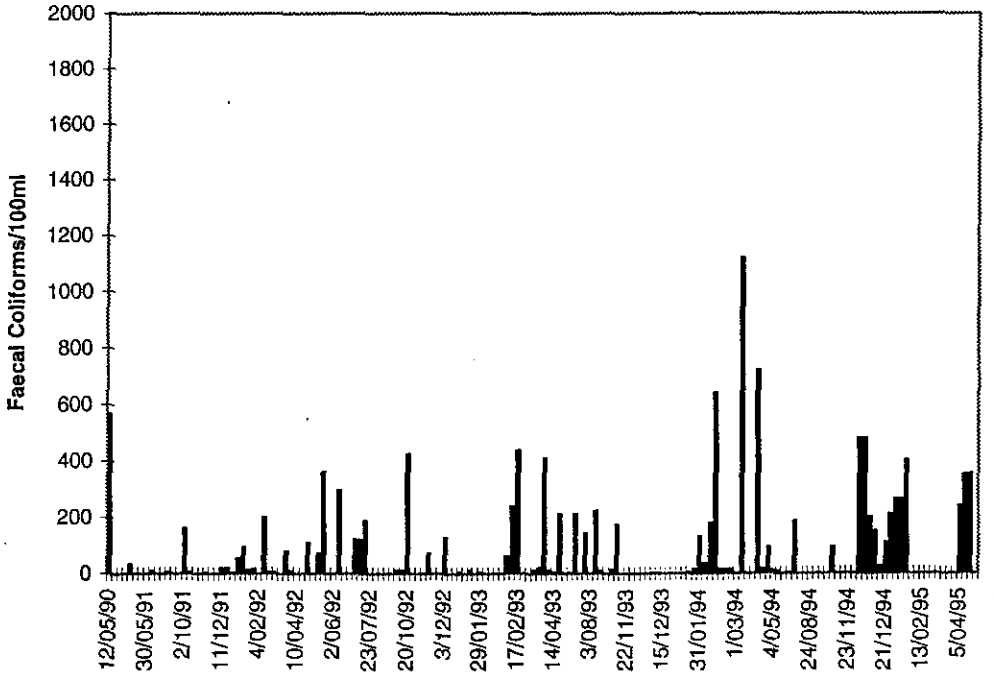
OCEAN OUTFALL POLLUTION LEVELS:1994/95

FIGURE 2.8

Faecal Coliform Levels at Site 279 - 20m North of Ulladulla Ocean Outfall



Faecal Coliform Levels at Site 281 - Most Northerly Part of Racecourse Beach



OCEAN OUTFALL POLLUTION LEVELS: 1994/95

FIGURE 2.8A

Dissolved Oxygen - Dissolved oxygen levels were acceptable for most sampling in Racecourse Creek during 1994/95.

Metals, Pesticides and Other Pollutants - During May 1992 the effluent from the Ulladulla Sewage Treatment Works was tested for the full range of substances as shown in Schedule 2 of the Clean Waters Regulations. All metals and pesticides were well within the criteria, however, ammonia and nitrate were higher than these levels. The mixing achieved at the outfall would, however, mean the ammonia and nitrogen levels would quickly be diluted to low levels within the sea water.

2.5.4 Burrill Lake Catchment

Burrill Lake is a relatively deep coastal lake which is usually open to the ocean. The lake has a wide range of land uses within the catchment including urban, rural, state forest and native forest.

Environmental History
Council has been testing this water body since 1989. In the early stages of testing bacteriological pollution around the Kings Point area was an issue. With the connection of the sewer in 1990 this situation has improved markedly. Other parameters tested by Council such as dissolved oxygen and pH have generally indicated good water quality.

In 1991 Council undertook sediment analysis at two sites within the lake. The levels of nitrogen and phosphorus obtained were similar to those recorded by the CSIRO (Anderson et al 1981 - in a much more extensive study) approximately a decade earlier. The results showed relatively high nutrient levels when compared to Lake Wollumboola and Tuggerah Lake.

Also in 1991, the former State Pollution Control Commission (SPCC) undertook a study of nine sites in Burrill Lake. Generally, their conclusion in relation to nutrient water quality was that the lake could be regarded as mesotrophic, ie between oligotrophic (low nutrient) and eutrophic (nutrient enriched).

The 1991 SPCC study also involved sediment analysis for metals at two sites. The sites were within Stoney Creek and within the northern bay facing Kings Point. All metals tested (with the exception of iron) were below the detection limits of the testing methods.

Generally, the lake water has shown good water quality. The sedimentation evident at some locations and nutrient levels are the biggest threat to this lake.

Pollution Indicators
Faecal Pollution - A total of 93 individual faecal coliform tests wee conducted on Burrill Lake during 1992. Only four showed elevated levels. Two of these were in Stoney Creek and in the northern reaches of the lake respectively and as low dissolved oxygen had also been recorded here earlier in the year (see below) Council undertook investigations in the catchment to try to ascertain any sources of bacterial pollution. All dairies within the catchment were inspected and, where there was inadequate yard wash disposal mechanisms, Council sought remedial action.

pH - Only two pH levels were outside the acceptable criteria during 1992. Both of these were in undeveloped catchments, with the waters being slightly acidic. Accordingly, the results appear to be of no great concern.

Dissolved Oxygen - With the exception of the northern reaches of the lake, dissolved oxygen levels were generally good throughout 1992. In February and May, both Stoney Creek and the bay into which it flows, both showed reduced dissolved oxygen levels. Occasional elevated faecal coliform levels at such locations led Council to investigate sources of pollution within the catchment. These investigations identified some potential sources and remedial action has been required by Council. Extremely high (super saturated) dissolved oxygen levels were recorded in November 1992. An examination of the turbidity results indicated that November registered the highest turbidity readings for the year, believed to be the result of microscopic algae.

Nutrients - No nutrient investigations were undertaken throughout the year 1992. The high dissolved oxygen levels and turbidity in the November sampling *may* indicate the growth of algae in Burrill Lake waters.

Metals and Other Pollutants - Quarterly testing of leachate waters from the Ulladulla Waste Depot in 1992 indicated the following materials did not meet the levels as outlined in Schedule 2 of the Clean Waters Regulations: iron, manganese, chloride, silver, lead, detergents, ammonia and phenol.

2.5.5 Current State of the Environment

Water Quality
Council's monitoring of environmental quality indicates that the standard of Milton-Ulladulla's waterways is generally good. However, there are localised deficiencies which require remedial action. These include:

- some point sources of pollution and erosion control generally in Millards Creek;
- bacterial levels in the immediate vicinity of the ocean outfall at Racecourse Beach; and
- local erosion control in the Burrill Lake Catchment.

Air Quality
Good local air quality is reflected in the EPA's 1993 Environmental Community Survey which found that 89% of Shoalhaven residents were satisfied with air quality. This compares with an average of only 44% satisfaction with the Illawarra councils to the north (EPA 1993).

Even though air quality is currently considered to be good, the community needs to be mindful of "creeping" air pollution, as has occurred in other growth areas in New South Wales.

There are a number of air quality issues in the Milton-Ulladulla district which require monitoring:

- particulate pollution and odours from summer bush fires in the region;
- particulate pollution and odours from winter burn-offs;
- localised incidence of odours from the Ulladulla sewerage treatment plant;
- chemical pollutants and odours from Port Kembla via north-easterly winds in summer; and
- increasing use of solid fuel heating appliances.

2.6 KEY STRUCTURE PLAN ISSUES

The key aspects of the district's physical setting which have implications for structure planning are summarised in Table 2.8.

Table 2.8
Key Structure Plan Issues

Landform:
- District's major ridge lines extend to its major headlands: Ulladulla and Warden Heads.
- Hilltop location of the Milton township.
- Fertile monzonite soils underpin the Milton cultural landscape.

Climate and Microclimate:
- Climate characterised by warm summers and mild winters with strong onshore north-easterly winds in spring.

Flora and Fauna:
- Flora and fauna habitats range from sub-tropical rainforest to coastal heath land.
- One mammal and two bird threatened species are known to occur in the district.
- Area contains a number of potential koala habitats.

The Landscape:
- Landscapes range from the undulating agricultural landscapes of Milton to the forested headlands, ridges and shorelines of the coast and inland waterways.
- Landscape between Narrawallee/Mollymook/Ulladulla and Milton is particularly sensitive to development.

Environmental Quality:
- Milton-Ulladulla's environmental quality is considered to be generally good, with local water quality deficiencies in Millards Creek, the Racecourse Creek ocean outfall and locations in the Burrill Lake catchment.

Section Three

HISTORICAL PERSPECTIVE

An appreciation of Milton Ulladulla's past development motivations and imperatives is seen to act as a positive platform from which to contemplate the future. Rather than being a "prisoner of the past", Milton-Ulladulla's genesis and pathway to the present assists our understanding of "why things are the way they are" and provides inspiration and instruction of how things may unfold in the future. Whilst the future will, of course, be different certain motivations, themes and reactions to change are timeless. Awareness of the past can be both enlightening and, to a certain extent, liberating.

3.1 ABORIGINAL CULTURE

3.1.1 Pre European Contact

The earliest human occupation of the Milton-Ulladulla district has been recorded to be 20,000 years ago near Burrill, when the coastline was 15 kilometres further east and the climate $10^{o}c$ cooler. When the first Europeans arrived the South Coast was occupied by related tribes known as the Yuin. In fact the local indigenous population was first seen by Cook and Banks in 1770, when they saw fires illuminating the Ulladulla shore. The most northerly of the group was the Wandandian tribe, living between the Shoalhaven River and Burrill, whilst the Walbonga tribe lived between Burrill and Cape Dromedary. Tribal territories extended from the coast westward as far as the Shoalhaven River near Braidwood.

Aboriginal art is represented in the district by rock paintings in the group of caves north of Milton, the largest of which is 40 metres long and 2 metres high. The paintings are, for the most part, stylised figures or symbols, some red ochre, some in charcoal, sometimes outlined in white.

3.1.2 Post European Contact

The district was consistently but not densely populated in the 18th Century. However, by 1801 smallpox was rife on the South Coast and presumably the population was already reduced. During Macquarie's governorship, the European settlers' activities intensified with Cedar-cutting and first land grants resulting in an adverse impact on Aboriginal occupation, but the Aboriginal population remained very viable. In 1821 Throsby described the coastal part of the Shoalhaven as more densely populated by Aboriginal people than the interior, but thought their numbers "very insignificant" and diminishing because of alcohol and diet (Organ 1990). In 1838 the Aboriginal population of Ulladulla was recorded to be 61. A number of Aboriginals found sporadic employment in saw mills, as cow hands, as general labourers or in domestic services and there were a number of Aboriginal owned seaworthy boats at Ulladulla, where fishing remained a major activity throughout the 19th Century. To this extent, the increasing displacement of the Wandandian people from their traditional hunting grounds was mitigated, although the number of full-bloods declined in relation to half-casts.

The most vivid contact documents which survive are the paintings and drawings by Mickey of Ulladulla, a member of the Dhurga group, who lived from about 1825 until 1891. Using European techniques, Mickey conveyed an unique Aboriginal view of the coastal world which he inhabited in the later years of the nineteenth century. As Mickey's work unconsciously demonstrated, traditional life had in fact become impossible (Mitchell Library). The 1900 census recorded only four full-bloods with 63 half-bloods at Ulladulla. In 1930 the Aboriginal population at Ulladulla were transferred to a site at Racehorse Creek.

3.2 EUROPEAN SETTLEMENT

3.2.1 Early Settlement

The Milton-Ulladulla area was surveyed by surveyors Florance and Hoddle in 1828, many bearings were taken off the distinctive land mark of Pigeon House Mountain to the west. The district was first settled in 1829, when the Reverend Thomas Kendall took up a grant of 518 hectares at Narrawallee. Other notable early settlers included Sydney Stephen, William Carr, William Morris. Robert Garrad, Alexander Macleay and John Miller.

3.2.2 Ulladulla Harbour

The economic base of the settlement was initially Cedar-cutting, closely followed by various forms of agriculture. With no bridges or formed roads north to Shoalhaven or south to Broulee, sea transport was the only viable transport system for timber and agricultural produce. From the first European settlement, the sheltered anchorage between Ulladulla Head and Warden Head was an important transport interchange for the district. Thomas Kendall made use of his son's 18 tonne cutter to transport Cedar from 1828 to 1832, when the cutter was wrecked off Jervis Bay. However the construction of a jetty was a long awaited facility. As late as 1856, stores were loaded on the beach. As an old man, John Ingold told his descendants he recollected coming direct to Ulladulla in 1857 on the vessel "Jenny Dean", and being lowered in a bag, to a boat, waiting to take folks ashore. The only harbour facility was a mooring chain.

By this time a vast volume of agricultural produce was being trundled along the miles of primitive tracks by packhorse, to the harbour where lighters levied them to waiting sailing ships and steamers. In July 1858 an official of the Illawarra and South Coast Steam Navigation Company warned the farmers of the settlement that the steamer would call again unless they built a jetty. In response to this ultimatum the local landholders raised the necessary finance and a temporary jetty was completed in February 1859. Harbour lights comprised fires lit on a hill side and the notice of arrival was the discharge of a gun. "Boat day" was an important occasion in the lives of the settlers.

An important milestone for the settlement was the construction of the stone pier, completed by December 1865. The Government wharf, which was erected on a natural reef was some 68 metres long and 7 metres wide. In 1871 an iron lighthouse was erected on the pier, reaching some 10 metres above sea level.

At about that time the weekly steamer covered the 240 kilometres to Sydney in 13 hours.

From the early 1900s until World War Two, the role of the harbour gradually changed from the transport of agricultural and forestry products to fishing. The volume of coastal shipping gradually decreased as the coast became more accessible by road. In 1940 a one hundred ton shipway was constructed for the launching of naval vessel. This led to the establishment of a wartime boat building industry.

In 1956 the Ulladulla Fisherman's Co-operative Society (UFC) was formed and expansion of the fishing fleet followed. In the early 1960s the northern and southern outer breakwaters were constructed to provide greater protection to the inner harbour, particularly during storms. Wharfage facilities were also improved and expanded, the "Tuna Wharf" being constructed along the inside of the southern breakwater. The 1974 storm overtopped the outer wall, flooded the inner harbour area, caused major foreshore erosion, and damaged boats and facilities. Following this storm the outer harbour walls were raised and strengthened. In the late 1970s facilities were further improved by the construction of the main slipway and the working jetty.

3.2.3 Ulladulla Town

Town lots in Ulladulla were sold in the early 1840s and a post office opened in 1842. Once the stone pier was constructed in 1865, the importance of Ulladulla was confirmed. Already there were three hotels, The Royal, Travellers Rest and Star, a post office, a court of petty sessions (opened in 1858) Millards tannery with fourteen employees (founded in 1854) and a public school opened in 1861. In 1871, the foundation stone for the School of Arts was laid on a land grant overlooking the harbour (demolished in 1969 to make way for the current civic centre).

3.2.4 Milton Township

The future of Ulladulla was, however, shared with the inland town of Milton, reputed to be named after John Milton the author of "Paradise Lost". The genesis of Milton was John Booth's produce depot and inn, the Travellers's Home, established in 1856 south of the later town, at the junction of Croobyar and Woodstock roads. Booth purchased 16 hectares to the north from Joseph Whatman, a "Man of Kent", who had established himself in the district in 1852 at Myrtle Forest Farm. In 1860 on Whatman's grant Booth laid out a private town in a rectangle diagonally bisected by the main south road. The town, bounded by Thomas Street to the north, Croobyar Road to the south, Church Street to the east and to the west Myrtle Street (named after Whatman's farm) is still the whole western half of modern Milton. Most of the 61 town allotments sold at once, although in 1866 there were still only 17 houses and 80 inhabitants. There were, however, already two churches. The brick Anglican church of St Peter and St Paul and a slab church school had been erected in 1859-60 on a trapezoidal block bounded by Church Street, Charles Street and the southern road, and its foundation stone was laid by a son of Thomas Kendall. The timber Wesleyan Chapel on the south side of Croobyar Road pre-dated the town by four years and lay outside its boundaries: it was replaced by a stone church in 1883. In the meantime a Congregational church, in stone, had been built in Milton in 1872 (now the Uniting Church). Finally the well appointed Catholic church, of stone and brick, was opened in 1891 with a presbytery completed in 1896.

Milton was in a strategic position on the main road. In 1866 it had one hotel, the Star run by Mrs Tydeman, as well as Booth's Travellers Rest on the south and by 1881 there were five hotels. Banking was concentrated in Milton. First the English Scottish and Australian Bank in 1865, the Commercial Bank Co of Sydney in 1871 (constructing the present NAB building in 1875): there was also an Australian Joint Stock Bank in the 1880s. By contrast there was no bank at all in Ulladulla until the CBC opened a sub-branch in 1946. The Milton Public School was built in 1877. The Milton Hospital was constructed in 1908 and St Mary's Catholic School was opened in 1912.

The inter-relationship of Milton and Ulladulla, with its attendant recurrent tensions, was encapsulated in 1874 when the first council of the new municipality of Ulladulla met in the Milton School of Arts (built in 1872, now the public library), where it continued to meet until in 1948 the municipality joined six other local government units to form Shoalhaven Shire.

3.2.5 Development of Economic Activity

Historically the economic viability of the district has been underpinned by two key industries: timber and dairying. In comparison to these industries, the other forms of economic activity can be considered to be relatively minor. These included: ship building, tanning, flour milling, silica mining, brick making and fishing.

Timber
The first industry in the district was timber, focused initially on the valuable cedar, then abundant in the dense coastal rail forests. With the laying of the railway track, sleeper cutting became profitable, mainly cut from ironbark. Timbers were cut for bridge girders, wharf piles, ship building, telegraph and electricity poles. The timbers were initially cut in sawpits, the first of which was established in the early 1860s.

The first mill in the region was established at Kioloa in 1881. Over the years there were a number of mills in operation in and around Ulladulla, but probably the best known of these is the mill built by the Mitchell brothers in 1929. It was destroyed by fire, rebuilt in 1939 and finally closed in 1973.

Dairy Industry
As the Cedar industry wound down and the independent families of settlers replaced the convict system along the South Coast, the large land grants partly divided into tenant farms, partly run by their owners or agents of the absentee landlords, were given over to more intensive agriculture. Wheat had been grown from the earliest settlements on the coast but the rust disease which came in during the 1860s caused it to decline in importance, although there was still a paddock of wheat at Woodstock in 1910. Sheep were raised until about 1900 but the country proved itself unsuitable for them.

However, it was dairying that became the principal outlet of agriculture very early in the district's history. The first South Coast dairy was on Alexander Berry's Coolangatta Estate near Nowra.

The first cattle used were Durham Devon, Suffolk, Sussex and Norman breeds.

In 1976 the Milk Zone was extended to cover the whole of New South Wales, made possible by the introduction of the refrigerated bulk milk tankers and milk vats. The entry of Britain into the European Common Market in 1973 and the consequent loss of Australian dairy produce sales caused huge changes and pressures to the Australian dairy industry. From 1968 the New South Wales dairy industry has been rationalised by farmers being able to sell their quotas separately from their land. This especially suited older farmers and those with smaller farms who did not wish to buy expensive milk vats or build new farm roads capable of taking the milk tankers. It has also enabled those who wished to stay in dairying to buy or lease more quota.

Ship Building
David Warden, a Scotsman of many business interests, opened a shipyard in the boat harbour as early as 1840 and continued activity until 1861, when his last schooner, the Jane Lockhart, was launched. In 1950 the industry was revived with the construction of a shipway designed for the launching of naval vessels.

Tannery
In 1854 Richard Millard established a tannery on the northern bank of Millard Creek, near the spot where a year previously his son George had planted a fig tree. An experienced tanner, Millard was attracted to the area because of its plentiful supply of fresh water, large supply of wattle bark and hides from local frame. In 1861 a dam as built to ensure an adequate supply of water.

Following a period of economic depression in the late 19th Century, the tannery prospered during the 1914-18 War having been successful in several defence contracts.

With the advent of the 1939-45 War with its attendant restrictions such as the discontinuance of coastal shipping which was used to carry freight to and from Sydney and Government acquisition of hides for essential purposes, the Tannery ceased to operate in 1939 and was demolished in 1950. The only remains to indicate its existence is the fig tree planted by George Millard in 1853, the dam on Millard Creek to feed the tanning pits and Richard Millards fine two-storey house.

Flour Mill
In an attempt to meet the basic needs of the pioneers, George Knight (first Milton Postmaster) built a steam flour mill in 1860, on its newly purchased 34 hectare farm in Milton. A year later he was insolvent, losing both farm and mill.

Brewing and Distilling
A brewery suffered the same fate, because the thrifty farmers brewed their own liquor and supplied the inns with their surplus. The Humphries of Robertson were the last people to draw the coils for the stills for distilling whisky and rum.

Silica Mining
In 1828 Surveyor Florance noted the presence of 'flint' on a headland at the north end of Coller's Beach, north of Ulladulla. The Mines Department followed up Florance's observation in 1915 and in 1918 identified Flint Point along with three other locations of fine quartzite, one near Milton, one at Bannister's Point, Ulladulla and the third at Red Head, to the south. The deposits were eminently

Later breeds were Ayrshires, Milking Shorthorns, Herefords, Jerseys, Guernseys and Holstein Friesians. Over many years the descendants of the Shorthorn, Devon and Ayrshire crosses evolved and were bred into the Australian Illawarra Shorthorn breed, which was officially recognised in 1910. Francis McMahon of Woodburn and Mimosa Park introduced the first pure-bred cattle into the Milton district in the 1860s.

The early farmers produced butter and cheese, easy to transport in wooden kegs from Ulladulla harbour. A by-product of the dairy industry was bacon curing, since the skim milk was fed to the pigs. A bacon factory was established at Ulladulla by the Knapp family. By 1865 Ulladulla was exporting 2,500 30-Kilo kegs of butter a year. By then there were many established families as the district's population grew. Untouched by the gold rush, with the land cleared of cedar and the huge task of clearing, burning and ash-fertilising the rich monzonite granite country around Milton well under way, the Milton dairy industry boomed.

Pasteurisation was first adopted in Milton by Adam Warden in 1898 and soon after by the dairy factories in the district. Tuberculin testing began in 1909.

In the late 19th Century an economic sub system of co-operatives was established in the Shoalhaven following the leadership of Joseph Warden of Kiama. As part of this system a number of butter factories were established in the Milton district. Conjola Dairy Company had its butter factory opened by Mrs James Murray in 1895. Ulladulla Refrigerated Butter Company was opened by Mrs Donald Kennedy in 1896. The factory was built in Whatman's paddock at Milton. The churn would make same 450 kilos of butter and the refrigerator held 13 tons. Yatte Yattah factory was opened by Mrs Arthur Cork in 1898 and the Woodstock cheese factory built in 1909.

At first whole milk was taken to the factories by the farmers to be separated and the skim milk taken home for the pigs, calves and fowls. The development of home separators meant that only the cream needed to be taken in, giving farmers a great deal more time for improving cultivation and hence milk production. Following the invention of a milk condensing process in the 1850s, Roger Seccombe of "Eyrie Bowrie", Milton established what is thought to be the first condensery in Australia in 1873.

The first milking machines were brought to Australia from Scotland in 1892 by the Bodalla Company. They were installed at "Sunnyvale" in 1902 and "Melrose" in the 1920s but they were so difficult to use that they were hardly used until improved versions came in, reaching Milton just before World War Two.

A central co-operative factory for Shoalhaven was established in 1901. The extension of the Illawarra Railway Line to Nowra in 1893 and the introduction of the motor truck saw milk for the Sydney trade - 600 gallons a day - being sent from Milton via Nowra as early as 1920. In 1942, wartime conditions and drought brought about the full entry of Milton into the Sydney milk supply zone; Yatte Yattah and Woodstock factories then closed. Cheese making ceased at the Milton factory. In 1946, all Milton milk except that for local use was sent to Nowra for the Sydney market. Milton-Ulladulla district consumers received their supplies from several local dairies until 1965; since that time milk has been sent back from Nowra after processing for local consumption.

suitable for providing silica in firebricks. The earliest to be mined was Flint Point, with the silica being carted to Ulladulla and then transported to Waratah and occasionally to Marrangaroo the two factories of the Newbold Silica Firebrick Company. This company took over the leases at Milton and Bannister's Point, where it built a substantial wooden loading jetty. Bannister's Point was reached by a private tramway from Narrawallee Beach to the north, which was constructed for Flint Point silica. The tramway was extended north over Narrawallee inlet to a new mine at Pattimores Lagoon in the 1920s. This extensive tramway system, using wooden rails and a variety of locomotives, can still be traced in part.

In the 1920s Newbold opened up their lease at Red Head, where they built a large wooden storage bin on a new jetty in 1924. Bannister Point plant closed in 1943 and Red Head crusher in 1947. The crushing was then done at Yatte Yattah and road transport replaced coastal shipping. The company jetties at Bannister's Point and Red Head were demolished in 1961 and 1975. The silica industry finally petered out with the closure of Pattimores Lagoon in 1975 (Harper 1924, Ulladulla and District Historical Society 1988).

Brick Making
The earliest brick homes were made from sun-dried bricks, the clay being dug on the properties. The Montgomery family established their first brick kiln on the Milton end of a long seam of clay extending to Ulladulla. Their second kiln was on the same seam half a mile south. Another brickworks was established near Narrawallee Creek.

Fishing
Prior to World War Two a number of Italian families including Puglisi, Greco, Lavelle and Basile, established a viable Seine trawling industry at Ulladulla. In 1956 the Ulladulla Fisherman's Co-operative Society was formed and expansion of the fishing fleet followed. By 1989/90 the co-operative had a turnover of $12 million, making it the State's second major port by value of fish landings. An abalone industry has existed at Ulladulla since 1961. In July 1975 the co-operative at Ulladulla Harbour was registered with 38 active diver members. Today abalone from Newcastle to the Victorian border is processed in the Ulladulla factory for export.

3.2.6 Municipal Services

From the first settlement in 1828, the quality of the lives of the residents of Milton-Ulladulla has been gradually improved with the introduction of a succession of municipal infrastructure and services.

Roads
Prior to 1857 the roads from the Shoalhaven to Ulladulla consisted of crude tracks crossing ranges, wetlands, creeks and streams, and fording entrances to coastal inlets. In 1857 a new route (now the alignment of the Princes Highway) was opened, the contractor clearing the trees to make a bridle track some five metres wide. The bridges were built later: at Wandandian 1858, Narrawallee Creek 1859 and Parma Creek 1866.

Periodic floods wreaked havoc with the roads. The Wandandian bridge

approaches were washed out in 1890, whilst in 1891 the coach took fifty-three hours instead of the usual eight hours to travel from Nowra to Milton.

Despite the poor roads, coach services were opened.

In 1893, R T Thorburn started a service to cover the 320 miles between Nowra and Bega, using 150 horses and 40 coaches; a twice a day service between Nowra and Milton was opened in 1908 and George Harrison started the motorcar service between Nowra and Moruya in 1910.

In 1920 the main road was named the "Princes Highway" and in July 1928, it was declared a national highway. Meanwhile, in 1925 the NSW Main Roads Board was formed. It found the highway through the Shoalhaven to be "gravel broken stone, or plain earth and only 12 to 14 feet wide". Widening commenced in 1929 and bitumen surfacing had passed Burrill Lake when work was stopped by World War Two.

Water Supply

The availability of water was a vital consideration to the early settlers. The first supplies came from the creeks; houses and dairies were built near them for convenience. From the 1860s the concrete dome-topped wells still seen on the old farm appeared; then square rivetted sheet iron tanks and then the round galvanised iron tanks and the more recent round concrete tanks.

Since 1924, there had been constant demands for a town water scheme. Promises and plans over many years had come to nothing, mainly because of cost. However, after the formation of the Shoalhaven Shire Council in 1948 activity was stepped up. In 1958, the local state member Mr J G Beale, an engineer and later Minister for Conservation, a keen supporter of the water supply, told a public meeting that his department recommended the Narrawallee scheme, to dam Narrawallee Creek and gravitate the water to Milton and Ulladulla. When the subsidy was finally granted in September 1965, however, it was the Porters Creek scheme which was adopted, the first of the three considered by the old Ulladulla Municipal Council. On October 21 1967 the water from Porters Creek Dam was turned on to Milton and Ulladulla town.

Sewerage

With a town water supply established, consideration was given to the installation of a town sewerage scheme. The council considered proposals for Milton-Ulladulla in June 1965 and schemes were drawn up in 1970. Compared with the water supply, the installation of sewerage proceeded quickly and by 1975 many properties were connected.

Electricity

The supply of electricity in Milton-Ulladulla was originally a joint municipal/private undertaking. During the early part of World War One the Council erected poles and wires when Blackburn and Son were contracted to supply power to light the street of Milton with the right to supply private consumers. Blackburn's store boasted electric light and among the early consumers was the Milton School of Arts (1921) and the Freemason's Temple (1922).

Two additional suppliers were contracted to provide street lighting and the right to supply power to private customers. However, by 1931 the supply and reticulation of power had become inadequate.

In 1944, estimates were prepared for the extension of the electricity supply line from Tomerong to Burrill Lake, but deferred as a "post war reconstruction project", and it was not until May 1948, that the official supply of electricity to parts of the Ulladulla Municipality was celebrated. The last act of the Ulladulla Council before amalgamation was to approve the extension of the line to Burrill Lake, since when electricity has been reticulated throughout the area.

3.3 DEVELOPMENT OF TOURISM

3.3.1 Early Days

The tourism and hospitality industry in the district commenced in the 1860s with Milton providing accommodation in at least two hotels: The Star and John Booth's Travellers Rest. By 1881 a fifth hotel was being built with another shortly to be built in Ulladulla. In 1883 Sydney's Town and Country Journal published scenic views, sketched in the Ulladulla district, depicting the picturesque harbour (with steamer and light-house), lake (Conjola, complete with sail boat) and mountain (Pigeon House, with contented cows in the foreground) and gracious lifestyle (Airlie House with more cows), all designed, no doubt to attract visitation. More pictures appeared in 1885, including Milton School of Arts, the Post and Telegraph Office, a lively view of Milton's main street, and a charming one of Ulladulla Harbour (Milton-Ulladulla and District Historical Society).

By the early 1900s the main attraction of the district was its opportunities for hunting and fishing. During this period Hughes' Harbour View Hotel in Ulladulla advertised to :

> *"Sportsmen and Lovers of Good Fishing (sea and lake), Cyclists etc very clean and Comfortable Quarters. Wild Duck, Swan, Snipe etc in abundance close by, Schnapper and Splendid Lake Fishing, Good Boats, Bathing etc Picnic, Shooting and Fishing Parties arranged and catered for."*

3.3.2 The Inter War Years

However, it was not until after the 1914-18 War, when the motorcar had become popular and the speed of travel had overcome distance, that holidaying became a regular and general activity.

Burrill Lake, on the main south road soon became a popular holiday destination. Before the township was established, a regular canvas-city would spring up at holiday times. In the Christmas season of 1920 the Butson family began catering for the needs of the holiday campers. From their farm west of the pine forest, the Butson children made daily horseback deliveries of fresh fruit and vegetables, milk, butter, eggs, homemade bread and cakes to the camping ground. The number of campers increased rapidly. At Christmas 1922, the Butsons themselves moved into temporary pole and bark shelters, where they served hot take away dinners cooked in camp ovens.

The Butson family erected a substantial building, where they took in boarders and sat down as many as forty-six to a meal. On their busiest Christmas Day they dressed three hundred and fifty head of Poultry for the campers and themselves. In the early 1930s the Butson boarding house was moved to a site on the highway, where it still stands transformed into a general store.

More secluded with rough access roads, Redhead, Cunjurong, Conjola, Bawley Point and Kioloa had their devotees in summer cottages, cabins and camps. Mrs Hammond started the Bawley Point Guest House in 1928 for those who required their "creature comforts".

At Ulladulla the Balmoral boarding house stood across the main street from Hughes' Hotel. After the Balmoral burnt down the large brick Marlin Hotel was built on the site, accommodating Pioneer Coach passengers as well as holiday makers and the travelling public. It was officially opened in 1948. Other forms of accommodation available during this period included the Hollywood Guest House and the Ulladulla Guest House.

Milton had besides the Star and the Commercial Hotel, Madden's Guest House, where Mellick's store was later built, and George Poole's Guest House opposite the hospital, which still welcomes visitors. After McArthurs (now Hacketts Restaurant) ceased to be a store, accommodation was available on the premises there too, for a time.

Mollymook Beach was the main surfing beach for the two towns. A 6.5 hectare area behind the beach was declared a public reserve in 1918 and in 1922 Milton Progress Association was granted permission to erect bathing sheds. After Mollymook Surf Lifesaving Club was formed in 1935, the patrolled section of the beach attracted even more surfers. At holiday periods campers took over part of the reserve where there was a well for water. But Mollymook became most widely known for its little sand-green golf links, laid out in the twenties on privately owned land overlooking the beach and the sea. In the forties, Mr and Mrs J Crews, leasing it, conducted their select "Country Club" guest house adjacent to the course and later had much to do with the development of the Mollymook Golf Club, formed in 1952.

3.3.3 Post War Mobility

The 1950s and 1960s saw the introduction of motels and caravan parks to accommodate the needs of an increasingly mobile holidaying public. Motels were established at strategic locations throughout the district, the first one possibly being the Town Motel in Ulladulla, followed by an impressive list of establishments now numbering over twenty between Termeil and Conjola. With caravans becoming increasingly popular as mobile accommodation, existing camping grounds became inadequate and caravan parks developed. These continued to expand and improve to a high standard of presentation and comfort, some have taken on a degree of permanence and an exclusive village atmosphere. Holiday flats and serviced units have also increased in numbers as the demand for self catering accommodation continues to grow.

Launching ramps have been installed at the harbour and at the lakes for the convenience of boat owners and specific areas for water skiing have been designated at Kings Point on Burrill and Lake Conjola.

3.4 LAND TENURE

Land in the Milton-Ulladulla district is in private ownership, State, or Council ownership.

3.4.1 Private Tenure

The majority of the land around Milton, that was cleared by the early settlers for agriculture, remains in private ownership, with several of the early family names represented on Council's current Rating Register. The majority of the urban area is also in private ownership, with a number of influential families owning a significant proportion of the district's urban real estate.

3.4.2 State Land

A large portion of land between Ulladulla and Kings Point and also to the south-west of Dolphin Point is in State ownership and managed by the Department of Conservation and Land Management (Figure 3.2). The majority of this land remains heavily timbered.

Aboriginal Land Claim
In November 1987 the New South Wales Government Gazette published a notice of application for the constitution of an extensive area to the west of Ulladulla as a local Aboriginal Land Council area, appeared under the heading of "Aboriginal Land Right Act, 1983". This application was granted in 1995. The area of land has become known as the Ulladulla Local Land Council Area.

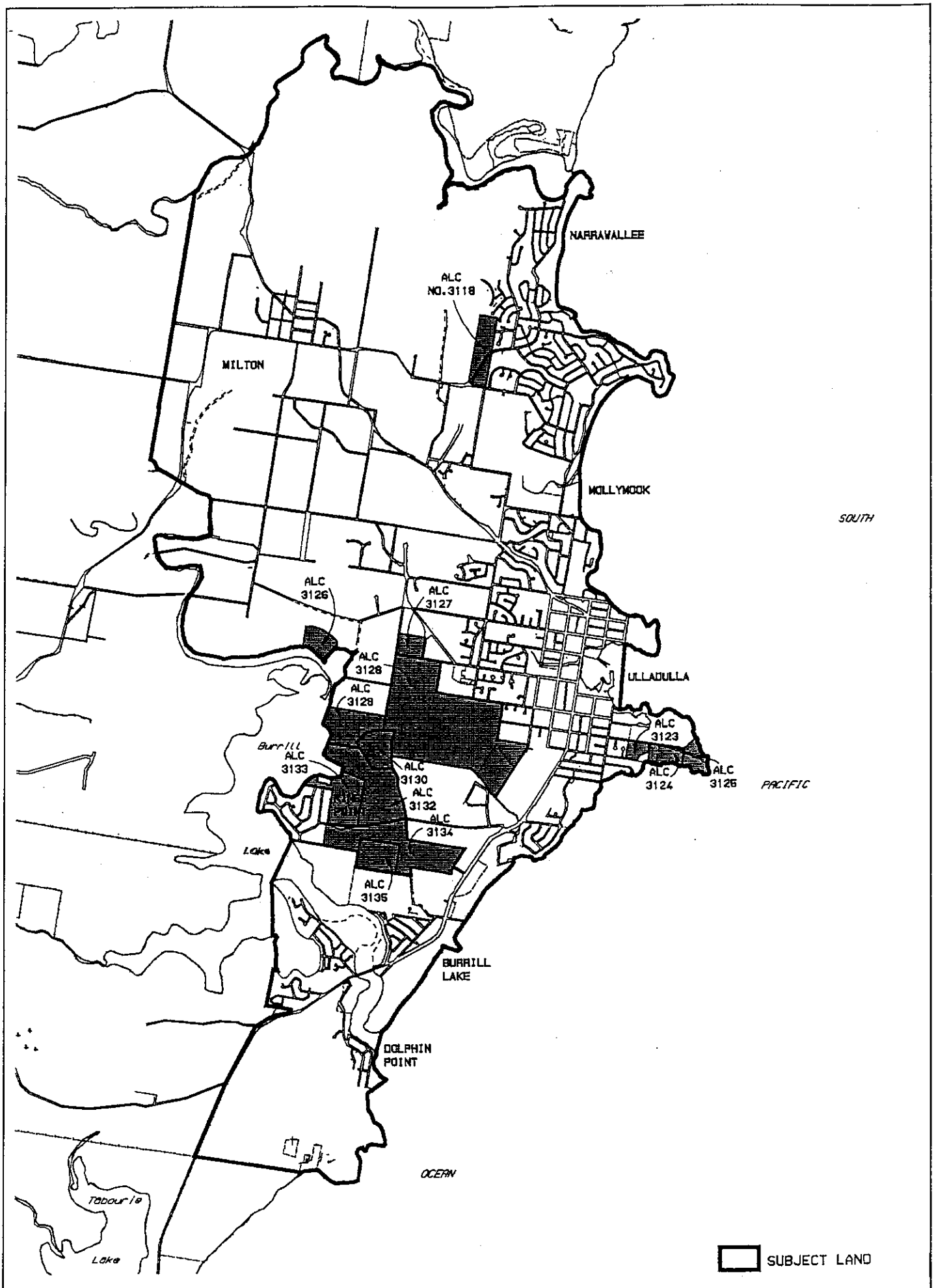
This was followed in September 1988 by an ambit claim which included:

- a single claim to the west of Mollymook
- a single claim at Ulladulla Head
- several claims at Warden Head
- several claims to the west and south-west of Ulladulla

These claims were over land currently owned by the State and Council. Following a process of objection and review of their appropriateness and legitimacy, the claims have been reduced (Table 3.1 and Figure 3.1).

Land Claim Implications
Where an Aboriginal Land Claim is successful, the subject State land would be transferred to the Ulladulla Local Land Council as a Freehold Title. The Land Council would be able to deal with the land, enjoying all the rights of freehold. However, whilst the land is in the Land Council's ownership no State or Council authority would be able to resume any part of the subject land. Were the land to be sold this protection from resumption would expire.

Under Land Council ownership, land use zoning would apply in the same way as it does for any land within private ownership. The Land Council would be free to develop their land to the most intensive use which the current zoning would allow; on the hand, the Land Council would be within its rights to maintain the land in a natural state, left undeveloped.



CURRENT STATE LANDS & ABORIGINAL CLAIMS

FIGURE 3.1

Table 3.1
Status of Aboriginal Land Claims in Milton-Ulladulla

Land Description	Aboriginal Land Claim No.	Current Status
Portion 77	3118	Finalised
Portion 6	3119	Not granted
Section 18 Warden Head	3123	Granted (part)
Section 17 Warden Head	3124	Not Granted
Warden Head	3125	Not Granted
Portion 160	3126	Not Granted
Portion 37	3127	Not Granted
Part Reserve 1963	3128	Under Investigation
Part Reserve 1963	3129	Under Investigation
Portion 272	3130	Under Investigation
Portion 18	3131	Not granted
Part Reserve 1963	3132	Under Investigation
Portion 233	3133	Under Investigation
Part Reserve 1963	3134	Under Investigation
Portion 165	3135	Not granted
	3433	Under Investigation
	3434	Under Investigation

Source: Department of Land and Water Conservation 1995

Native Title Claims (Mabo)

All State Land in the Milton-Ulladulla district is (as is State Land throughout Australia) subject to a Native Title claim under the Commonwealth Native Title Act (1993). The Department of Land and Water Conservation (the custodian of State Land) must deal with such claims in one of two ways:

- recognise the legitimacy of the Native Title and compulsory purchase the land; or

- contest the legitimacy of the Native Title, via a non claimant Native Title Application which supports a proprietary interest in the land by a non-Aboriginal person or organisation.

The resolution of the issue by one of these means would then enable the development of the land to proceed without the uncertainty of a future claim.

3.5 PREVIOUS PLANNING INITIATIVES

The key planning initiative undertaken specifically for this area was the Milton-Ulladulla Structure Plan completed in 1978. The objectives of this plan were to:

- provide a higher level of convenience, economy and quality for the community
- preserve, as far as possible the considerable natural assets of the area
- minimise public and private sector costs involved in development
- retain flexibility in the design to accommodate new demand pressures and life styles.

This plan took into account land capability, the landscape, utility constraints, growth patterns, tourism, land supply, commercial and residential development demand, the small economic base, restricted employment opportunities, as well as the needs and views of the residents.

The implications of rapid growth and tourism were identified as well as the need to provide the infrastructure necessary to accommodate the needs of these

developments and those of the residents, whilst protecting the very qualities that attract people to the area.

Many of the fruits of this plan remain very much in evidence. The need to separate the various settlements of the area was addressed, and the component villages still largely maintain their individual character today. The Civic Centre was foreseen and stands on land nominated by the 1978 plan. Residential development west of the Hill Top Golf Club was nominated and is now in the process of development. Also, the issues of a Milton-Ulladulla bypass and a local air strip were addressed, although no action was subsequently taken.

However, after a period of some 18 years the general philosophy and provisions of the plan are considered by many to be outmoded. The plan, predated the 1979 Environmental Planning and Assessment Act 1979, which represented a paradigm-shift in the approach to environmental planning in New South Wales.

3.6 KEY STRUCTURE PLAN ISSUES

The salient features of Milton-Ulladulla's historical perspective, that have implications for structure planning, are summarised in Table 3.2.

Table 3.2
KEY STRUCTURE PLAN ISSUES

Aboriginal Culture:
- Milton-Ulladulla was inhabited by Yuin tribe.
- Significant rock paintings in caves north of Milton.

European Settlement:
- Thomas Kendall settled at Narrawallee in 1829.
- Development of Ulladulla harbour and town in 1840s.
- Development of the private township of Milton in 1860s.
- Early version of Princes Highway opened in 1857.
- Electricity supply provided in 1948.
- Town water supply connected in 1967.
- Sewerage scheme in operation in early 1970s.

Development of Tourism:
- Organised camping holidays commenced at Burrill Lake in early 1920s.
- Mollymook Surf Life Saving Club founded in 1935.
- Country Club guest house established at Mollymook in 1940s.
- Motels and caravan parks established in the district in 1950s and 1960s.

Land Tenure:
- Land between Ulladulla and Kings Point in State ownership.
- Much of the State owned land subject to Aboriginal Land Claim and Native Title Claims (Mabo).

Previous Planning Initiatives:
- The first Milton-Ulladulla Structure Plan was completed in 1978.

Section Four

THE PEOPLE

The characteristics, activities and growth trends of both the resident and the visitor populations are essential determinants of the demands for the services and facilities that constitute "life style" on the one hand and "visitor experience" on the other.

4.1 RESIDENT CHARACTERISTICS

At the 1991 Census, the southern Shoalhaven subregion (Area 5) had a resident population of 13,960, of which 9,952 lived in the urban settlements of Milton-Ulladulla. Thus Milton-Ulladulla accounts for 71.3% of the subregion's total population, to which it acts as a service centre. The balance of the subregion's population are accommodated for the most part in the coastal villages of Bendalong, Manyana/Cunjurong, Fishermans Paradise and Lake Conjola to the north and to the south Tabourie Lake, Termeil, Bawley Point, Kioloa and North Durras.

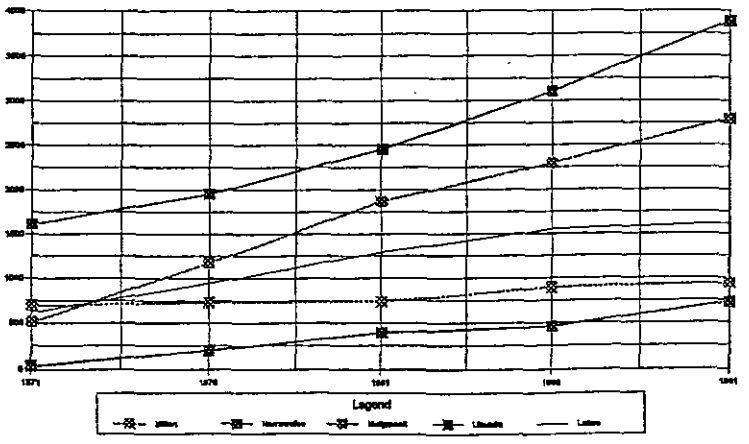
4.1.1 Growth Trends

Since the mid 1960s the population of Milton-Ulladulla has increased dramatically, with the growing appreciation of the district's attractiveness for tourism and subsequent retirement. Major source markets for both visitation and retirement have been the Sydney metropolitan area, Wollongong, Canberra and Victoria. Between 1971 and 1981 the population increased from 3,476 to 6,751, a growth rate of 94.2, or an average of 9.4% per annum. From 1981 to 1991 the district's population increased by a further 3,201, a significantly reduced growth rate of 47.4%, that is an average annual rate of 4.7%. This slow-down in growth has, however, not been echoed at the subregional level, which sustained a growth rate of 60.2%. This was attributable to the dramatic growth of the coastal villages and rural areas, which, although starting from a low 1981 baseline of 1,967, grow to 3,984 in 1991, a Malthusian increase of 102.5%, or 10.3% per annum (Figure 4.1).

Figure 4.1

POPULATION GROWTH TREND

Milton-Ulladulla Area



4.1.2 Gender and Age Profile

Gender

In 1991 there was a gender split in favour of females, accounting for 51% of the population. This has increased marginally since 1971 (Table 4.1). There are, however, significant imbalances in certain age groups (Table 4.2). In the age group 0-4 to and including the 25-29 age group, the split favours males. However, from the age of 30 (with the exception of the 45-49/50-54 groups) there is an imbalance in favour of females. The imbalance is must pronounced in the post 80s age groups, in particular the post 90 age band, where there are no males represented.

Table 4.1
Gender Split: Milton-Ulladulla: 1971-1991

Year	Males		Females		Total	
	No	%	No	%	No	%
1971	1,737	50	1,739	50	3,476	100
1976					5,000	100
1981	3,354	49.7	3,397	50.3	6,751	100
1986	4,081	49.1	4,227	50.9	8,308	100
1991	4,846	48.7	5,106	51.3	9,952	100

Source: Australian Bureau of Statistics 1971-1991 Censuses of Population and Housing

Table 4.2
Population Growth by Locality: 1971-1991

Locality	1971	1976	1981	1986	1991
Milton	695	729	740	897	940
Narrawallee	37	198	393	460	724
Mollymook	513	1,175	1,869	2,295	2,792
Ulladulla	1,611	1,952	2,429	3,102	3,883
Kings Pt/Dolphin Pt/Burrill Lake	620	946	1,295	1,551	1,613
Total	**3,476**	**5,000**	**6,756**	**8,305**	**9,952**

Source: Australian Bureau of Statistics: 1971-1991 Censuses of Population and Housing

Table 4.3
Age and Gender Structure: 1991

Age Group	Males		Females		Persons	
	No.	%(1)	No.	%(1)	No.	%(2)
0-4	328	50.1	327	49.9	655	6.6
5-9	366	51.5	344	48.5	710	7.1
10-14	364	52.5	329	47.5	693	7.0
15-19	270	50.9	260	49.1	530	5.3
20-24	196	50.9	189	49.1	385	3.9
25-29	268	51.7	250	48.3	518	5.2
30-34	290	43.2	381	56.8	671	6.7
35-39	366	47.8	399	52.2	765	7.7
40-44	310	49.3	319	50.7	629	6.3
45-49	233	51.8	217	48.2	450	4.5
50-54	216	50.5	212	49.5	428	4.3
55-59	212	40.2	315	59.8	527	5.3
60-64	400	49.8	403	50.2	803	8.1
65-69	416	48.6	440	51.4	856	8.6
70-74	301	49.7	304	50.3	605	6.1
75-79	208	48.6	220	51.4	428	4.3
80-84	78	39.2	121	60.8	199	2.0
85-89	24	32.4	50	67.6	74	0.7
90+	0	0.0	26	100.0	26	0.3
Total	**4,846**	**48.7**	**5,106**	**51.3**	**9,952**	**100.0**

Notes: (1) percentages expressed as a proportion of persons within each age group
(2) percentages expressed as a proportion of all age groups
Source: ABS Census : 1991

Table 4.4
Age Group Changes: 1981-1991

Age Group	1981		1986		1991	
	No.	%	No.	%	No.	%
0-4	461	6.8	566	6.8	655	6.6
5-9	520	7.7	611	7.4	710	7.1
10-14	497	7.4	607	7.3	693	7.0
15-19	382	5.6	462	5.6	530	5.3
20-24	391	5.8	400	4.8	385	3.9
25-29	470	7.0	511	6.2	518	5.2
30-34	467	6.9	602	7.2	671	6.7
35-39	370	6.5	603	7.2	765	7.7
40-44	295	4.4	362	4.3	629	6.3
45-49	324	4.8	363	4.4	450	4.5
50-54	388	5.7	356	4.2	428	4.3
55-59	511	7.5	505	6.1	527	5.3
60-64	552	8.2	689	8.3	803	8.1
65-69	500	7.4	636	7.7	856	8.6
70-74	327	4.8	511	6.2	605	6.1
75+	296	4.4	524	6.3	727	7.3
Total	**6,751**	**100.0**	**8,308**	**100.0**	**9,952**	**100.0**

Source: ABS Census : 1991

Table 4.5
Functional Age Groups (Total Persons) : 1981, 1986, 1991

Functional Age Group	1981		1986		1991	
	No.	%	No.	%	No.	%
Preschool (0-4)	461	6.8	566	6.8	655	6.6
Primary School (5-9)*	520	7.7	611	7.4	710	7.1
High School (10-19*	879	13.0	1,069	12.8	1,223	12.3
Tertiary Education (20-24)	391	5.8	400	4.8	385	3.9
Early Career (25-34)	937	13.9	1,113	13.4	1,189	11.9
Mid Career (35-49)	989	14.7	1,328	16.0	1,844	18.5
Late Career (50-64	1,451	21.5	1,550	18.7	1,758	17.7
Retirement (65+)	1,123	16.6	1,671	20.1	2,188	22.0
Total	***6,751***	***100.0***	***8,308***	***100.0***	***9,952***	***100.0***

NOTE: Approximate Age
Source ABS Census: 1981, 1986, 1991

Age

The population of Milton-Ulladulla is gradually aging (Tables 4.3 and 4.4). The preschool age group has remained relatively constant as a proportion of total population (Table 4.4). The older child, adolescent and young adult age bands have experienced a gradual decline since 1981. This has been balanced by a substantial increase in the mid-career, late career and retirement age bands.

Age Groups by Locality

Currently age segmentation within the villages of Milton-Ulladulla tends to be mixed, although a pattern can be discerned, with certain areas echoing the overall pattern and others exhibiting a degree of polarisation and other deviations from the mean. Kings Point, Narrawallee and Milton have the highest proportion of their populations in the preschool age group (0-4), whilst Dolphin Point and Mollymook have the lowest (Table 4.6). Milton, Narrawallee, Kings Point and Dolphin Point have an above average proportion in the primary school age group (5-9), whilst Burrill Lake and Mollymook have the lowest representation. The high school age band (10-19) is well represented in Ulladulla, Kings Point and Milton and less so in Dolphin Point, Narrawallee and Mollymook. Dolphin Point, Narrawallee and Kings Point have above average proportions of their populations in the tertiary eduction/early career age bands (20-34), whereas Mollymook and Milton are well below average. The mid and late career age groups (35-64) are well represented in Dolphin Point, Kings Point and Burrill Lake, yet poorly represented in Milton and Narrawallee. Mollymook, Milton and Burrill Lake have above average representation in the retirement age band (65+), whereas Kings Point, Narrawallee and Ulladulla have below average proportions in this segment.

Table 4.6
Population Age by Locality : 1991

Age (years)	0-4	5-9	10-19	20-34	35-64	65+	Total
Milton	78	98	117	136	277	234	940
Narrawallee	65	55	74	140	257	133	724
Mollymook	161	186	300	350	1,025	770	2792
Ulladulla	243	272	545	671	1,438	714	3,883
Kings Point	37	28	50	73	144	49	381
Burrill Lake	65	59	125	172	396	250	1,067
Dolphin Point	6	12	12	32	65	38	165
Total	**655**	**710**	**1,223**	**1,574**	**3,602**	**2,188**	**9,952**

Source: Australian Bureau of Statistics 1991 Census of Population and Housing

4.1.3 *Cultural Background*

Milton-Ulladulla has a high proportion of Australian born residents (86.4% in 1991). There is, however, a slight trend towards greater multi-culturalism (Table 4.7). The proportion of the residents born overseas has increased marginally from 10.6% in 1981 to 13.6% in 1991 and the proportion of the population from non-English speaking backgrounds (NESB) has increased from 3.8% to 5.7% during the same period. There has been a significant increase in the resident population born in the United Kingdom and Eire; New Zealand; and to a lesser extent northern and southern Europe. Middle East/Africa/Asia and the Pacific Islands have remained stable.

Aboriginality

The Aboriginal population of Milton-Ulladulla has increased significantly since 1981, but remains a small proportion of the total (Table 4.8).

Table 4.7
Resident Country of Birth

Country of Birth	1981		1986		1991	
	No.	%	No.	%	No.	%
English speaking						
Australia	6,019	89.4	7,358	88.4	8,618	86.4
United Kingdom and Eire	385	5.7	474	5.7	660	6.6
New Zealand	65	1.0	64	0.8	105	1.1
North America	10	0.1	10	0.1	12	0.1
Other English speaking	0	0.0	4	0.0	3	0.0
Total	**6,479**	**96.2**	**7,910**	**95.0**	**9,398**	**94.3**
Non English speaking						
Europe (north)	58	0.9	83	1.0	97	1.0
Europe (South)	97	1.4	115	1.4	122	1.2
Middle East/N Africa	4	0.1	2	0.0	3	0.0
Asia	32	0.5	32	0.4	32	0.3
Pacific	12	0.2	12	0.1	15	0.2
Other/not stated	50	0.7	170	2.1	304	3.0
Total	**253**	**3.8**	**414**	**5.0**	**573**	**5.7**
Total	**6,732**	**100.0**	**8,324**	**100.0**	**9,971**	**100.0**

Source: ABS Census : 1981, 1986, 1991

Table 4.8
Aboriginal Population

Aboriginality	1981		1986		1991	
	No.	%	No.	%	No.	%
Aboriginal	27	0.4	57	0.7	74	0.7
Torres Strait Islander	0	0.0	4	0.0	15	0.2
Total	**27**	**0.4**	**61**	**0.7**	**89**	**0.9**

Source: ABS Census : 1981, 1986, 1991

4.1.4 Socio-Economic Status

Socio-economic status is expressed as a function of educational achievement, occupational status and household income.

Educational Achievement

In 1991, 28.7% of Milton-Ulladulla's adult population possessed some form of tertiary qualification (Table 4.9). Although there has been no improvement since 1981, the proportion of the population with a diploma, degree or a higher qualification has increased from 5.9% to 9.2%.

Table 4.9
Educational Achievement of Adult Population: 1981, 1986, 1991

Qualification	1981		1986		1991	
	No.	%	No.	%	No.	%
Degree or higher	98	2.2	177	3.1	379	5.4
Diploma	166	3.7	212	3.8	265	3.8
Trade	664	14.8	823	14.4	1,012	14.5
Other	380	8.4	818	14.5	345	5.0
No stated qualification	3,192	70.9	3,632	64.1	4,978	71.3
Total	**4,500**	**100.0**	**5,662**	**100.0**	**6,979**	**100.0**

NOTE: Adult population equates to age groups ≥ 25
Source: ABS Census : 1981, 1986, 1991

Occupation (Industrial Sector)

Occupations in the wholesale and retail trade account for the largest section of the population (23.7%); followed by community services (14.9%); recreation, personal and other services (12.7%); construction (11.5%); and finance, property and business services (9.8%) - Tables 4.10 and 4.11).

Occupation (Employment Status)

Correlating with the predominance of occupations in the wholesale and retail trade, sales and personal services workers account for the largest proportion of Milton-Ulladulla's occupations by employment status (Table 4.12). This category is followed by: trades persons; labourers and related workers; managers and administrators; and clerks.

Figure 4.10
Resident Occupation (Industry) by Gender : 1991

Industrial Classification	Males	Females	Total
Agriculture, Forestry and Fishing	95	15	110
Mining	0	0	0
Manufacturing	178	63	241
Electricity, Gas and Water	24	6	30
Construction	290	40	330
Wholesale and Retail Trade	381	300	681
Transport and Storage	64	24	88
Communication	33	3	36
Finance, Property and Business Services	123	158	281
Public, Administrative and Defence	68	21	89
Community Services	143	285	428
Recreation, Personal and Other Services	168	197	365
Other/Not Stated	106	92	198
Total	**1,673**	**1,204**	**2,877**

Source: ABS - 1991 Census

Figure 4.11
Resident Occupation (Industry) by Age Group : 1991

Industrial Classification	15-24	25-54	55+	Total
Agriculture, Forestry and Fishing	9	71	30	110
Mining	0	0	0	0
Manufacturing	30	188	23	241
Electricity, Gas and Water	0	24	6	30
Construction	53	265	12	330
Wholesale and Retail Trade	161	453	67	681
Transport and Storage	6	76	6	88
Communication	0	33	3	36
Finance, Property and Business Services	42	192	47	281
Public, Administrative and Defence	12	68	9	89
Community Services	9	379	40	428
Recreation, Personal and Other Services	38	284	43	365
Other/Not Stated	24	135	39	198
Total	**384**	**2,168**	**325**	**2,877**

Source: ABS - 1991 Census

Table 4.12
Resident Employment Status by Gender : 1991

Employment Status	Males	Females	Total
Managers and Administrators	253	131	384
Professionals	148	120	268
Para-professionals	87	57	144
Trades persons	460	42	502
Clerks	55	313	368
Sales and Personal Services Workers	206	320	526
Plant and Machine Operators and Drivers	139	15	154
Labourers and Related workers	269	135	404
Other/Not Stated	100	107	207
Total	**1,717**	**1,240**	**2,957**

Source: ABS Census 1991

Household Income

A significant proportion of Milton-Ulladulla's households (63%) have incomes which fall below the median range (less than $30,000 per annum). Almost 11% of households have an income in the median range, whilst about 13% have annual incomes above that range (Table 4.13).

Table 4.13
Resident Household Income : 1991

Annual Income	Households No.	%	Income Status
$0-$12,000	607	15.8	] Below median
$12,001-$20,000	1,144	29.8	] income
$20,001-$30,000	675	17.6	] band
$30,001-$40,000	410	10.6	Median income band
$40,001-$50,000	253	6.6	]
$50,001-$60,000	118	3.1	]
$60,001-$70,000	52	1.4	] Above
$70,001-$80,000	29	0.7	] Median
$80,001-$100,000	22	0.6	] Income
$100,001 +	*15*	*0.4*	] *Band*
Not stated/partially stated	515	13.4	]
Total	**3,840**	**100.0**	

4.2 VISITOR PROFILE

4.2.1 Visitor Numbers

Visitors represent a significant component of Milton-Ulladulla's population, particularly during the summer months (Table 4.14). In 1993 an estimated 4,440,000 visitor nights were spent in the Milton-Ulladulla subregion (City of Shoalhaven 1994). Estimates for 1993 give a permanent winter Milton-Ulladulla population of 11,300 and a summer peak population of 25,360. That is a peak over-night visitor population of 14,060 during January.

Table 4.14
Milton-Ulladulla Visitor Seasonality : 1993

Season	Milton-Ulladulla %	Batemans Bay %
Spring (September, October*, November)	24.2	26.0
Summer (December, January*, February)	33.6	37.4
Autumn (March, April*, May)	23.7	22.4
Winter (June*, July, August)	18.5	14.2
Total Year	**100.0**	**100.0**

NOTE: * highest month
Source: Adapted from City of Shoalhaven 1994.

4.2.2 Visitor Characteristics

Stage in Life Cycle

Visitors to the Milton-Ulladulla district are characterised by a high proportion of families and a significant proportion of younger solos (Table 4.15).

Income

Visitors to the district are also characterised by relatively low personal incomes, although they are marginally higher than the New South Wales average and Batemans Bay on the South Coast (Table 4.16).

Table 4.15
Visitor Stage in Life Cycle : 1993

Life Cycle	NSW %	Milton-Ulladulla %	Batemans Bay %
Dependent Children	8.2	5.9	4.9
Younger Solos	17.0	18.3	18.5
Younger Married	5.6	6.4	5.8
Younger Families	15.1	17.9	18.3
Single Adults	2.0	1.4	0.7
Married Adults	7.4	9.4	10.1
Families	23.8	24.0	24.6
Older Families	3.4	2.6	1.7
Older Couples	14.0	12.1	13.4
Older Solos	3.4	2.0	2.1
	100.0	100.0	100.0

Source: Adapted from City of Shoalhaven 1994

Table 4.16
Visitor Personal Annual Income (1989 $s)

Annual Income	New South Wales %	Milton-Ulladulla %	Batemans Bay %
Under $10,000	49.1	43.4	42.3
$10,000-$14,999	6.4	8.4	11.8
$15,000-$19,999	8.9	10.1	12.3
$20,000-$29,999	17.2	17.7	15.9
$30,000-$39,999	11.5	12.5	11.7
Over $40,000	6.9	7.9	6.0
Total	**100.0**	**100.0**	**100.0**

Source: Adapted from City of Shoalhaven 1994

4.2.3 Source Markets

The source markets of the Milton-Ulladulla district are considered to be somewhere between those of the Illawarra Region and the South Coast Sub-Region (Table 4.17). Thus the key source markets in descending order are currently:

- Sydney (42.6%)
- Country New South Wales (27.2%)
- ACT (16.0%)
- Victoria (10.0%)

Table 4.17
Visitor Source Markets: 1991/92

Source Market	Illawarra %	Milton-Ulladulla $	South Coast %
Sydney	57.8	42.6	27.3
Country NSW	29.8	27.2	24.5
ACT	4.0	16.0	23.1
Victoria	3.2	10.0	21.7
Other States	4.4	3.8	3.2
Overseas	0.7	0.4	0.2
Total	**100.0**	**100.0**	**100.0**

Source: NSW Tourism Commission (1993), City of Shoalhaven (1994)

4.2.4 Visitor Activities

Purpose of Visit

The prime reason for visiting the district is pleasure and holiday, followed by visiting friends and relatives. In-transit or travelling through also registered as a significant purpose for the visit (Table 4.18).

Focus for Visit

Family and friends and the beaches were the most frequently given focus for the visit (Table 4.19). The region's bushland, its shopping facilities, entertainment facilities, waterways, historical features and its sporting venues were also cited as attractions for the visit.

Accommodation Used

Staying at a friend's or relative's home accounts for 42% of the accommodation used by visitors, followed by caravan park accommodation (own van, rented van or camping) which accounts for 26%, and motels which account for 14% (Table 4.20).

Table 4.18
Main Purpose of Visit

Purpose	1991/92		1993	
	Illawarra $	**South Coast $**	**Shoulder Season $**	**Off-Peak Season $**
Pleasure/holiday	53.8	62.9	41	46
Visiting friends and relatives	29.0	23.3	34	24
Sport	1.9	1.6	3	9
Personal	2.7	4.8	-	-
Business	10.9	-	8	9
Education	0.4	-	-	-
Other/not stated	1.6	1.8	3	3
Travelling through	-	-	11	9
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: NSW Tourism Commission (1993); Shoalhaven City Council (1994)

Table 4.19
Focus for visit to Milton-Ulladulla

Focus for Visit	1993 Shoulder Season %	1993 Off-Peak Season %
Historical Features	6	11
Sport	6	10
Entertainment	9	13
Family/Friends	40	41
Beaches	38	36
Shopping	14	17
Work	9	9
Bushland	13	19
Waterways	15	13
Other	8	8

NOTE: Total % do not sum to 100 due to multiple responses
Source: City of Shoalhaven 1994

Table 4.20
Accommodation used by Visitors

Accommodation Form	Proportion %
Friends and Relatives home	42
Rented Holiday House/Unit/Flat	7
Caravan Park (own van; rented van; tent)	26
Hotel	6
Motel	14
Guest House	3
Bed and Breakfast	1
Other	1

Source: City of Shoalhaven 1994

4.3 JOURNEY TO WORK PATTERNS

A significant proportion of the resident population travels to work outside of the area.

4.3.1 Travel Mode

The majority (65%) of the working population travels to work each day by car either as a driver or as a passenger (Table 4.21). Walking accounts for a relatively significant proportion of the work force (6%), whilst public transport accounted for only 1%. The number of economically active population that works at home is also significant accounting for 8% of the total.

Table 4.21
Journey to Work Transport Mode

	Males	Females	Total
Public Transport	6	6	12
Taxi	6	3	9
Car (as driver)	946	567	1,513
Car (as passenger)	171	114	285
Motor Cycle/Scooter	29	0	29
Bicycle	18	0	18
Walk	102	75	177
Other	40	0	40
Worked at Home	99	134	233
Did not go to work/not stated	185	252	437
Total	**1,602**	**1,151**	**2,753**

Source: ABS Census 1991

4.4 RESIDENT AND VISITOR ACTIVITIES

The various social, cultural and sporting activities conducted within the Milton-Ulladulla district represents an indicator of its "richness: as a community in terms of social cohesion and identity. Such activities provide benefits to residents and also act as attractions to the visitor, since the visitor increasingly wants to look past the area's natural and built attractions and share in the "life" of the community. Festivals, events and sporting carnivals not only represent important milestones in the residents' annual calendar, but also offer the visitor the opportunity to participate in its "rituals" and share in the appreciation of its "icons".

4.4.1 Resident Activities

Cultural Activities

Milton-Ulladulla possesses a rich tapestry of cultural activities, focusing on the performing arts, the visual arts, crafts and local history and heritage (Table 4.22).

Table 4.22
Resident Cultural Activities

Cultural Activity	Members/Participants
Arts and Crafts	
Embroiders Guild of NSW Mollymook Branch	70
Millhouse Art Society of Milton-Ulladulla Inc	100
Ulladulla and District Lapidary Club	25
Milton-Ulladulla District Band Inc	40
Choristers of Milton-Ulladulla Inc	60
Local History and Heritage	
Little Forest Family History Research Group	20
Milton-Ulladulla Historical Society	10
Milton-Ulladulla Genealogical Society	25

Festivals and Events

The Blessing of the Fleet and the Settlers Fair are the two main cultural festivals held during the year in the Milton-Ulladulla area. Both of these festivals bring substantial visitors to the area and involve broad community participation and support.

The Blessing of the Fleet is held in March/April each year. Activities include a cocktail party, yacht race, church services, tree planting, pet shows, rodeo, Mardi Gras, fun run, blessing of the fishing fleet, dog shows, markets, fireworks, dances, music, historic homes inspections, bowls tournaments, fishing tournaments, board riders competitions, art exhibitions, golf tournament, bridge tournaments, breakfast and music by the harbour, seafood tasting, beach events and entertainment.

Milton's Settlers Fair is held each year in early October. The centres of focus are the Flea Market in the Milton township and the Country Fair at the Showground. In previous years crowds have exceeded the 10,000 mark. Activities include: a whip cracking competition; period costume displays; folk museum; music by a large wind concert band; jam sessions and folk bands; puppets; fun run and half marathon; a gum boot throwing competition and family history research.

4.5 RESIDENT AND VISITOR GROWTH PROJECTIONS

4.5.1 Resident Growth Trends

The resident population of the area is anticipated to increase significantly over the next fifteen years. The population of the sub region (Area 5) is forecast to increase within a range of 22,000 to 23,800 by the year 2011 (Table 4.23).

Table 4.23
Subregional Population Projections (Area 5)

Projection	1981	1986	1991	1996	2001	2006	2011
High				16,300	19,100	21,500	23,800
Medium	8,723	11,402	13,971	16,130	18,300	20,400	22,500
Low				16,100	18,100	20,100	22,000

Source: Shoalhaven City Council (1993)

The distribution of the subregion's growth between Milton-Ulladulla and the coastal villages is to a large extent predicated on how attractive these options are judged to be by outsiders as a place to build a dwelling and settle. As the following section will demonstrate most of the attractive residential locations in the district have already been developed. Consequently, a larger than anticipated component of the anticipated growth in Area 5 may occur in the coastal villages.

Projections
The low, medium and high population growth scenarios for Milton-Ulladulla are illustrated in Figure 4.2. On the basis of the conservative growth assumption, projections of the key age groups are depicted in Figure 4.3.

4.5.2 Visitor Growth Trends

Although the southern Shoalhaven has sustained steady growth in visitor numbers over the past twenty years, future projections of this trend are fraught with difficulty. The high proportion of dwellings in Milton-Ulladulla owned by individuals, families and organisations based outside the district will serve to guarantee a base level of holiday visitation each year. Much, however, will depend on the extent that the district's tourism plant and infrastructure is upgraded to meet the changing demands of the market.

4.6 KEY STRUCTURE PLAN ISSUES

The key aspects of Milton-Ulladulla's demographic structure and growth trends, that have structure planning implications, are summarised in Table 4.24.

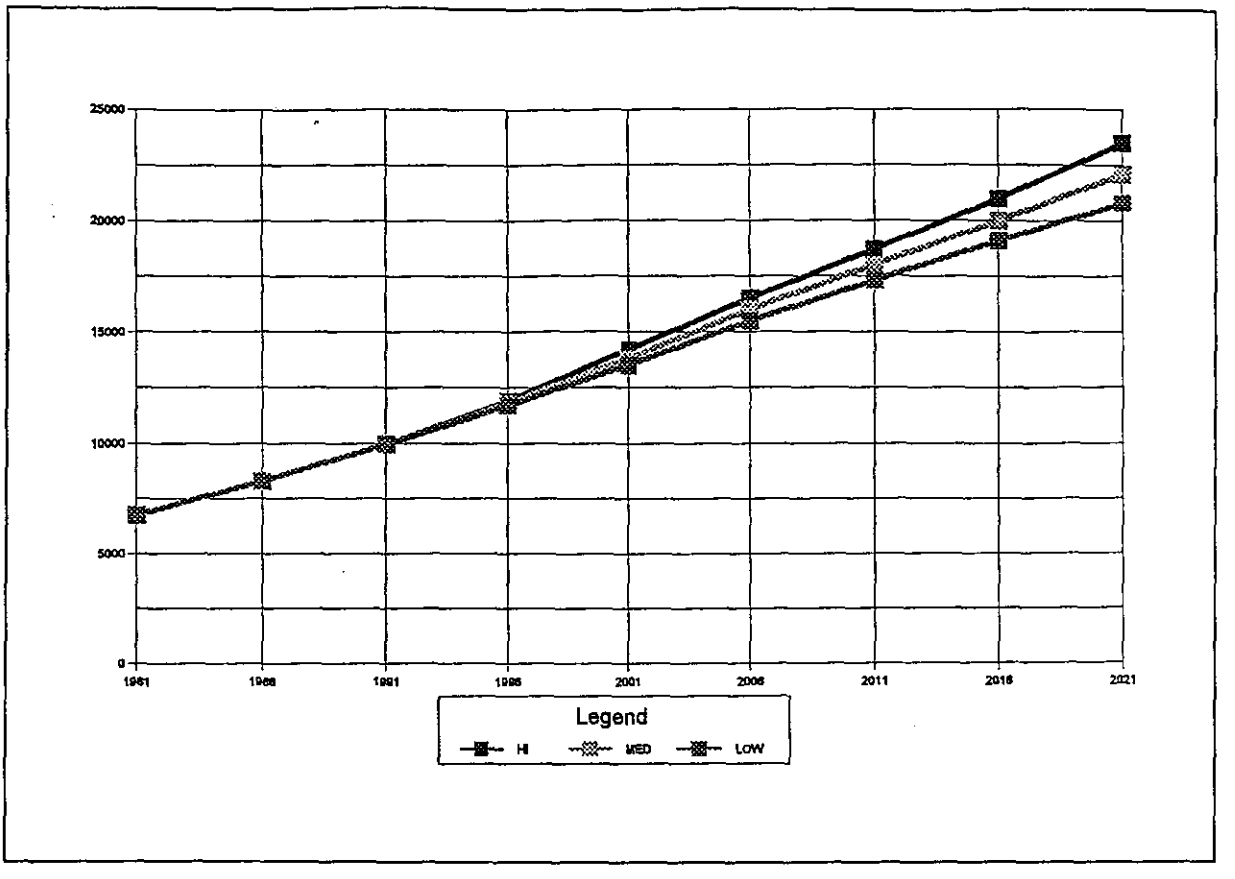


Figure 4.2
MILTON-ULLADULLA RESIDENT POPULATION PROJECTIONS

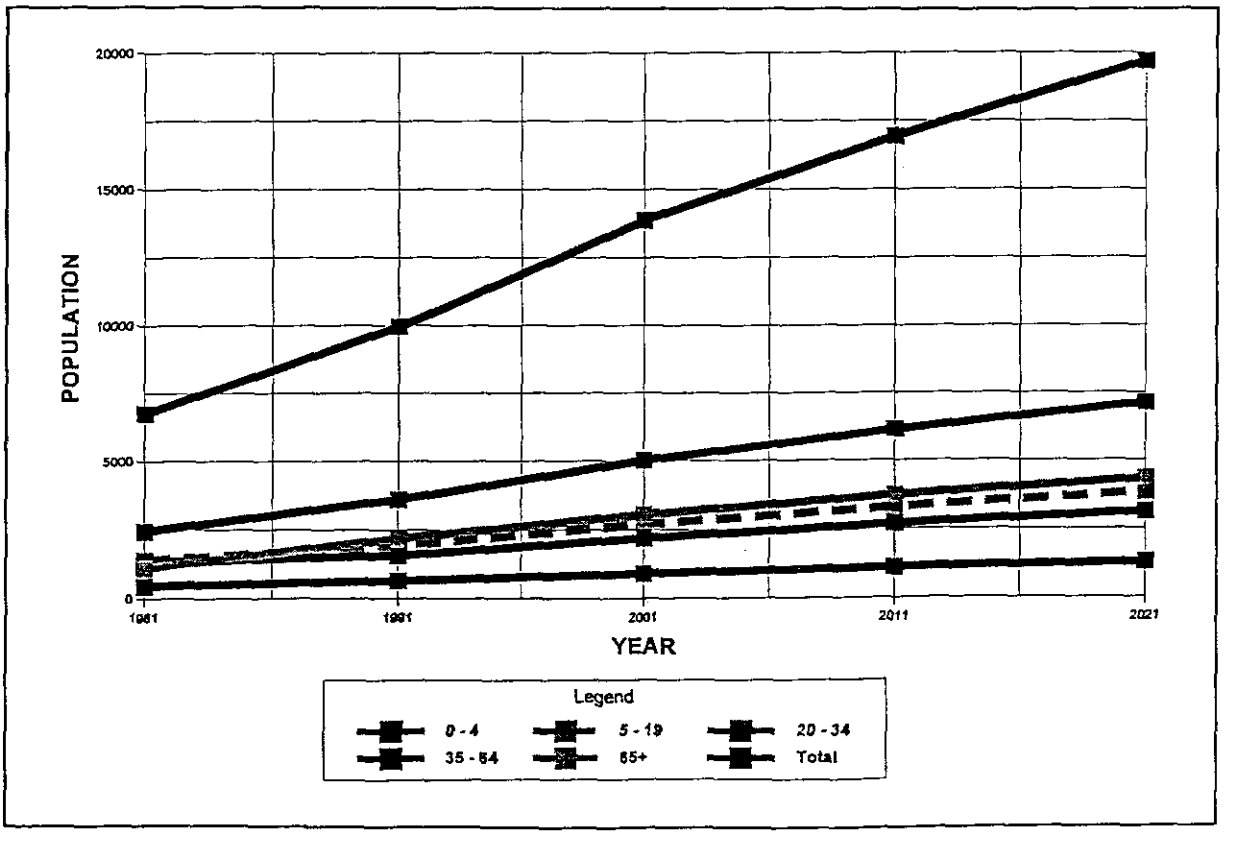


Figure 4.3
MILTON-ULLADULLA AGE GROUP PROJECTIONS

Table 4.24
KEY STRUCTURE PLAN ISSUES

Resident Characteristics:
- Approximately 11,600 residents currently inhabit Milton-Ulladulla.
- Early holiday home settlement has transformed to a resident community.
- Retirement age population component is increasing (16.6% to 22.0%).
- Preschool population component is relatively constant (6.6%).
- Older child, adolescent and young adult age bands in gradual decline (18.8% to 16.2%).
- Working career age bands have marginally declined (50.1% to 48.1%).
- Ethnic composition largely Anglo-Celtic, although multicultural component increasing.
- Significant proportion of households (63%) below median income range ($30,000).

Visitor Profile:
- Approximately 4,440,000 visitor nights spent in Milton-Ulladulla subregion (1993).
- Summer peak population of Milton-Ulladulla estimated at 25,360 (1993).
- High proportion of families (42%) and young solos (18.5%).
- Visitor source markets are: Sydney, NSW Country, ACT and Victoria.

Resident and Visitor Growth Trends:
- Early fast population growth (9.4% pa) has slowed in recent years (4.7% pa).
- Pattern of gradual visitor growth, although subject to significant annual variation.

Resident and Visitor Travel Modes:
- Major resident journey to work travel modes include: car (86%); walk (8%); motor cycle (1%) and bicycle (1%).
- Major visitor travel mode is the private motor vehicle.

Section Five

ECONOMIC ACTIVITY

The various forms of industry and services which exist in the district provide the economic base of Milton-Ulladulla. The economic well being of these activities will greatly influence the settlements' economic stability, diversity and degree of self-containment in terms of journey to work. As the historical perspective has demonstrated there has been a succession of economic activities in the area from timber, cereals, dairying, fishing, and eventually tourism and other service-related activities. As Table 5.1 demonstrates, there has been a dramatic increase in the economically active population in the district, which has been accompanied by significant shifts in the economic sectors in which they work.

5.1 PRIMARY INDUSTRY

5.1.1 Agriculture

The rich monzonite-based land around Milton remains an important dairying centre. However, there are now only eleven dairy farms at Milton producing over 6.5 million litres per year. Five dairy farms come within the boundary of the Structure Plan area.

Milton Dairy Farmers

Dairy farms in the Milton district range in size from 37 hectares to 210 hectares. Production herd sizes range from 92 to 280 milking cows. The majority of the milking herds are Holstein Friesian (68%) followed by Jersey (26%) and Illawarra (6%). Milk production ranges from 6,400 to 30,000 litres a week. Most dairy farms produce well above their quota (Table 5.1).

Milk Quota System

The dairy industry in the Milton area is regulated by a quota system, which has evolved from the scheme established by the NSW Government in 1955. The 1955 scheme initially provided an incentive to produce milk in the winter months. However, over the years quotas assumed the additional function of controlling producer access to the whole milk market. The price for quota milk has historically been set at a higher level than that necessary to encourage the production of just enough milk to satisfy consumer demand.

The premium generated by the quota system has probably been capitalised and benefited quota holders through capital gain rather than increased returns (eg the values of properties holding quotas are higher than similar properties without quotas). Farmers leaving the dairy industry can surrender their quota and receive a quota compensation. The current value of surrendered quota has substantially increased, and the difference between the surrender price and current market value has resulted in a large number of leasing arrangements to provide alternative means of transferring quotas.

Currently the NSW Dairy Corporation operates a three tier purchasing structure (Table 5.2). Each farm is paid the "quota" per litre price for the contract milk volume. Amounts produced above that level are purchased at the significantly lower "manufacturing" price up to an agreed volume threshold. Volumes

produced above that threshold are then purchased at a further reduced "spot" price. Thus there is a major disincentive to produce quantities of milk beyond the quota limit.

The "quota" price is set on the basis of an extended period, whilst the "manufacturing" and "spot" prices vary within respective ranges of $0.24 to $0.46 per litre and $0.14 to $0.27 per litre (Table 5.3)

The total quota is not normally purchased, the usual "take" being 85%-95%.

The quota price is supplemented by a system of bonuses for: composition quality (protein and butter fat); bacterial content and white cell count.

Under the existing portability policy, dairy farmers are able to relocate their operations with its quota to a new area. Where the price of land is excessive, or farmers are unable to obtain contiguous parcels of land of sufficient size to run a viable dairy farm, this option may be taken.

There is currently speculation in the Milton dairying community that the quota system would be abandoned in the short to medium term in favour of a deregulated industry.

Table 5.1
Trends in Resident Workforce Occupations (Industry) : 1971-1991

Industrial Classification	1971	1981	1991
Agriculture, Forestry and Fishing	107		110
Mining	14		0
Manufacturing	159		241
Electricity, Gas and Water	15		30
Construction	168		330
Wholesale and Retail Trade	252		681
Transport and Storage	64		88
Communication	45		36
Finance, Property and Business Services	64		281
Public Administration and Defence	31		89
Community Services	94		428
Recreation, Personal and Other Services	126		365
Other/Not Stated	51		198
Total	**1,190**		**2,877**

Source: ABS - 1971, 1981, 1991 Censuses

Table 5.2
Profile of Sample Milton Dairy Farms

Farm	Farm Size	Herd Size		Dairy Breed	Milk Production		Milking Parlour Type	Farm Employment	
		Milking	Other		Quota litres/wk	Yield litres/wk		Full Time	Part Time
Farm A	192ha	190	320	Holstein Friesian: 100%		30,000	Herring-bone	2	1
Farm B	210ha	320		Holstein Friesian: 80% Jersey: 20%	17,046	28,000	Rotalactor	3	3
Farm C	168ha	120	180	Holstein Friesian: 100%	12,000	20,000	Herring-bone	5	0
Farm D	37ha	92	70	Holstein Friesian: 2% Jersey: 92% Cross: 6%	3,276	6,400	Walk through	1	1
Farm E	175ha	85	115	Holstein Friesian: 50% Illawarra 50%	9,000	7,500	Herringbone	1	0

Source: Milton Dairy Farmers 1995

Table 5.3
Milk Quota System

Tier Structure	Current Price	Price Range
Tier 1: "Quota" Price	$0.5518/litre	Fixed for extended period
Tier 2: "Manufacturing" Price	$0.3233/litre	$0.2400-0.4600/litre
Tier 3: "Spot" Price	$0.1767/litre	$0.1400-0.2700/litre

Source: Milton Dairy Farmers (1995)

5.1.2 Timber

Although a declining industry, a number of small saw mills continue to operate in the district.

5.1.3 Fishing

Commercial fishing from Ulladulla Harbour is divided between the tuna export industry, general (mainly trawl) fishing and abalone diving. Most of the vessels operating out of the port are involved in the tuna export industry.

Tuna Fishing
Although the tuna fishery declined in the 1980s, the introduction of quotas in the early 1990s appears to have stopped the downward trend. Recent figures indicate an improvement in juvenile fish stocks. Certainly the size and value of the Southern Bluefin Tuna catch has increased over recent years. The annual turnover derived from tuna exports by the Ulladulla Fisherman's Co-operative increased from $5 million in 1992 to $9 million in 1993. This has resulted in a further three large Ulladulla trawlers converting to tuna long line fishing in 1995.

The Southern Bluefin Tuna season lasts from June to September with the best catches in the week of the full moon in June and in July. The Southern Bluefin Tuna prefer colder water, following the current up the coast. Fishermen generally follow the fish until their quota is caught, starting near Eden. In Fiscal 1993/94 the local quota was 120 tonnes plus 90 tonnes leased from South Australia.

Yellowfin Tuna are caught off the New South Wales coast between Eden and Coffs Harbour nearly all year round, depending on the Tasman front and water temperatures. Yellowfin Tuna are generally sought by fishermen after their Southern Bluefin Tuna quota has been met. Big Eye Tuna and Northern Bluefin Tuna are also caught, but not in large numbers. Skipjack Tuna are also caught for the Eden cannery. Because of the improvement in fish catch value it is anticipated that additional Southern Bluefin Tuna quota will be transferred into the Ulladulla area. This would confirm the current trend for the operation of additional or larger and more sophisticated vessels from the harbour. However, any increase will be constrained as it is likely to be many years before there will be a significant revision of the Southern Bluefin Tuna quota (Webb McKeown and Associates, 1995). Total fish landings by weight at Ulladulla between 1985/86 and 1994/95 is graphed in Figure 5.1.

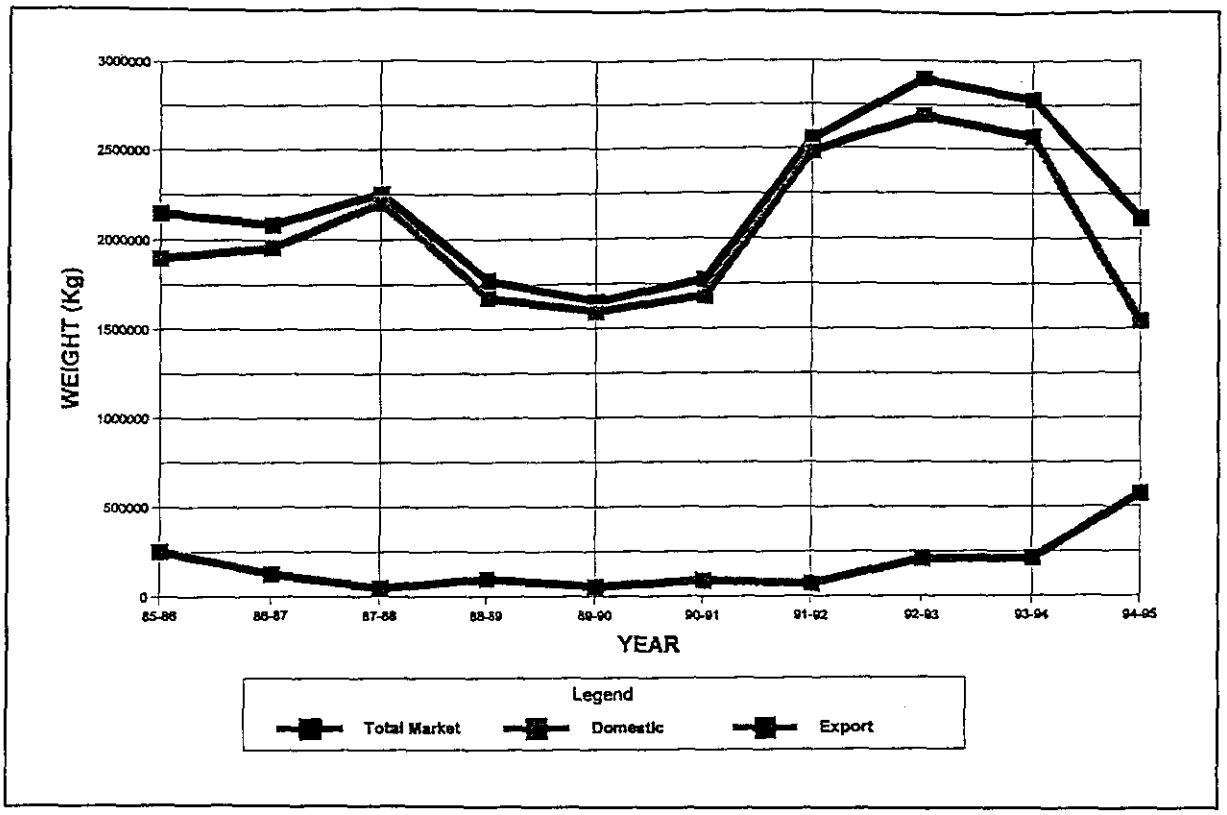


Figure 5.1
FISH LANDINGS AT ULLADULLA

Abalone Diving

The third component of the Ulladulla fishing industry is the export of abalone by the NSW Abalone Company. Abalone diving and export is strictly controlled by a quota system. Production levels are limited to a constant 10 tonnes per diver annually.

In recent years there have been attempts by the Ulladulla divers to expand their export market to include lobsters and sea urchin roe. Lobster exports have not been particularly successful and sea urchin roe exports have only just commenced. The future of this enterprise is, therefore, unclear (Webb McKeown and Associates, 1995).

Harbour Activities

There are currently 75 licensed fishing vessels which nominate Ulladulla as their home port. Of these, 41 regularly moor in the harbour, 5 are trawlers and 27 are long liners (the remaining vessels are trap and line boats and runabouts). Commercial fishing vessels berth at the Working Jetty, the old stone breakwater or the Tuna Wharf.

The Ulladulla Fisherman's Co-operative maintains a number of cold storage rooms, a large ice-making plant, a fish weighing and icing area, an amenities block, a loading area, a small workshop and chandlery, and office space. It also leases a small retail outlet. The buildings are considered adequate for existing and future requirements.

During Fiscal 1993/94 2,200 tonnes of fish were trucked to Sydney or Melbourne for sale and a further 50 tonnes were distributed elsewhere. Most fish remained

in the Co-operative storerooms for less than a day. In addition, 211 tonnes of (mainly) tuna were exported. Most of the tuna were trucked to Sydney, air-freighted to Japan, and sold on the fresh sashimi market within a day or two of being caught (Webb McKeown and Associates, 1995).

5.1.4 Quarrying

There are currently no forms of extraction activity (mining or quarrying) within the Structure Plan area. However, five potential sites for the extraction of hard rock aggregate (Milton Monzonite) have been identified in the Illawarra Regional Environmental Plan No. 1 to the north-west of Milton and to the west of the Structure Plan area. The potential resource site to the north-west of Milton has, however, been deleted in a subsequent review of the Regional Environmental Plan.

5.1.5 Primary Sector Employment

In 1971 primary industries accounted for some 10.2% (121) of the resident workforce of Milton-Ulladulla. By 1991 this figure had declined to 3.8% (110) of the economically active population living in the district (Table 5.1).

5.2 FABRICATION AND STORAGE

Over the past twenty years several enterprises have been established in the industrial zone to the south of Ulladulla. These, for the most part, comprise sheds for fabrication and storage, together with associated office space. There is a total of 125 industrial enterprises in the district, with a total covered floor area of 49,330m^2 (NLA) employing a total of 480 full time and 149 part time workers (Table 5.4).

Table 5.4
Industrial Sector: Fabrication and Storage

Location	Establishments Number	Floor Area (m^2NLA)	Employment	
			Full Time	Part Time
Ulladulla	109	39,040	387	125
Mollymook	0	0	0	0
Milton	14	10,100	18	24
Kings Point	0	0	0	0
Burrill Lake	2	190	3	0
Dolphin Point	0	0	0	0
Total	**125**	**49,330**	**480**	**149**

Source: Shoalhaven City Council

5.2.1 Industrial Land Availability

Currently there is a total of 43.65 hectares of zoned industrial land located in the key industrial areas of: Deering Street (3.33ha); Camden Street/St Vincent Street (11.87ha); Princes Highway at south Ulladulla (10.32ha); and the Ulladulla Industrial Estate (18.13ha). Of the total, 23.65 hectares has been developed and 20 hectares remain undeveloped (Table 5.5).

Table 5.5
Industrial Land Availability in Ulladulla (Zoned)

Locality	Developed	Undeveloped	Total
Deering Street	1.66ha	1.67ha	3.33ha
Camden/St Vincent Streets	6.55ha*	5.32ha	11.87ha
Princes Highway	6.31ha	4.01ha	10.32ha
Ulladulla Industrial Estate	9.13ha	9.00ha	18.13ha
Total	**23.65ha**	**20.00ha**	**43.65ha**

**NOTE:* includes 1.39ha of industrial 1(c) zoning

Source: Shoalhaven City Council (1994)

5.3 COMMERCE

A major component of the district's economic viability are those activities associated with retail, commercial and professional offices, located for the most part in the centres of Ulladulla and Milton.

5.3.1 *Retail Facilities*

Retail Facilities

There is a total of 189 retail establishments in the district, with a total floor area of 25,375m^2 (NLA), with a total employment of 419 full time and 421 part time (Table 5.6). Ulladulla accounts for the lion's share of the district's retail floor space (79.8%), followed by Milton (8.6%) and Mollymook (8.0%). Retail facilities at Kings Point and Burrill Lake are restricted to a modest number of local shops (Table 5.7). Various forms of food retailing account for 35.4% of total floor space, whilst clothing accounts for 14%, household 21.1% and personal services (hairdressers etc) 9.3%. Ulladulla accounts for the vast majority of the non-food retailing (89.2%).

Table 5.6
Retail Facilities: Establishments, Floor space and Employment

Location	Establishments Number	Floor Area (m^{2}NLA)	Employment	
			Full Time	Part Time
Ulladulla	136	20,260	322	325
Mollymook	16	2,020	36	39
Milton	28	2,180	46	51
Kings Point	1	115	1	0
Burrill Lake	8	800	14	6
Dolphin Point	0	0	0	0
Total	**189**	**25,375**	**419**	**421**

Source: Shoalhaven City Council (1995)

Table 5.7
Retail Facilities by Type

Locality	Food m^2	Clothing m^2	Household m^2	Personal Services m^2	Other m^2	Total m^2
Milton	940	190	570	270	210	2,180
Mollymook	1,750	0	0	0	270	2,020
Ulladulla	5,650	3,360	4,790	2,020	4,440	20,260
Kings Point	115	0	0	0	0	115
Burrill Lake	540	0	0	80	180	800
Dolphin Point	0	0	0	0	0	0
Total	**8,995**	**3,550**	**5,360**	**2,370**	**5,100**	**25,375**

Source: Shoalhaven City Council 1995

Table 5.8
Ulladulla CBD Retail Floor space (m^2)

CBD	Food	Clothing	Household	Personal Services	Other	Total
North	4,690	1,380	1,410	1,540	2,790	**11,810**
South	960	1.980	3.380	480	1,650	**8,450**
Total	**5,650**	**3,360**	**4,790**	**2,020**	**4,440**	**20,260**

Table 5.9
Commercial Offices

Location	Establishments Number	Floor Area (m^2NLA)	Employment	
			Full Time	Part Time
Ulladulla	52	5,518	195	74
Mollymook	1	130	3	7
Milton	6	520	14	6
Kings Point	0	0	0	0
Burrill Lake	1	80	0	1
Dolphin Point	0	0	0	0
Total	**60**	**6,248**	**212**	**88**

Source: Shoalhaven City Council (1995)

5.3.2 Ulladulla CBD

The Ulladulla CBD has developed into two distinct centres polarised at the northern and southern extremes and joined by a thin cord of retail and associated uses along the Princes Highway. The CBD has a total of 20,260m^2 of retail floor space (Table 5.8).

The northern CBD straddles the Princes Highway from Green Street to South Street and includes Wason Street east to Burrill Street and Green Street west to St Vincent Street. It is the larger centre providing 11,810m^2 of retail floor space.

The largest retail outlet in this area is Payless Supermarket with 1,200m^2 of floor space and a sealed parking area for 250 vehicles. This is followed by Festival Food Market with 550m^2. This area contains most of the food and personal service outlets in the total CBD area.

The southern CBD occupies the Princes HIGHWAY south from South Street to Parsons Street. It is bounded by Burrill Street in the east and St Vincent Street to the west. It has a total retail floor space of 8,450m^2 and is the focus for clothing and household supply. The larges outlet for the southern CBD is Allens on the corner of Deering Street and the Princes Highway. It has an estimated nett retail floor space of 1,500m^2.

Service Stations
There are currently a total of ten service stations located in the district, seven of which are owned by oil companies (Ampol, Caltex and Shell) and three are independent. Three service stations are located in Milton; one is located between Milton and Ulladulla (south of Slaughterhouse Road); five are located within Ulladulla; and one is located at Burrill Lake (to the north of the bridge). There is no service station in the Mollymook/ Narrawallee area.

Commercial Offices
There is a total of 60 commercial offices in the area, with a total floor space of 6,248m^2 (NLA), with a total workforce of 212 full time and 88 part time (Table 5.9).

5.4 TOURISM INDUSTRY

Tourism embraces a wide spectrum of activities that cross many of the standard industrial classifications. Tourism has been defined in a number of different ways. A typical definition describes tourism as: "the temporary short-term movement of people to destinations outside the places where they normally live and work, together with their activities and experiences during these trips".

It is first and foremost a "people industry", involving the successful interaction of the visitor with the host and the host area. It involves the development and supply of a range of facilities and services to meet the needs, desires and aspirations of the visitor, while at the same time not putting excessive pressures on the host and the host area.

5.4.1 Tourism Product

Holistically the tourism product of Milton-Ulladulla comprises:
- attractions (natural and built);
- transport services (external and local);
- accommodation (commercial and private);
- hospitality services;
- entertainment;
- events and festivals;
- visitor information services;
- leisure retail;
- support services; and
- education and training.

For the purposes of this analysis, however, tourism will be addressed in terms of Milton-Ulladulla's attractions, accommodation, hospitality and visitor information services. The other components have been addressed under separate headings within this document.

5.4.2 Attractions

Attractions are the most important element of Milton-Ulladulla's tourism resource portfolio. Without genuine attractions visitors will not come to the area. As well as being the most important, they are often the most difficult to define and categorise. For instance, how can the attractive power of a forested escarpment backdrop (eg Pigeon House Mountain) or a rocky headland (eg Warden Head) be adequately defined and quantified?

Attractions are conventionally divided into two basic areas:

- natural attractions; and
- built (man-made) attractions.

However, this distinction can often be more apparent than real. Most natural attractions have some form of built added-value, adding such features as visitor centres, interpretive facilities, car parking areas and picnic/BBQ areas. On the other hand, most built attractions are based on one or more aspects of the natural environment. Indeed, their very context is invariably defined by the natural environment.

Natural Attractions
Without doubt the key natural attractions in the Milton-Ulladulla district are its beaches. The area offers a good choice of high profile beaches, well supported with facilities, to a number of secluded beaches without facilities for the connoisseur or the more adventurous resident and visitor (Figure 5.2). Following a north to south traverse along the coastline, their salient features are described below:

Narrawallee Beach - an extensive beach of fine sand (approximately 1,400 metres in length), contained between Narrawallee Inlet and Bannister Point, that is relatively popular with family and solo groups. Access to the beach is reasonable (principally provided from Matron Porter Drive), although visibility tends to be obscured by densely vegetated dunes. Support facilities include on-street car parking, sets of timber tables and chairs, and public toilets.

Mollymook Beach - an extensive, highly attractive expanse of fine sand (approximately 2,000 metres in length), between Bannister Point to the north and a monzonite wave cut platform adjacent to the Mollymook nine hole golf course, to the south. The beach is extremely popular with solo and family groups. Access to the beach is very good, with multiple points of entry and is highly visible from the local road system and more distant vantage points. The beach resource is supported by a well appointed surf live saving club house, a number of retail outlets, car parking areas, timber tables and chairs, public toilets and beach showers.

Collers Beach - a secluded beach, located between rocky headlands and a monzonite wave cut platform adjacent to the Mollymook Beach side Golf Course. The beach consists of fine sand interspersed with rock outcrops. Access to the beach is indirect. The beach resource is supported by a small car park and one set of timber table and chairs.

Harbour Beaches - the harbour has two beach areas: within the confines of the harbour and immediately to its south, adjacent to the ocean pool. The inner harbour beach suffers from sedimentation and a degree of pollution from Millards Creek. It is seldom used for bathing. The small beach adjacent to the ocean pool, although problematic as a point of ocean entry, is popular as a picnic area for family groups. Access to these beaches is good, which are supported by sets of timber tables and chairs and public toilets.

Warden Head Beaches - two secluded beaches to the south-west of Warden Head, backed by rocky headland and high level dunes. Road access is provided indirectly from car parks on Deering Street. There are no support facilities.

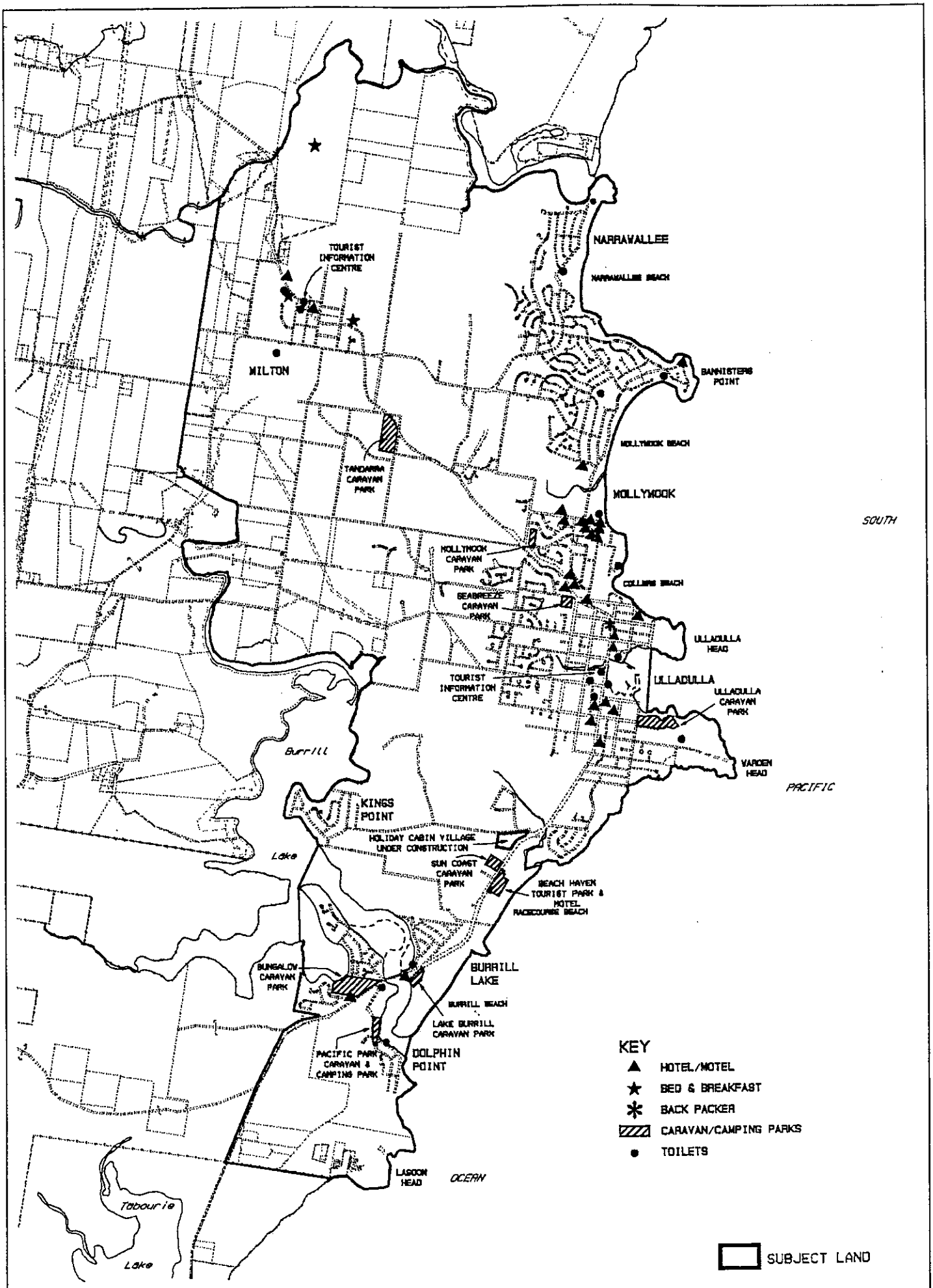
Rennies Beach - an attractive secluded beach of fine sand backed by rocky headlands. Road access is provided from Did-Dell Street, via a small car park. There are no support facilities.

Racecourse Beach - an extensive beach of fine sand (approximately 1,300 metres in length), backed by high vegetated sand dunes, located principally to the south of Racecourse Creek. The beach tends to be relatively popular with family groups staying at the nearby caravan parks. Unfortunately, a section of the beach is subject to faecal coliform pollutants from the sewerage ocean outfall, located to the north of Racecourse Creek. Access to the beach is provided by tracks and footpaths from the caravan parks and the Princes Highway. There is no dedicated car parking or support facilities at this beach.

Burrill Beach - an extensive area of fine sand (approximately 1,400 metres in length), backed by high vegetated dunes, extending to a spit formation across the entrance to Burrill Lake. The beach tends to be highly popular with family and solo groups. Access is provided by tracks and footpaths from the Princes Highway. There are limited support facilities.

Dolphin Point Beaches - beaches at Dolphin Point are limited to a small extent of sand, backed by a grassed area to the south of the Burrill Lake entrance. It tends to be frequented by families with small children. Access is provided from Dolphin Point Road. Support facilities include car parking, sets of timber tables and chairs, and public toilets.

Lagoon Head Beaches - a number of secluded beaches of fine sand interspersed with rock outcrops are located between Dolphin Point and Lagoon Head. It is frequented by surfers and the more adventurous visitor. Access is provided by a relatively long, unsealed track, punctuated by a number of speed humps. There are no support facilities at this beach.



TOURISM RESOURCES & INFRASTRUCTURE

FIGURE 5.2

5.4.3 Commercial Visitor Accommodation

Visitors to the Milton-Ulladulla district are housed in the following forms of visitor accommodation: hotels/motels; motel apartments; caravan and cabin parks; holiday apartments; guesthouses; holiday homes; backpacker hostels; farm stay; and private visitor accommodation.

Hotels/motels - there is a total of 34 hotels and motels in the district, with the majority (14) located in Mollymook. A total of 14 hotel/motels are located in Ulladulla; six in Milton and five in Burrill Lake (Table 5.10). These establishments have a total of 349 rooms and provide employment for 55 on a full-time basis and 74 part-time. There are only three licensed hotels with accommodation in the area: the Marlin in Ulladulla and the Commercial and the Star in Milton. These tend to perform the function of taverns and tend to be infrequently used by holiday makers for overnight stays. The majority of the motels in the district are located adjacent to the highway and tend to serve the needs of the general traveller and not the holiday visitor. The Mollymook Shores Resort, Bannister Lodge Motor Inn and the Quiet Garden Motel are notable exceptions, being located away from the highway in close association with the area's primary tourism resource, its coastline. To compete with the more favourably located motels and the growing trend for holiday apartments, the highway motels are tending to rely on tariff cutting and the upgrading of room facilities.

Motel apartments - there is an increasing trend for motels to offer self catering facilities, such as separate sitting/dining areas with kitchenettes. This form of accommodation is equivalent to a one bedroom holiday apartment with the added option of on-site management and a cooked breakfast. The Milton-Ulladulla area has six such premises offering 79 units. The Harbour Royal Motel in Ulladulla is the largest, with 21 units available.

Caravan Parks - a total of eight caravan parks are located in Milton-Ulladulla. Four establishments are located in Ulladulla, one in Mollymook, one in Milton and two at Burrill Lake. These caravan parks have 119 cabins (98 of which are in Ulladulla); 229 on-site vans; and 372 sites for touring vans. The caravan parks provide employment opportunities for twenty-five full-time and twelve part-time people (Table 5.11). These establishments provide low cost self catering holiday accommodation for the price sensitive visitor, and have proved to be highly popular with family groups.

Holiday Apartments - there is a total of sixteen advertised holiday establishments (within two miles or more) in the area, providing an estimated 103 units for holiday visitors. These tend to be concentrated in the vicinity of the Mollymook "golden triangle", the hub of the district's principal tourism resource, and the seaward side of the highway in Ulladulla. Fathoms, located on Mitchell Parade, Mollymook, providing twenty units, is the largest holiday apartment facility in the district. Burrill Lake has two of these establishments providing eleven apartments in the "Lakes" district.

Guesthouses the district has a total of four guest houses or bed and breakfast establishments. Three establishments are located in Milton (Governor's Guest House, Milton Bed and Breakfast and Times Past Bed and Breakfast) and one in Ulladulla (Ulladulla Guest House), which tend to cater for long term residents

rather than short term visitors. These facilities are meeting the increasing demand for quality personalised accommodation. In the case of Milton, the character of these establishments is enhanced through the appropriate use of heritage themes.

Holiday Homes - there are a significant number of houses and cottages available for holiday rental, predominantly in the Mollymook/Narrawallee area. Quantification, however, is fraught with difficulty.

Backpacker Hostels - the South Coast Backpackers, located in Ulladulla, provides low cost overnight accommodation for the budget traveller.

Farm Stay - although there is presently no Farm Stay accommodation in the district, one of the district's dairy farms (Narrawallee) is planning to offer Farm Stay accommodation in the form of two mud brick cottages.

Private Visitor Accommodation - many visitors to Milton-Ulladulla overnight in private dwellings either owned by themselves or by their friends and families. These dwellings are also often let commercially (either privately or via an agent) to other holiday visitors.

5.4.4 Hospitality Services

There are a total of 44 restaurants, cafes and takeaways in the district, employing 84 full time and 111 part-time staff. Ulladulla is the main centre for this sector, followed by Milton and Mollymook (Table 5.12).

5.4.5 Tourist Information Services

The main source of tourist information is the Ulladulla Tourist Information centre located in the Ulladulla Library. The Tourist Information Centre operates within the Ulladulla Library section of the Ulladulla Civic Centre. It utilises the existing library staff to provide information on accommodation, tourist facilities, places of interest, scenic facilities, local history and historical sites. It also retails maps, books and local souvenirs to the visitor. International tourist information "I" signs are located at Burrill Lake and north of Millards Creek.

Additionally, there are two tourist information boards which provide general location and directions to the visitor. One is positioned in Milton near the Post Office while the other is in Ulladulla on the eastern side of the Princes Highway, opposite the Civic Centre.

Signs denoting the existence of Tourist Drive 3, a scenic drive from Milton to Batemans Bay through the rural landscape, are positioned on the corner of Princes Highway and Croobyar Road in Milton. Further signs are in Croobyar Road and nominate its starting point.

Table 5.10
Tourism Sector : Motels

Location	Establishments Number	Floor Area (m^2NLA)	Employment	
			Full Time	Part Time
Ulladulla	9	109	17	36
Mollymook	14	168	26	26
Milton	6	34	10	12
Kings Point	0	0	0	0
Burrill Lake	5	38	2	0
Dolphin Point	0	0	0	0
Total	**34**	**349**	**55**	**74**

Source: Shoalhaven City Council (1995)

Table 5.11
Tourism Sector : Caravan Parks

Location	Establishment	Cabins	On-Site Vans	Touring Van Sites	Employment	
					Full Time	Part Time
Ulladulla	4	98	108	101	17	12
Mollymook	1	6	5	20	2	0
Milton	1	9	35	124	2	0
Kings Point	0	0	0	0	0	0
Burrill Lake	2	6	81	127	4	0
Dolphin Point	0	0	0	0	0	0
Total	**8**	**119**	**229**	**372**	**25**	**12**

Source: Shoalhaven City Council (1995)

Table 5.12
Restaurants, Cafes, Takeaways

Location	Establishments Number	Floor Area (m^2NLA)	Employment	
			Full Time	Part Time
Ulladulla	30	4,180	63	80
Mollymook	6	670	8	19
Milton	7	800	11	12
Kings Point	0	0	0	0
Burrill Lake	1	100	2	0
Dolphin Point	0	0	0	0
Total	**44**	**5,750**	**84**	**111**

Source: Shoalhaven City Council (1995)

5.4.6 Value of Tourism

The value of tourism in the southern Shoalhaven has experienced a relatively steady increase from $25 million in 1981 to $168 million in 1994/95 (adjusted for inflation and expressed in 1994/95 dollars). The tourism value trend line is depicted in Figure 5.3

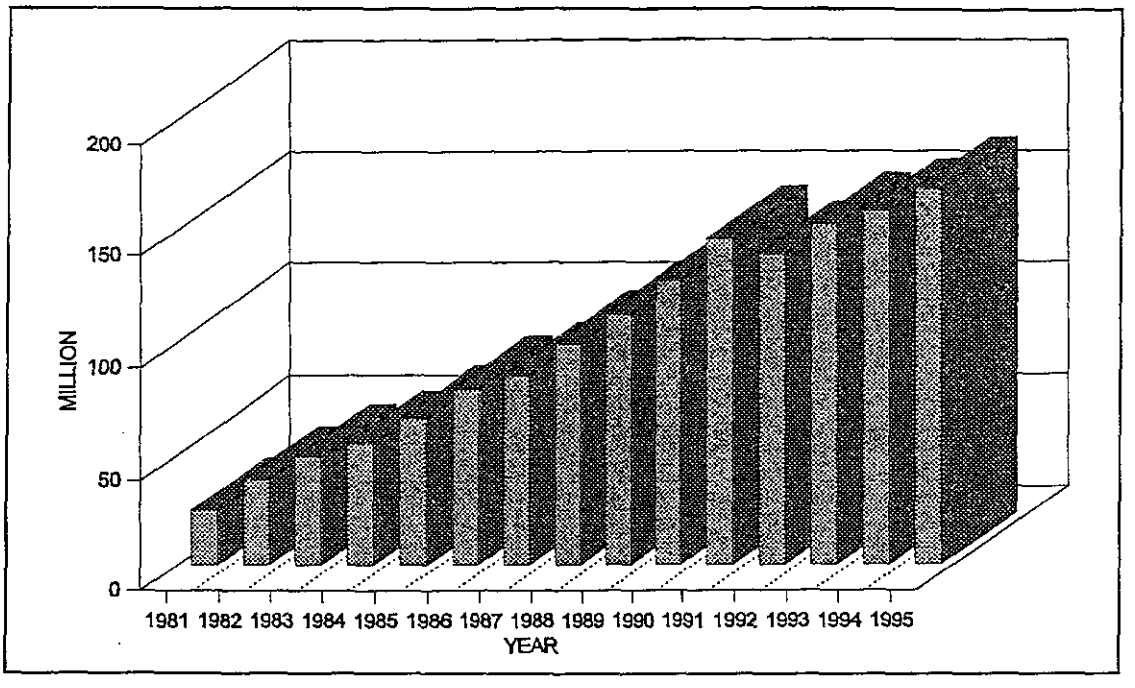


Figure 5.3 - Growth in Tourism by value

5.5 KEY STRUCTURE PLAN ISSUES

The important features of Milton-Ulladulla's economic base, that have structure planning implications, are summarised in Table 5.13.

Table 5.13
KEY STRUCTURE PLAN ISSUES

Primary Industry:

- Decrease in volume of fishing catch and potential decrease in commercial fishing fleet.
- Shift to export oriented fish catches (Southern Blue Tuna).
- Increase in dairy productivity and decline in number of establishments.
- Declining timber and milling industry.

Fabrication and Storage:

- Industry and wholesaling focused on the needs of the resident and visitor: domestic construction and equipment; auto repairs and components; and marine components and repairs.

Commerce:

- Sector characterised by low threshold retail and office-based businesses.
- Need for the introduction of a retail major in the Ulladulla CBD.

Tourism Industry:

- Although there are a number of attractive recent tourist developments in Mollymook, *the industry appears to be resting on its laurels providing more of the same to* established markets.

Section Six

HOUSING

Housing, which generally accounts for in excess of 50% of the urban areas, is a fundamental social resource as well as an important economic asset. The distribution and quality of residential environments are fundamental to sound structure planning. In accordance with the social justice principles of access and equity, it is important that housing be provided which offers diversity of lifestyles and is affordable to the full range of socio-economic groups. In the following sections housing is addressed in terms of quantity, form, tenure, distribution and the rate of development.

6.1 RESIDENTIAL CONTEXT

In 1991 Milton-Ulladulla had a total residential stock of 3,866 occupied dwellings. This included 3,482 separate dwellings; 93 attached houses; 144 apartments; and 88 residential caravans (Table 6.1).

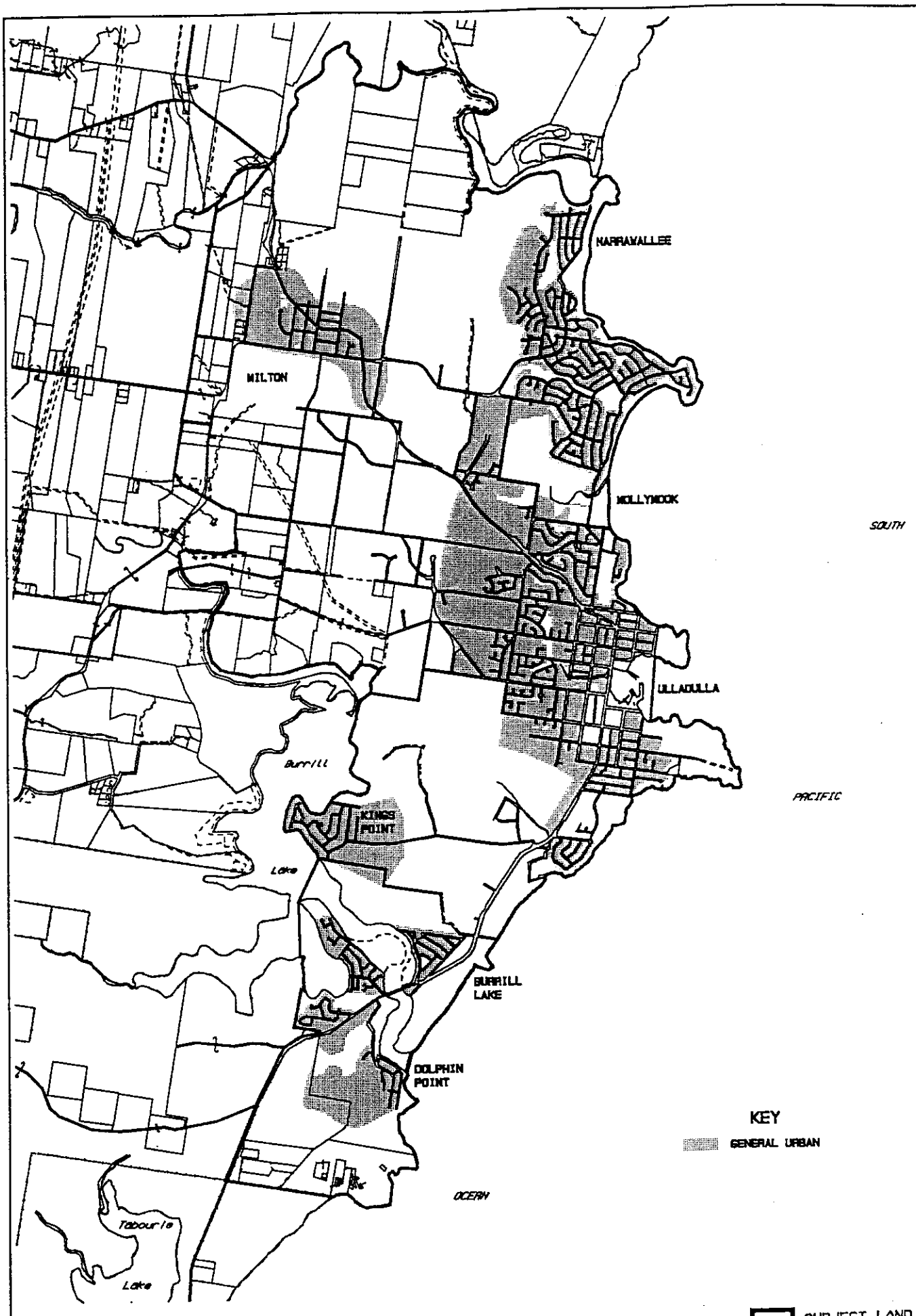
6.1.1 Distribution of Dwelling Stock

The majority of occupied dwellings are located in Ulladulla (1,519), followed by Mollymook (1,182), Burrill Lake (465) and Milton (290). Ulladulla and Mollymook account for the majority of attached and apartment dwellings, whilst Ulladulla and Burrill lake account for the bulk of residential caravan accommodation (Table 6.1). Other dwelling forms include caravans not located within a caravan park, improvised homes, house boats and flats attached to commercial premises. The major residential areas are shown on Figure 6.1.

Table 6.1
Structure of Dwellings by Household Type

Household/Family Type	Dwelling Type				
	Separate Houses	Attached Houses	Apart-ments	Caravans	Other/ Not Stated
One Family Households:					
One Parent Families	259	13	6	3	3
Couples without Offspring	1,335	28	24	20	17
Two Parent Families	1,067	15	9	0	27
Other Related Individuals	18	0	3	0	0
Sub Total	**2,679**	**56**	**42**	**23**	**47**
Other Households:					
Multi-Family Households	19	0	0	0	0
Group Households	77	0	9	3	6
Lone Person Households	639	30	73	31	6
Visitor Households	68	7	20	31	0
Sub Total	**803**	**37**	**102**	**65**	**12**
TOTAL	**3,482**	**93**	**144**	**88**	**59**

Source: ABS Census : 1991



MAJOR RESIDENTIAL AREAS

FIGURE 6.1

Table 6.2
Distribution of Occupied Dwellings: Milton-Ulladulla

Locality	Separate Dwelling	Attached Dwelling	Apartment	Residential Caravan	Other	Total
Milton	285	0	5	0	0	290
Narrawallee	282	0	0	0	0	282
Mollymook	1,050	33	79	7	13	1,182
Ulladulla	1,310	71	62	35	41	1,519
Burrill Lake	412	0	9	30	14	465
Total	**3,339**	**104**	**155**	**72**	**68**	**3,738**

Source: Australian Bureau of Statistics: 1991 Census of Population and Housing.

6.2 HOUSING TENURE

The vast majority of housing stock in Milton-Ulladulla is owner occupied that is either owned or being purchased (73.0%). Mollymook and Ulladulla account for 68.3% of the district's total owner occupied housing. Private rental is a significant form of tenure in the district (18.2%), with large concentrations in Ulladulla and Mollymook (74.3% of total private rental housing). Public rental is a relatively insignificant form of tenure (2.5%), being concentrated in Ulladulla, which accounts for 67.0% of total public rental housing (Table 6.3).

Table 6.3
Housing Tenure : Milton-Ulladulla

	Owned	Being Purchased	Private Rental	Public Rental	Other	Total
Milton	155	81	33	9	16	294
Narrawallee	169	41	40	13	18	281
Mollymook	715	174	234	9	50	1,182
Ulladulla	787	261	294	63	109	1,514
Kings Point	65	40	19	0	7	131
Burrill Lake	264	80	71	0	44	459
Dolphin Point	44	9	20	0	6	79
Total	**2,199**	**686**	**711**	**94**	**250**	**3,940**

Source: Australian Bureau of Statistics: 1991 Census of Population and Housing

Role of Home Ownership

Home ownership is not only by far the dominant tenure form, crossing socio-economic groups, life cycle stages and ethnic backgrounds; it is overwhelmingly the preferred tenure. Kilmarten (1988) observed that over 90% of Australians aspire to be home owners and there is evidence that around 85% Australians actually achieve this sometime in their lives (Neutz and Kendig 1991).

There are many reasons why home ownership is the preferred tenure of most Australians. Financial advantages obtained from home ownership such as capital growth and reduced income needs in retirement are obvious factors. So too is the security that home ownership provides. But another important reason people want to own their own homes is because of the autonomy and independence home ownership offers (Yates 1989; Saunders 1990).

Projection of the level of home ownership levels are sensitive to movements in house prices and economic performance. With overall constant house prices and the achievement of the more optimistic base scenario, the level of home ownership is projected to remain steady. However, the aging of the population may be disguising a steady decline in the proportion of the population aged 25 to 34 purchasing homes (National Housing Strategy 1991).

Role of Rental Housing

The private rental sector has traditionally served as a transitional tenure for those moving to home ownership, or if they could not afford this, into public housing. This is considered to be an appropriate role. The private rental market can also suit some people's needs and preferences for longer periods, at least at certain stages of their lives. Whilst the cost of moving can be high in the private rental market, they are usually less significant than those for home owners. Accordingly, private rental can be most useful for those who require mobility and flexibility in relation to their employment or for other reasons.

The private rental market, however, does not provide the same benefits as home ownership. It does not provide the same degree of security as home ownership. It does not provide the same degree of security of tenure, nor the autonomy and independence which home ownership offers. Yet if home purchase becomes more difficult in the future, more people will stay for longer periods in private rental accommodation.

Public Rental Market

For many people, renting in the private sector is not affordable. The public rental sector provides affordable and secure housing and is the main form of "social" rental housing in Australia. Public housing has been provided through slow but consistent increases in the number of dwellings constructed or purchased. Although a small sector, the future operation of public or social housing ensures both affordable and appropriate housing and many of the advantages of home ownership.

Public Rental Housing

The NSW Department of Housing owns and lets 121 dwellings in the Milton-Ulladulla district. Of the total stock, 119 dwellings are located in Ulladulla/ Mollymook and two are located in Milton. In Ulladulla the main concentration of public rental housing is the area to the west of the Ulladulla CBD: bounded by St Vincent Street; South Street; Warden Street/Village Drive; and McKail Street/Millards Street. The majority of the dwellings are cottage types (separate dwellings), are of brick veneer construction and are aged under twenty years (Table 6.4). The Department of Housing is currently implementing a policy of further dwelling acquisition (20-30) in the district to meet the requirements of prospective tenants on the housing waiting list. The Department is targeting two bedroom cottages or villas (linked ground level units) close to transport nodes,

shopping centres and employment centres. It has a policy of not concentrating more than 10-20 public rental dwellings in any one location.

Table 6.4
Department of Housing Dwelling Profile : Milton-Ulladulla

	Ulladulla/Mollymook		Milton	
Dwelling Type	No	%	No	%
Cottage Dwelling:	76	63.9%	2	100.0
Aged Persons Dwelling:	39	32.8%	0	0.0%
Other Dwelling Type:	4	3.3%	0	0.0%
Total:	119	100.0%	2	100.0%
Dwelling Building Material				
Brick Construction:	31	26.1%	0	0.0%
Brick Veneer Construction:	60	50.4%	0	0.0
Fibro Construction:	28	23.5%	2	100.0%
Total:	119	100.0%	2	100.0%
Dwelling Age				
Under 10 Years:	28	23.5%	0	0.0%
10 to 19 Years:	41	34.4%	0	0.0%
20 to 29 Years:	13	10.9%	2	100.0%
30 to 39 Years:	0	0.0%	0	0.0%
Unknown:	37	31.1%	0	0.0%
Total:	119	100.0%	2	100.0%

Source: NSW Department of Housing 1995

6.3 SPECIAL NEEDS HOUSING

6.3.1 Retirement Facilities

The only retirement housing facility in the district is Sarah Claydon Village at Milton, managed by the Illawarra Retirement Trust. Opened in 1982, the village comprises 36 self care and 61 hostel units with a 40 bed nursing home. The site has the capacity for a further 36 self care units. From its platform at the village, the Illawarra Retirement Trust provides Federal Government funded "community age care packages" (CACPs) to the elderly residents of Milton-Ulladulla.

The Trust has acquired a site on the northern bank of Millards Creek in the centre of Ulladulla for the future development of 40-50 self care units. Construction is anticipated to commence in 1997. Back-up services will be provided from its "platform" facility at Milton.

6.4 HOLIDAY HOMES

A significant component of the housing stock of Milton-Ulladulla has been the holiday home. These have traditionally been owned by residents of Sydney, Canberra and other major urban areas. In the early days holiday homes represented a very significant proportion of total dwellings. Popular holiday home areas in 1971 were: Narrawallee, Mollymook and the Burrill Lake/Kings Point/Dolphin Point area, where holiday homes respectively accounted for 69%, 53% and 45% of dwelling stock. However, the significance of holiday homes has declined over the intervening twenty years. In 1971 the overall proportion of holiday homes (dwellings unoccupied in June) in Milton-Ulladulla was 43.0%. By 1991 this proportion had declined to 31.4% (Table 6.5).

Table 6.5
Dwelling Occupancy Trends : Milton-Ulladulla : 1971-1991

Year	Occupied Dwellings	Unoccupied Dwellings	Total Dwellings	% Unoccupied
1971	1,126	850	1,976	43.0%
1976	1,582	1,036	2,618	39.6%
1981	2,439	1,196	3,635	32.9%
1986	3,139	1,596	4,735	33.7%
1991	3,945	1,803	5,748	31.4%

Note: Holiday homes equate to habitable dwellings unoccupied in June
Source: Australian Bureau of Statistics: 191 Census of Population and Housing

6.4 RATE OF DEVELOPMENT

Corresponding with the general South Coast pattern, the rate of residential development in the Milton-Ulladulla area has declined somewhat in recent years, following the boom years in the late 1970s and early 1980s. Those were, in many ways, exceptional times arguably never to be repeated. The potential for residential property investment in the district has been squeezed on both the demand and supply sides of the equation. On the demand side, low employment growth in Milton-Ulladulla has tended to thwart local demand and the decline in disposable incomes in external investor markets has significantly curtailed opportunities for holiday home investment in coastal locations. On the supply side the cost of developing and owning residential property in the district has soared substantially over the past twenty years, affecting both the local and more significantly the external investor/consumer. These increases in costs are attributable to increases in land values, building costs (through higher construction standards) and rates.

Residential Subdivision Approvals

The number of residential subdivision approvals granted in Milton-Ulladulla, during the ten year period between 1986 and 1995, totalled 1,645 lots (Table 6.5). As is typical with the pattern of residential subdivisions, the approval data is very lumpy with a total of 335 lots approved in 1989, 520 lots approved in 1990 and 282 lots approved in 1991. Ulladulla accounted for the bulk of lots in 1989 and 1990, whilst Mollymook accounted for the lion's share in 1991. The 1989/1990/1991 high point has been followed by four years of relatively low volumes, when Ulladulla and Milton accounted for almost all the subdivision activity in the area.

Residential Subdivision Releases
Data on subdivision releases demonstrates a similar pattern to approvals in terms of location and timing. The number of releases between 1986 and 1995 totalled 1,300 and the average release rate for the period was 130 lots per annum (Table 6.6).

Residential Building Approvals and Commencements
During the six year period between 1990 and 1995 the total number of residential building approvals granted in the district was 1,063, that is an average of 177 dwellings per annum (Table 6.8). The corollary statistic, building commencements, indicates a slower rate of development. For the ten year period between 1986 and 1995 a total of 1,401 residential building commencements were recorded, that is an average of 140 dwellings per annum (Table 6.9).

For much of the period the annual building commencement rate hovered around the 120-160 dwelling mark. The peak year was 1989 with 209 commencements, whilst 1995 represented the lowest point of building activity with only 78 commencements. Ulladulla, Narrawallee and Mollymook accounted for the lion's share of residential building activity, followed by Burrill Lake, Milton and Kings Point.

Potential Rates of Development
Projecting a future rate of development on the basis of recent trends is fraught with difficulty. It is generally acknowledged that this recent pattern is symptomatic of a generally recessed residential property market. It is an established fact that the Milton-Ulladulla residential property market is greatly influenced by trends in the wider context, including the Sydney and Canberra residential markets. In particular, Mollymook appears to be something of an icon to Sydneysiders and Canberrans in terms of holiday investment properties. In the wider housing market, the period 1990/91 saw an abrupt halt to investor and consumer optimism. However, in late 1992 and during 1993 investment support returned to the property market and values recovered partially (Buttrose 1995). During this period there was a mini boom in housing construction which has created an over supply in suburban housing in the Milton-Ulladulla area. In addition, a number of localised factors are considered by the building industry to be depressing demand, such as the current shortage of quality building lots (in terms of location and outlook). Generally, the property market in Australia is considered to be at the point in the economic cycle which is emerging from a recession, characterised by falling interest rates and rising share prices Thus the next five years should witness an upturn in the economic cycle. However, how long this growth cycle will last and how it would manifest itself in the local economy is difficult to judge.

In the light of these uncertainties, taking account of recent trends and the potential for improvement, it is considered reasonable to anticipate a rate of growth for Milton-Ulladulla (averaged over twenty years) to be in the order of 180 new dwellings per annum.

Table 6.6
Residential Subdivision Approvals (Total Lots): 1986-1995

Locality	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Total
Milton	56	52	31	88	40	32	30	39	45	27	440
Narrawallee	6	0	0	28	0	2	0	0	0	0	36
Mollymook	14	29	22	78	18	181	2	1	2	2	349
Ulladulla	11	8	7	122	462	44	6	38	41	8	747
Kings Point	18	0	0	0	0	3	0	0	0	2	23
Burrill Lake	6	0	5	19	0	20	0	0	0	0	50
Dolphin Point	0	0	0	0	0	0	0	0	0	0	0
Total	**111**	**89**	**65**	**335**	**520**	**282**	**38**	**78**	**88**	**39**	**1,645**

Source: Shoalhaven City Council 1995

Table 6.7
Residential Subdivision Releases (Lots) : 1986-1995

Locality	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Total
Milton	28	34	15	50	27	17	30	18	26	30	275
Narrawallee	53	0	0	46	47	0	10	0	5	0	161
Mollymook	21	8	30	6	14	12	3	126	51	42	313
Ulladulla	29	17	8	87	160	103	45	6	19	25	499
Kings Point	4	0	0	0	0	0	0	0	0	0	4
Burrill Lake	0	0	2	0	30	4	12	0	0	0	48
Dolphin Point	0	0	0	0	0	0	0	0	0	0	0
Total	**135**	**59**	**55**	**189**	**278**	**136**	**100**	**150**	**101**	**97**	**1,300**

Source: Shoalhaven City Council 1995

Table 6.8

Residential Building Approvals (Total Dwellings): 1990-1995

Locality	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Total
Milton	17	4	14	16	8	7	5	4	17	7	99
Narrawallee	15	22	39	40	31	25	24	30	22	18	266
Mollymook	37	27	19	12	14	5	15	16	26	8	179
Ulladulla	40	49	104	145	30	100	86	77	60	43	734
Ulladulla Rural	*	*	*	*	3	2	3	7	3	3	21
Kings Point	3	7	5	11	15	11	10	10	8	5	85
Burrill Lake	12	15	17	29	15	14	14	9	10	8	143
Dolphin Point	3	0	1	1	0	1	1	1	6	0	9
Total	**127**	**124**	**199**	**254**	**116**	**165**	**158**	**154**	**152**	**92**	**1,541**

Source: Shoalhaven City Council 1995

Table 6.9

Residential Building Commencements (Total Dwellings): 1986-1995

Locality	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Total
Milton	18	4	11	15	7	7	4	7	16	3	92
Narrawallee	12	10	42	32	22	32	20	21	22	13	226
Mollymook	37	29	22	15	12	5	16	33	13	8	190
Ulladulla	40	53	52	117	95	96	72	70	53	38	686
Ulladulla Rural	*	*	*	*	5	2	2	4	2	4	19
Kings Point	2	5	3	8	10	7	11	5	7	5	63
Burrill Lake	14	14	11	21	11	10	12	4	8	7	112
Dolphin Point	0	2	1	1	1	0	0	2	6	0	13
Total	**123**	**117**	**142**	**209**	**163**	**159**	**137**	**146**	**127**	**78**	**1,401**

Source: Shoalhaven City Council 1995

6.6 RURAL RESIDENTIAL

In recent years there has been considerable pressure for various forms of rural residential development within the structure plan area, some of which has been permitted. However, this form of residential development is difficult to justify in the Milton-Ulladulla urban-rural system.

Australian and overseas studies have Australian and overseas studies have indicated that rural residential is the most expensive form of residential development in terms of social, economic and environmental costs as well as in natural resource consumption terms. The following assessment of these costs draws on recent research undertaken by the Centre for Coastal Management at the Southern Cross University, Lismore (Edols-Meeves and Knox 1996). 'Rural residential development' refers to the subdivision of land primarily for residential purposes within a rural environment, which is generally on a scale larger than an urban house block and smaller than a farm.

6.6.1 Social Costs

Although rural living delivers benefits to the individual experiencing that lifestyle, it puts severe pressures on community infrastructure. The dispersed settlement pattern resulting from rural residential development is more expensive and costly to service in terms of health, education and community service provision than a more compact urban pattern and the quality of these services is generally lower. For example enrolments in rural schools have risen beyond the ability of the existing facilities to cope, with temporary buildings often becoming permanent fixtures, resulting in schools operating in less than optimum conditions.

6.6.2 Economic Costs

Whilst rural residential development provides revenue to Council via Section 94 contributions and rates, it also imposes significant costs on the community in terms of infrastructure costs and long term commitments of land.

Roads: Studies undertaken by councils in the upper North Coast Region have estimated the average for road maintenance at $3,600/km. This represents a cost per typical rural allotment of approximately $120 per annum, that is for times the cost of road upkeep fronting a typical urban allotment. This additional cost is not, however, reflected in rates levied, since rates are based on the unimproved capital value of lots. With about 20% of rate revenue devoted to road upkeep rural allotment rates would need to be surcharged by approximately 40% to match the urban equivalent.

Water: Many rural lifestyle subdivisions are designed according to arbitrary minimum allotment sizes, often resulting in insufficient catchment area to supply dams. In addition there is often inadequate backup supplies to cope with drought, necessitating the costly transport of water to affected properties.

Sewerage: Septic tanks may eventually require replacement by public sewerage reticulation schemes, involving significant capital costs.

Electricity and Telecommunications: Data from electricity authorities indicate a significant cost impost for rural areas in terms of service provision and maintenance. The value of network assets (line distance and distribution substations) is approximately $960 for urban residents compared with approximately $6,000 for rural users, that is six times higher. Similarly the provision of telecommunications costs urban residents approximately $775 for the installation of reticulation and infrastructure cabling, whereas in rural areas the cost can be as high as $6,000 per lot, with not all costs borne by the developer. For both electricity and telecommunications the maintenance of the networks in rural areas involves a major cross subsidy from other consumers.

Opportunity Costs: Where rural residential subdivisions are developed adjacent to urban areas they can seriously compromise its orderly planning (particularly in urban growth paths), since such development represents long term commitments of land. The restructuring of these areas, should urban development occur, tends to be fraught with difficulty and expense.

6.6.3 Environmental Costs

Rural lifestyle development is accompanied by a number of environmental costs:

Prime Crop and Pasture Land: The consumption of quality agricultural land for non-rural uses is one of the principal barriers to long term sustainability of the land. A consequence of the growth in demand for residential land is increased land prices to a point where the economic return from subdivision exceeds that for traditional agricultural enterprises. It is apparent that market forces take little account of the long term benefits of retaining agricultural land for both economic and aesthetic reasons.

Water Quality: Extensive rural residential development can have long term detrimental effects on water quality. Recently the NSW Department of Health undertook a study of four river systems on the North Coast. The findings indicated that the rivers associated with high usage of septic tanks in their catchments, primarily from rural residential development, shows levels of faecal contamination well above the NSW acceptable levels. This has been caused by two factors:

- Development on high quality agricultural land, whose soils tend to have poor effluent water absorption capabilities; and

- Cumulative effects of rural lifestyle subdivisions within rural residential estates.

Biodiversity: Dispersed forms of rural residential development have often resulted in the loss of important habitats through the clearing of bushland. In areas already generally cleared for agriculture, the large field system with its accompanying pattern of tree clusters and shelter belts have, over the generations, created modified habitats for flora and fauna. The additional numbers of domestic dogs and cats, that result from rural residential development tend to cause significant impacts on the native fauna of the area.
Landscape Values: Rural lifestyle development has the effect of gradually and cumulatively transforming the landscape. In a popular tourist area, such as

Milton-Ulladulla, where the quality of the landscape is of prime importance, the transformation of a broadacre cultural landscape to a patchwork of small properties containing dwellings (with their associated outbuildings and accoutrements) could well have significant impacts on the local economy.

6.6.4 Policies for Rural Residential Development

A number of approaches have been successfully adopted overseas for minimising the unwelcome effects of rural lifestyle development. Countries such as the United Kingdom and USA have reviewed the cost implications of this form of development and have adopted stringent land management practices, such as the implementation of agricultural protection programs which exclude residential use. This type of program has been adopted in Hawaii and in Europe such programs also aim at maintaining historical rural landscapes for ecological reasons and to promote tourism.

As a result of their high rates of urbanisation countries of the Europe Union (EU) have placed a high value on rural land, particularly areas of high agricultural value and cultural landscape significance. For reasons of amenity, aesthetics and tourism, substantial areas adjacent to conurbations are protected from non-rural forms of development by way of 'green belts' and 'green fingers'. Fortunately for the farming community in these areas agricultural enterprises receive financial encouragement to continue farming in locations and at a scale that would otherwise not be profitable.

6.7 KEY STRUCTURE PLAN ISSUES

The major components of Milton-Ulladulla's housing situation, that have structure planning implications, are summarised in Table 6.10.

Table 6.10
KEY STRUCTURE PLAN ISSUES

Housing Tenure:
- In 1991 Milton-Ulladulla had a total of 3,866 occupied dwellings.
- Vast majority of housing stock is owner occupied (73%).
- Private rental is a significant form of tenure (18%), particularly in Ulladulla and Mollymook.
- Public rental is an insignificant form of tenure (2%).

Special Needs Housing:
- Sarah Claydon Village provides the only retirement facilities (97 units).
- Retirement housing is an area of potential need in the future.

Holiday Homes:
- Proportion of holiday homes to total dwelling stock has declined from 43% to 31%.

Rate of Development:
- Average rate of residential development over the past ten years is 177 dwellings per annum

Rural Residential:
- Rural residential not considered to be appropriate in the Milton-Ulladulla district.

Section Seven

COMMUNITY FACILITIES

The adequate provision of community facilities and services serves to complement the residential, educational and working environments by providing for the other physical, social and cultural needs of the community. The cornerstone of provision adequacy is the social justice principles of access and equity, which the structure plan addresses in terms of spatial distribution. The following assessment includes: education; health services; community support; law and order; recreation; entertainment and culture; religious facilities; bush fire management; and cemeteries.

7.1 EDUCATION

7.1.1 Primary Schools

There are currently four primary schools in the district:

- Ulladulla Public School (609 students);
- Milton Public School (701 students);
- St Mary's Catholic School (185 students); and
- Croobyar Christian School (150 students).

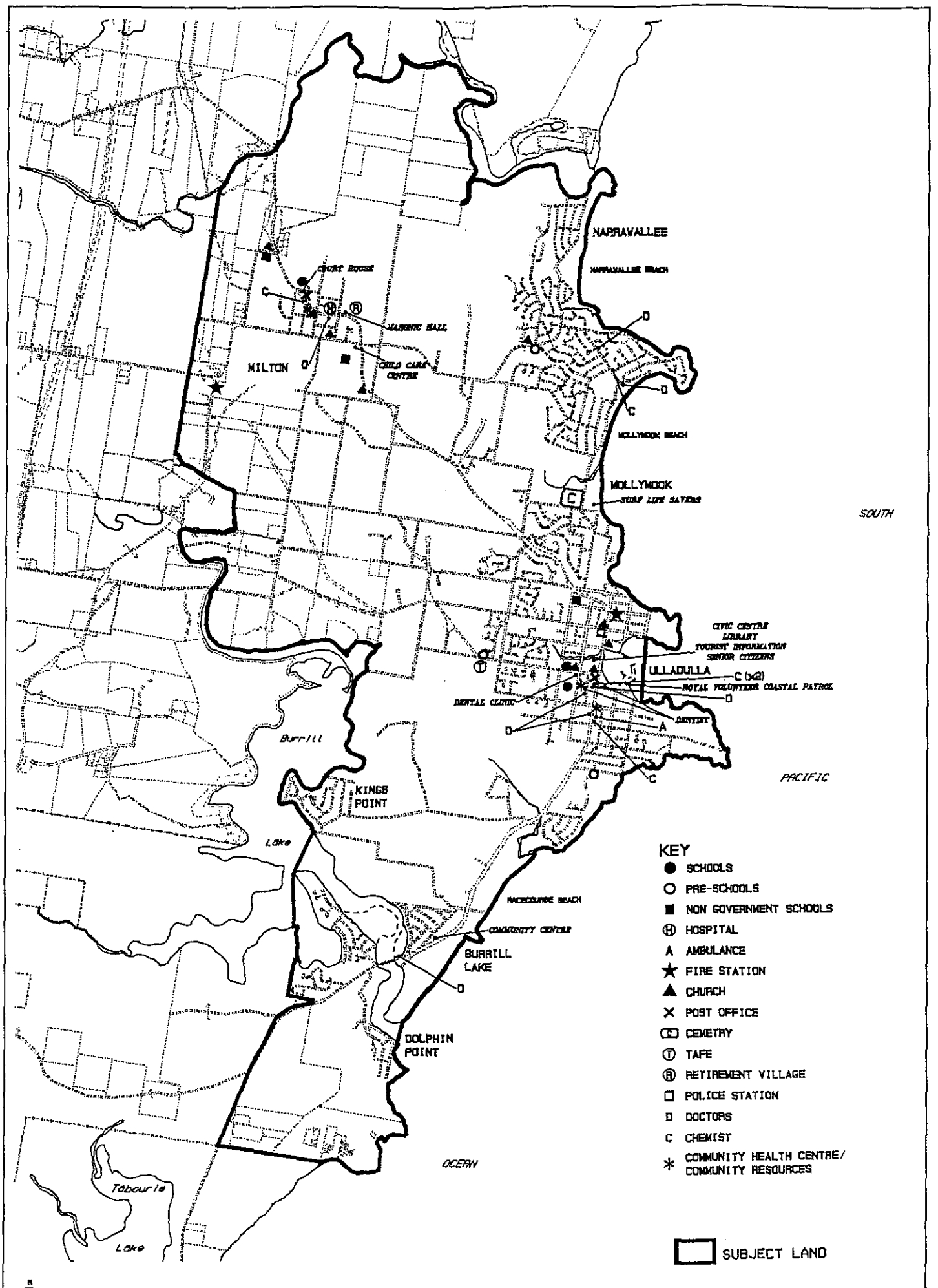
The schools draw their students from a relatively wide catchment area: Manyana and Bendalong to the north; and Bawley Point and Kioloa to the south. Enrolments in all three primary schools have shown a gradual and consistent pattern of growth (Table 7.1 and Figure 7.1)

Table 7.1
Primary, High School and TAFE Enrolments 1990-95

School	1990	1991	1992	1993	1994	1995
Ulladulla Public Primary	481	516	545	562	596	609
Milton Public Primary	611	657	665	670	673	701
St Mary's Catholic Primary	187	192	200	189	185	185
Croobyar Christian School	-	13	70	-	-	150
Ulladulla High School	823	855	854	861	847	832
Ulladulla-Milton TAFE	-	-	174	193	188	-

A site for a primary school has been acquired by the Department of School Education in Mollymook. It is anticipated that (subject to funding) a new primary school would be constructed within five years. A site is also being acquired at Dolphin Point for another primary school. The Catholic Education Office has no plans to expand the primary school facilities within the district.

The Croobyar Christian School, established at Milton by parents in 1988 to provide Christian value-based education has expanded rapidly since its first enrolment in 1991. By 1996 it will provide education until Year 10 and by 1999 it is proposed to extend this to Year 12. The school occupies a 7 hectare site of which only 2 hectares has so far been developed.



COMMUNITY FACILITY DISTRIBUTION

FIGURE 7.1

7.1.2 High Schools

Currently there is only one secondary school in the area, located at Ulladulla. It has an enrolment of 832 students for 1995. The Department of School Education anticipates that there will be a need in the short to medium term for another high school to be located at Milton.

Catholic secondary education is provided at St John the Evangelist at South Nowra. The recent opening of a new Catholic secondary school at Broulee is anticipated to account for a number of Catholic secondary students living in the southern districts of the Milton-Ulladulla subregion. However, a significant number of the Catholic primary school enrolments (75% in 1995) continue their education at Ulladulla High School.

7.1.3 TAFE Colleges

The district currently has two TAFE colleges: one at Ulladulla and one at Milton (Figure 7.1). The Milton-Ulladulla campus currently offers tertiary education courses in: arts and media; building and construction; business services; information technology; manufacturing; personal and community services; tourism and hospitality; transport; basic work skills; foundation studies; and pre-vocational programs. Enrolment equivalents are relatively modest with 188 being recorded for 1994. The Milton TAFE component is programmed to close at the end of 1995, with the bulk of the courses being transferred to the Ulladulla campus.

7.1.4 Libraries

The district currently has two libraries: one at Ulladulla and the other at Milton (Table 7.2). Although sustaining a decline in patronage in 1991 to 1993, patronage levels for 1994/95 have resumed their earlier numbers.

Table 7.2
Library Patronage: Ulladulla and Milton (1990-95)

Year	Ulladulla	Milton	Total
1990	127,542	17,618	145,160
1991	122,700	16,907	139,607
1992	123,220	16,918	140,138
1993	120,949	17,276	138,225
1994*	65,797	5,877	71,674
1994/5	127,596	16,547	144,143

* *NOTE:* Data for 1994 represents first 6 months of the year, prior to change over to the Commonwealth and State Fiscal Year accounting basis

Source: Shoalhaven City Council 1995

7.2 HEALTH SERVICES

7.2.1 Milton-Ulladulla Hospital

The centre piece of the health services of the southern Shoalhaven is the Milton-Ulladulla Hospital located on the Princes Highway (Figure 7.1). The hospital provides medical, surgical, obstetrics, emergency and rehabilitation services for both residents and visitors. It has 20 beds, a staff of 48 full-time equivalents and

a current annual operating budget of $2.5 million. During Fiscal 1994/95 the hospital treated 2,087 in-patients and 7,000 emergency patients (a 20% increase over the previous year). During the school holiday peak periods the number of emergency treatments is significant. As part of a rolling upgrade program to meet the needs of an increasing demand, the hospital has recently undergone a $345,000 renovation, which included the upgrade of the emergency department, waiting room, ambulance entrance and main entrance area.

At this stage there are no definite plans to further expand the hospital's facilities and services.

7.2.2 Medical Services

The Milton-Ulladulla Study area is served by eleven medical practitioners, eight dentists, three chiropractors, two physiotherapists, and one psychologist.

Medical Practitioners

There are eleven doctors in seven surgeries serving the study (Table 7.3). They provide general medical treatment and some minor surgical procedures from their respective surgeries Monday to Friday and on Saturday morning. Eight of these doctors are also Visiting Medical Officers (VMO) at the Milton Hospital and provide general surgical, anaesthetic and emergency services to the community. Two medical practitioners act as Government Medical Examiners for the area.

Dental

The community has eight dentists servicing it from four surgeries. All of these surgeries are located in the Ulladulla CBD. They provide this service Monday to Friday and Saturday morning, all by appointment. They also supply emergency after hours treatment as required. There is also a community dental facility (Ulladulla Dental Clinic) which provides low cost dental services to those who qualify.

Other Medical Services

The Milton-Ulladulla Study Area has three chiropractors, two physiotherapists, and one psychologist.

Table 7.3
Medical and Associated Services

	Milton	Ulladulla	Mollymook	Burrill Lake Area
Doctors	1	6	4	2
Dentists	None	8	None	(from Ulladulla)
Chiropractors	None	3	None	None
Physiotherapy	None	2	None	None
Psychology	1	None	None	None
				None

7.3 COMMUNITY SUPPORT

The Milton-Ulladulla community is supported by a range of facilities and services for children, youth, the aged and disabled to a varying standard of provision (Figure 7.1).

7.3.1 Children's Services

Family Day Care
Family day care is provided in the district by the Ulladulla Family Day Care Scheme. It operates fifty-two weeks a year and is part of a network of individuals providing emergency, 24 hour and weekend care and development activities in their own homes for other peoples children, organised and supported by a centrally co-ordinated scheme. The scheme selects care givers, arranges the placement of up to five children per carer, according to the needs of families, supervises the care, provides a toy and equipment library, weekly play groups and a Social Security means tested subsidy for parents. Family Day Care is aimed at children aged 0-5 years but can also assist school aged children up to 12 years of age (Table 7.4).

Long Day Care
Long day care is provided in the district by the Ulladulla Children's Centre, located on Hollywood Avenue.

Long day care centres provide care and educational programs for young children aged 6 weeks to 5 years of age. Unlike pre-schools, they operate during school holiday periods. They also operate for longer hours during the day as they particularly target the needs of working parents. Places at long day care centres are prioritised for workforce participation/training; children with disabilities; children at risk; and children at home.

Long Day Care/Pre-Schools
Long day are/pre-school centres are located in Milton, Mollymook and Ulladulla. These centres provide both long day care (open for eight hours or more a day) and pre-school programs, operating throughout the school holiday periods.

Pre-Schools
Pre-school facilities are provided by the Milton-Ulladulla Pre-School located in Dowling Street, Ulladulla. Pre-schools usually operate from 9am to 3pm Mondays to Fridays during school terms, offering educational programs for children aged 3 to 5 years.

Playgroups
Playgroups are organised and run by groups of parents on a voluntary basis. They provide an opportunity for children 0-5 years of age and their parents to meet together, share toys and activities, play and learn together. Each session lasts a few hours, one or more times a week. Playgroups are located at Milton and Ulladulla.

Occasional Care
Occasional care is provided in the district by the Ulladulla Children's Centre. The program provides care for up to five children from 0-5 years of age to allow

parents to shop, attend appointments, have time to themselves or participate in training or employment opportunities.

Vacation and After School Care

Vacation and after school care is provided at the Ulladulla High School. Vacation care is provided for up to 45 children during the school holidays for 5-12 year olds (8am to 6pm). After school care is provided during the school term for the same age group and has a capacity for 30 children.

Table 7.4
Children's Services in Milton-Ulladulla

Facility/Service	Location	Places
Family Day Care	Ulladulla	60
Long Day Care	Ulladulla	40
Long Day Care/pre schools	Milton	32
	Mollymook	29
	Ulladulla	29
Pre-Schools	Ulladulla	90
Play Groups	Milton	
	Ulladulla	
Occasional Care	Ulladulla	5
Vacation/After School Care	Ulladulla	30/45
Special Needs Care: Education	Ulladulla	8
Special Needs Care: Residential	Ulladulla	6

Source: Shoalhaven City Council (1994)

Support for Children with Special Needs

Facilities and services for children with intellectual and physical handicaps are provided at the Bundawang School and at Eloura Cottage.

Bundawang School for Specific Purposes: This facility, located in Camden Street, Ulladulla provides public school education for a maximum of eight children aged 4-18 years who have special needs.

Eloura Cottage: Eloura Cottage, located on North Street, Ulladulla, provides residential care for up to six children aged 6-16 years with intellectual and mild physical disabilities. It also provides respite care.

7.3.2 Youth and Young Adult Services

Youth Centre

The Ulladulla Youth Centre, located on St Vincent Street, provides the focus for many of the services directed to the youth and young adults of the district, such as life skills and access to training and employment programs. It also provides a focus for social and recreational activities.

Crisis Accommodation

Currently there is no crisis accommodation in the southern Shoalhaven. There is considered to be a compelling need for crisis accommodation for youth and women, particularly as a result of domestic violence.

7.3.3 Aged and Disabled Services

HACC Program

The prime focus for the care of the aged and disabled in the Milton-Ulladulla community is the Federally funded Home and Community Care (HACC) Program, which uses as its delivery platforms: Milton Hospital, Sarah Claydon Village and the Milton Ulladulla Community Resource Centre located in Ulladulla.

The HACC Program assists frail, aged and younger people with disabilities to live independently in their own homes and participate in the life of the community. Services include the delivery of meals; home help; home nursing; home modification and maintenance; and transport. The Program also provides services to the carers of these people, giving them respite from their caring role.

7.4 COMMUNITY SECURITY

7.4.1 Police Station

The current police station was established and operational at its site at the intersection of Princes Highway and North Street, Ulladulla in December 1994. (Figure 7.1). The facility is a Senior Sergeant Patrol Station, the smallest administrative unit in the NSW Police Service. Its patrol area encompasses the southern section of Shoalhaven City Council area south of St Georges Basin. The station has a complement of 23 staff, comprising:

- 1 Patrol Commander (Senior Sergeant)
- 6 Highway Patrol Officers
- 12 General Duties Officers
- 2 Detectives
- 2 Unsworn Administrative/Support Staff.

During peak holiday periods these resources are supplemented by some 10-15 additional Highway Patrol Officers from Sydney. Also during peak holiday periods a number of mobile stations are set up in car parks in some of the key visitor areas in the sub-region. During the summer months the Police Station is open for extended hours (Table 7.5).

Table 7.5
Ulladulla Police - Hours of Operation

Season	Opening Hours	Days of Week
Winter	7am - 2.30am 7am - 12pm	Fridays and Saturdays Sundays to Thursdays
Summer	7am - 4.30am 7am - 2.30am	Fridays and Saturdays Sundays to Thursdays

Source: NSW Police Service (1995)

Crime Profile

Milton-Ulladulla is considered to have a relatively low crime profile. There appears to be a significant correlation between certain crimes and peak holiday visitation. These include: stealing; breaking and entering; drug (soft) and alcohol

abuse; and traffic offences. Domestic violence, car theft and malicious damage tend to be local resident issues.

Areas identified by the Police Service as requiring police resources include the Princes Highway; the Harbour, the fishing fleet, environmental protests (eg logging), tourism, licensed premises and potential disasters. Traffic management is a major problem at peak holiday periods. The Princes Highway/Green Street intersection is cited as a major source of traffic congestion at these times.

Community Policing
The current Patrol Commander puts high store on community policing. The patrol area has six active Neighbourhood Watch organisations. "On the beat" policing has been reintroduced to the Ulladulla CBD.

7.4.2 Courthouse

The Milton Courthouse, established in 1892, continues to function as such, being open five days a week. A magistrate court sits once a week on Thursdays, hearing all cases emanating from the Southern Shoalhaven patrol area. There are currently no plans to change its current function.

7.5 RECREATION

7.5.1 Public Open Space

The Milton-Ulladulla district has a total public open space resource of 361.54 hectares (Figure 7.2). This comprises 116.48 hectares of Council owned and 245.06 hectares of State owned open space (Tables 7.6 and 7.7).

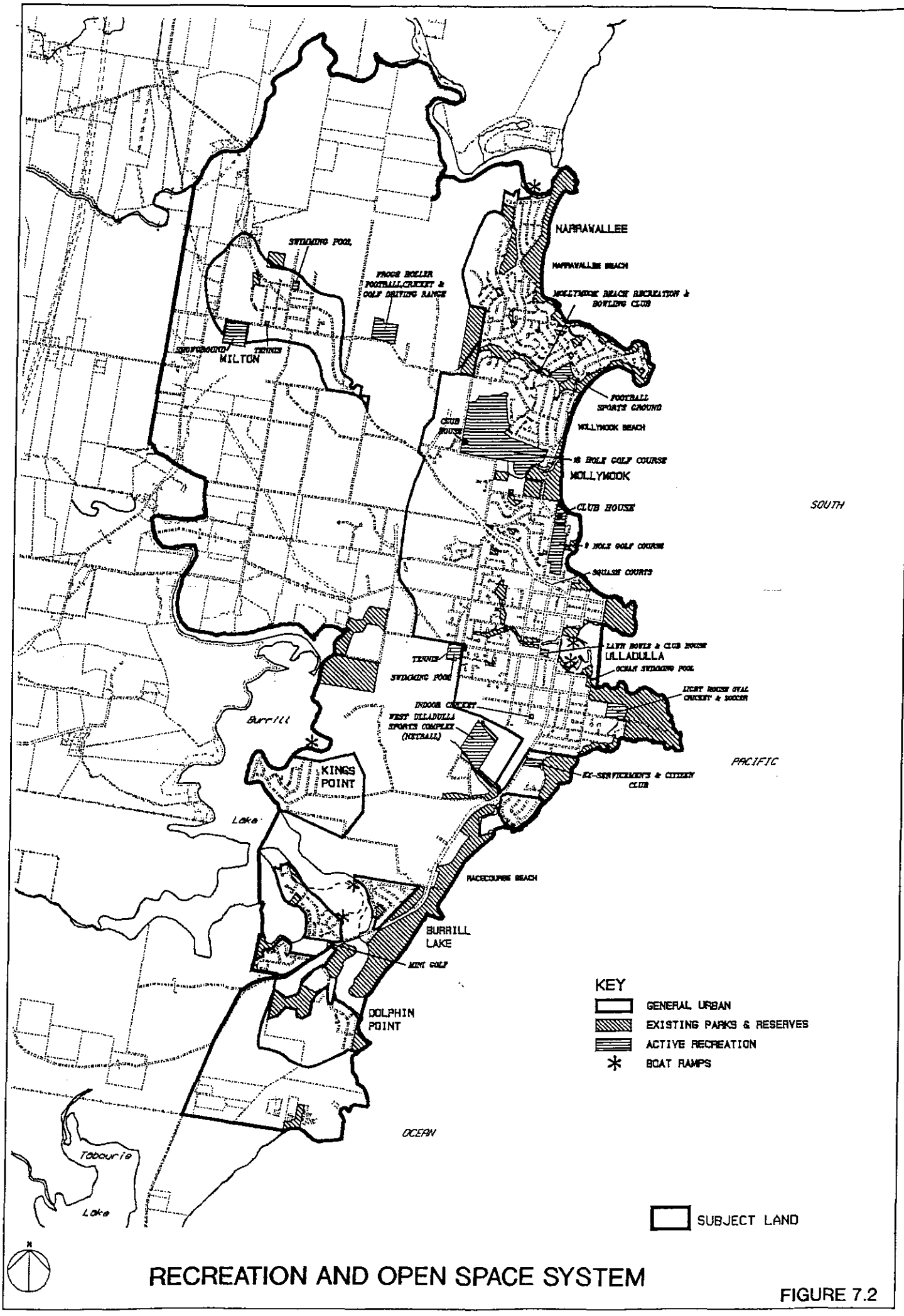
The Ulladulla area has the most generous open space provision with 51.16 hectares of Council owned and 106.50 hectares of State owned land. Milton, set amidst open farming land, is the least endowed having a total of 2.89 hectares of Council-owned and 3.32 hectares of State-owned public open space.

7.5.2 Existing Sports Facilities

Sports facilities are associated with the following areas of public open space:

- Lighthouse Oval;
- West Ulladulla Sporting Complex;
- Ulladulla Swimming Pool;
- Milton Show Ground;
- Frogs Holla; and
- Mollymook Oval.

Facilities are provided for Tennis, Rugby Union, Rugby League, Touch Football, Soccer, Junior Soccer, Cricket, Basketball and Netball (Table 7.8). There are, however, no facilities in the district for Australian Rules or Hockey. With the notable exception of Netball, sports facility provision in the district does not compare favourably with subregion (Area 5) or the City as a whole (Table 7.9).



RECREATION AND OPEN SPACE SYSTEM

FIGURE 7.2

Swimming Pools

There is currently a 50 metre swimming pool at Ulladulla, a 20/25 metre swimming pool at Milton, and a 25 metre ocean pool to the south of the harbour at Ulladulla.

Equestrian Facilities

Equestrian facilities in the district consist of the Milton Showground, the Milton Pony Club and a Polocrosse field adjacent to the West Ulladulla Sporting Complex.

Golf Courses

The Mollymook Golf Course represents an attractive active and passive (visual) recreation resource. It has two courses and club houses: and 18 hole championship course and a 9 hole course. It has a current membership of approximately 5,000. In addition to the facilities at the Mollymook Golf Club, there is driving range at Frogs Holla.

Table 7.6
Council Owned Open Space

Locality	Open Space Classification											
	Sport		Community		Natural Wetland/ Foreshore		Parkland		Natural Bushland		Total	
	No.	Area	No	Area	No.	Area	No	Area	No.	Area	No.	Area
Burrill Lake	1	1.0100					8	6.1609	1	4.0500	10	11.2209
Kings Point					1	3.8192	3	2.2352			4	6.0544
Milton	1	0.2023	1	0.7685			5	1.9114			7	2.8822
Mollymook	2	13.9009					24	17.9695	2	10.1938	28	42.0642
Narrawallee							5	5.3366	1	11.6581	6	16.9947
Ulladulla			1	0.6500	2	3.9100	16	7.2753	5	25.4275	24	37.2628
Total	**4**	**15.1132**	**2**	**1.4185**	**3**	**7.7292**	**61**	**40.8889**	**9**	**51.3294**	**79**	**116.4792**

NOTE: Area shown in hectares
Source: Shoalhaven City Council 1995

Table 7.7
State Owned Open Space

Locality	Coastal		In-Land		Total	
	No.	Area (ha)	No.	Area (ha)	No.	Area (ha)
Burrill Lake	1	59.9000	1	10.2200	2	70.1200
Dolphin Point	1	4.6000			1	4.6000
Kings Point			1	37.6400	1	37.6400
Milton			1	3.3270	1	3.3270
Mollymook	1	6.2760			1	6.2760
Narrawallee	1		1	16.5900	2	16.5900
Ulladulla	4	49.9710	12	56.5326	16	106.5036
Total	**8**	**120.7470**	**16**	**124.3096**	**24**	**245.0566**

Source: Shoalhaven City Council 1993

Table 7.8
Sports Field Facilities in Milton-Ulladulla

Facility	Ulladulla- Burrill Lake	Milton - Mollymook	Total
Tennis Courts	4	2	6
Rugby Union Fields	-	1	1
Rugby League Fields	-	1	1
Touch Football Fields	-	4	4
Soccer Fields	2	-	2
Junior Soccer Fields	2	-	2
Cricket Ovals	1	2	3
Basketball Courts	-	2	2
Netball Courts	9	-	9

Source: Shoalhaven City Council 1995

Table 7.9
Comparative Supply of Sports Facilities

Facility	Milton-Ulladulla		Area 5		City-wide	
	No. facilities	Popn/ facilities	No. facilities	Popn/ facilities	No. facilities	Popn/ facilities
Tennis	6	1,659	13	1,207	59	1,324
Football (all codes)	4	2,488	10	1,570	66	1,184
Cricket	3	3,317	5	3,139	35	2,232
Basketball	2	4,976	2	7,848	4	19,534
Netball	9	1,106	9	1,744	55	1,421
Hockey	0	*	2	7,848	11	7,103

NOTE: Football codes exclude touch football and junior soccer. Source: Shoalhaven City Council 1995, ABS Census 1991

7.5.4 Off Lead Dog Areas

With the increasing popularity of dog ownership in urban areas, coupled with increasing restrictions on the access of dogs to areas of public open space, there is a need for the designation of specific off-lead dog areas within Milton-Ulladulla. Current research indicates that nationally, some 42% of households own a dog (Rearck 1995). In the Milton-Ulladulla urban areas there are an estimated 2,358 dogs (Table 7.10). Dog ownership is considered to have a number of benefits, having been found to enhance the physical and mental health of their owners. Regular outdoor exercise of the household dog is considered beneficial for both the canine and the human, in terms of physical exercise and social interaction.

Site Selection Criteria

For hygiene and safety reasons, the following areas are considered to be inappropriate for the "free running" of dogs: areas in the immediate vicinity of children's playgrounds; areas which attract high concentrations of people (eg popular beaches and tourist facilities); picnic areas' sports ovals/playing fields; botanical gardens; environmental protection areas; and parks where horses, bicycles and motor bikes are likely to be present.

Off-lead dog areas should generally be linear in configuration and meet the following criteria:

(i) parks which can withstand free running by dogs, including utility easements (eg drainage, electricity);

(ii) partial use during winter of those beaches not requiring environmental protection;

(iii) parks which are already fenced to park boundaries, that have natural boundaries or require only minimal fencing;

(iv) parks which are not associated with established recreation interests; and

(v) unique local conditions or opportunities (eg derelict land).

Table 7.10
Dog Ownership in Milton-Ulladulla

	Owners	Dogs Registered	Dogs Unregistered	Total Dogs
Ulladulla	574	709	242	951
Mollymook	337	381	139	520
Narrawallee	84	96	27	123
Milton	195	273	119	392
Kings Point	56	70	19	89
Dolphin Point	16	17	6	23
Burrill Lake	161	191	69	260
Total	**1,423**	**1,737**	**621**	**2,358**

7.6 ENTERTAINMENT AND CULTURE

For the size of its permanent population, Milton-Ulladulla is relatively well provided with entertainment and to a lesser extent cultural facilities and services (Figure 7.1).

7.6.1 Entertainment Facilities

Entertainment facilities comprise a cinema centre, entertainment facilities, licensed clubs, hotels/taverns and restaurants.

Arcadia Twin Cinema
The Arcadia Twin Cinema comprises two 180 seat theatres, showing recently released films seven days a week. During the off season the theatre offers four matinees and four night sessions and during the peak season (school holidays) it offers seven matinees and seven night sessions. The theatre employs five full time and fourteen part time staff.

Holiday Entertainment Centre
Funland, located within Ulladulla's CBD, provides holiday entertainment facilities for young people. They include video games, slot cars, skee rolls, skill testers, kiddy rides, dodgem rides and sizzler (thrill ride). It is open between 10am to 5pm during the off season and from 10am to 10pm during the peak season. This represents an invaluable asset during wet days in the peak season.

Licensed Clubs
The district has a total of four social and recreation clubs which operate licensed premises (Table 7.11). These clubs contain bars, restaurants/ bistros and gaming areas (poker machines).

Table 7.11
Licensed Clubs in Milton-Ulladulla

Clubs	Members
Recreation Clubs	
Milton-Ulladulla Bowling Club	2,413
Mollymook Golf Club	4,960
Mollymook Beach Bowling and Recreation Club	807
Social and General Clubs	
Milton-Ulladulla Ex-Servicemen's and Citizens' Club	3,700

NOTE: These clubs contain bars, restaurants/bistros and gaming areas for the use of members and visitors.

Hotels and Taverns

There are only three licensed hotels in the district: the Commercial and Star Hotels at Milton and the Marlin Hotel at Ulladulla.

Restaurants

There are a total of twenty-two licensed and BYO restaurants in the Milton-Ulladulla district, excluding coffee shops and take-aways. Restaurants serving traditional fare (colonial or seafood themes) are in the majority (twelve), with Chinese restaurants (five) and Italian (three) having significant representation (Table 7.12). The KFC family restaurant in Ulladulla is the only fast food chain representative in the district.

Table 7.12
Restaurants in Milton-Ulladulla

Location	Traditional	Chinese	Italian	Indian	Fast Food	Total
Milton	4	0	1	0	0	5
Mollymook	2	1	0	0	0	3
Ulladulla	6	4	2	1	1	14
Total	**12**	**5**	**3**	**1**	**1**	**22**

Source: Yellow Pages (1995)

7.6.2 Cultural Facilities

Cultural facilities within the district are restricted to the Civic Centre, the Milton Theatre and a number of other venues.

Civic Centre

The Ulladulla Civic Centre provides a venue for the performing arts and a display space for art exhibitions.

Milton Theatre

The former cinema is used periodically by local amateur theatrical groups for the production of plays and shows.

Other Venues

Community cultural activities also take place at the Burrill Lake Community Centre, the Mollymook Surf Life Savers Club hall, the former Catholic Church building in Green Street, Ulladulla, and the Masonic Temple Hall in Milton.

7.7 RELIGIOUS FACILITIES

The Milton-Ulladulla district has a total of ten places of worship, representing eight Christian traditions. Only the Anglican and Catholic Churches have more than one place of worship in the area, both being represented in Milton and Ulladulla (Table 7.13 and Figure 7.1). The recently constructed Baptist Church is the only religious facility located at Mollymook.

Table 7.13
Places of Worship in Milton-Ulladulla

Church	Milton	Mollymook	Ulladulla	Total
Anglican Church	1	0	1	2
Apostolic Church	0	0	1	1
Baptist Church	0	1*	0	1
Catholic Church	1	0	1	1
Christian Outreach	0	0	1	1
Jehovah's Witnesses	1	0	0	1
Seventh Day Adventist Church	0	0	1	1
Uniting Church	1	0	0	1
Total	**4**	**1**	**5**	**10**

NOTE: *recently completed

7.8 FIRE MANAGEMENT

Fire management services are provided by: the NSW Fire Brigade and Council's Bush Fire Brigade.

7.8.1 NSW Fire Brigade

The NSW Fire Brigade is primarily responsible for the urban areas and properties adjacent to the Princes Highway. It operates from premises in central Ulladulla with one pump appliance and one back-up appliance. It is staffed by twelve retained firemen.

7.8.2 Bush Fire Brigade

The Bush Fire Brigade is primarily responsible for the rural areas of the district. It operates from a recently constructed three bay facility located to the south-west of Milton (Figure 7.1). It is supported by a team of twenty-seven volunteers.

Bush fire management and control is undertaken from Council's Administrative Centre at Nowra. Consideration is currently being given to establishing a satellite control centre at the Ulladulla Civic Centre, for use during major bush fire events.

7.8.3 Bush Fire Hazard Areas

The major area of bush fire hazard in the district is located to the west of Burrill Lake, the scene of a number of recent fires.

7.9 CEMETERIES

The Sandridge General Cemetery, located at Mollymook, together with a secondary facility at Lake Conjola, provides burial facilities for southern Shoalhaven (Figure 7.1). The Sandridge site, which has existed for over 100 years, has an excellent burial medium of loamy shales. During Fiscal 1994/95 a total of 55 burials and 85 cremations were conducted for deceased people from the Milton-Ulladulla district. The 55 burials were conducted at Mollymook, which has no provision for cremations.

Although Council operates a well appointed crematorium at Worrigee, the cremations from the district were conducted at Dapto.

The facilities at Mollymook and its support facility at Lake Conjola are anticipated to meet community needs (50-60 burials per annum) for at least the next 50 years. Council has prepared detailed plans to redevelop the Sandridge General Cemetery and work, valued at $1.3 million, is anticipated to commence in 1996, with final completion in 2000. Council supports a policy of land conservation in its cemeteries with a view to extending their long term use and is actively providing the community with options for disposal other than burial.

7.10 KEY STRUCTURE PLAN ISSUES

The key elements of Milton-Ulladulla's community facility and service provision, that have implications for structure planning, are summarised in table 7.14.

Table 7.14
KEY STRUCTURE PLAN ISSUES

Education:
- Existing education services centred on Ulladulla and Milton.
- Proposed new high school to be located near Milton.
- Proposed new primary schools to be located at Dolphin Point and Mollymook.
- TAFE college facilities centred on Ulladulla.

Health Services:
- Recently upgraded Milton Hospital to continue catering for the needs of the subregion.
- Health centres located in Ulladulla, Milton and Mollymook.

Community Support:
- Community support facilities and services (child, youth and aged) centred on Ulladulla.

Community Security:
- Police facilities centred on Ulladulla.
- Courthouse located at Milton: pressure to relocate function to Ulladulla.

Recreation:
- Major active recreation facilities centred on: West Ulladulla, Warden Head, Frogs Holla, Milton Showground and Mollymook.
- Plans to convert Ulladulla Olympic size pool to an indoor aquatic centre.
- Plans to develop a major recreational complex at West Ulladulla.

Entertainment and Culture:
- Commercial entertainment centred on Ulladulla.
- Cultural based entertainment centred on Milton.

Religious Facilities:
- Religious facilities and services centred on Ulladulla, Milton and Mollymook.

Bush Fire Management:
- Bush fire facilities located near Milton.

Cemeteries:
- Mollymook's Sandridge cemetery has capacity to accommodate demand for over 50 years.

Section Eight

TRANSPORT

Efficient "friction-reduced" (if not "friction-free") movement between land uses and the removal of extraneous traffic from "people" areas is fundamental to sound urban structure planning. Issues that are addressed in this section include: existing road networks and traffic flows; potential road networks and traffic flows; public transport; car parking; harbours and waterways; air transport potential; and off-road movement systems.

Transport to and within Milton-Ulladulla is provided by the road network and road vehicles. Historically, the district has never been connected to the NSW rail network. The nearest rail service is located at Bomaderry, some 76 kilometres to the north.

8.1 EXISTING ROAD NETWORK

The road network comprises a central spine road and a subsystem of local collectors and access roads which service the six main urban areas of the district (Figure 8.1).

Princes Highway

The Princes Highway (Route 1) is the main arterial road through the urban area (approximately 13 kilometres of highway) and carries:

- through traffic - currently it is the only route for through traffic; and
- local traffic - to and from the main destinations of Ulladulla CBD and the industrial areas.

Western Road System

On the western side of the Princes Highway, Slaughterhouse Road provides a low-level and rather tenuous link between the highway just south of Milton and Ulladulla CBD via Green Street.

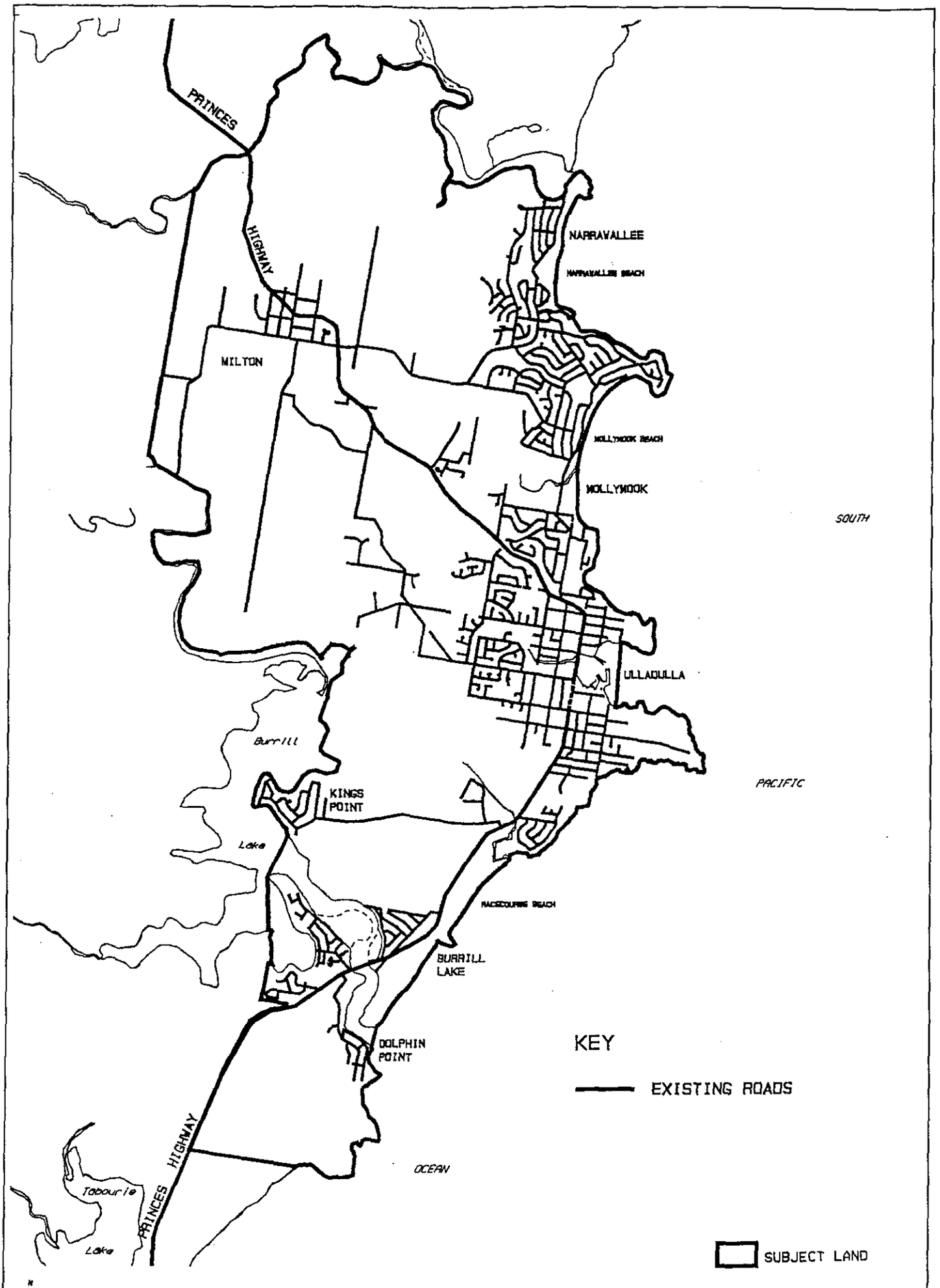
Mollymook/Narrawallee Road System

On the eastern side of the highway, Golf Avenue and Mitchell Parade in Mollymook provide the only existing and practical north-south route to Ulladulla CBD and destinations further south for Narrawallee, Mollymook and Mollymook Beach.

Matron Porter Drive provides the link between Narrawallee/Mollymook Beach to Milton and destinations to the north. Bannister Head Road and Tallwood Avenue provide the main link roads between Matron Porter Drive and Mitchell Parade in Mollymook Beach.

Ulladulla Road System

Within the central area of Ulladulla, St Vincent Street runs parallel to, and just west of, the Princes Highway and provides another north-south feeder road into the CBD. Green Street performs a similar but, at the present, relatively minor function for east-west traffic in conjunction with Slaughterhouse Road.



EXISTING ROAD NETWORK

FIGURE 8.1

Milton Road System

Milton township is small and compact in its settlement pattern and has the Princes Highway running through its centre. There is almost no alternative route between Milton and Ulladulla other than the highway, except via Windward Way and Slaughterhouse Road. The latter has poor vertical and horizontal alignments and in its present form should only be regarded as a low order local rural traffic road.

However, Windward Way is almost impassable after rain. Myrtle Street and Croobyar Road provide the main access to rural areas to the west and south-west.

8.1.1 Road Network Issues

A number of issues were raised in 1987 in the Milton-Ulladulla Arterial Road System Report and are still current. These include:

- A priority need to relieve existing and projected traffic congestion along Princes Highway in the Ulladulla CBD (especially at peak holiday times). This involves the investigation of a by-pass in the medium to long term which may also need to eventually by-pass Milton.

- A short to mid term need to relieve projected traffic congestion at Golf Avenue and the highway in Mollymook and to provide an alternative north-south link into the CBD, industrial areas and beyond for the Narrawallee and Mollymook Beach areas.

- Other issues include:

  - extension of Garside Road to Matron Porter Drive in Mollymook;

  - improve the road intersection at Mitchell Parade, Shepherd Street and Ocean Street, Mollymook;

  - western extension of Ocean Street, Mollymook; and

  - upgrading of roads to the Hilltop Golf Course in Mollymook.

8.1.2 Existing Traffic Flows

The Princes Highway through Milton and Ulladulla carries volumes of 14,000 vehicles per day. Maximum existing mid-block capacities are 2,800 vehicles per hour, a figure which is reduced by grades, presence of heavy vehicles and pedestrians and the effects of traffic signals. In Ulladulla, traffic currently operates usually at level of service C and, during holiday periods, at level of service D. During peaks, conditions often deteriorate to level of service F. The accident rate on the Princes Highway through Ulladulla is significantly higher than the New South Wales State average for similar roads and the accident rate in Milton is also unacceptably high.

There is a significant potential for an increase in accident rates because of the high level of pedestrian activity in the area. An analysis of vehicle/pedestrian

conflict in the Ulladulla CBD was undertaken in April 1996. During the peak Easter period as many as 709 pedestrians crossed the highway at one traffic signal crossing in the space of one hour (8.30am - 9.30am), the AM peak for vehicular traffic, but not necessarily for pedestrians. This was more than twice the level of pedestrian movements recorded during off-peak periods.

During peak summer periods the situation becomes critical, when the Princes Highway is operating well above maximum capacity, under forced flow stop/start conditions (19,000 vehicles per day compared with a maximum capacity of 12,000 vehicles per day (Table 8.1).

Table 8.1
Road Traffic Carrying Capacity Standards

Route Type (1)	Service Standard	Daily Traffic Volumes (Vehicles per Day)
Urban Route	Desirable maximum	9,000 vpd (with parking) 14,000 vpd (without parking)
	Maximum capacity (2)	12,000 vpd (with parking) 18,000 vpd (without parking)
Rural Road	Desirable maximum	20,000 vpd (approximately)

NOTES: (1) based on a two-lane, two-way road
(2) forced traffic flow in stop/start conditions
Source: DMR, NAASRAA, Ogden and Bennett

8.2 POTENTIAL ROAD NETWORK

8.2.1 Road Network Improvements

Recorded traffic volumes and local experience indicate that the relief of traffic congestion on the highway within the Ulladulla CBD is currently the most crucial issue to resolve. To reduce the volume of traffic along that section of the highway requires the pursuit of the following objectives:

- re-routing the through traffic; and/or
- providing and promoting alternative routes into the CBD.

To achieve these objectives the following options have been considered:

- upgrade St Vincent Street;
- Upgrade Slaughterhouse Road; and
- develop a north-south link road.

Option 1: St Vincent Street Up-grade
St Vincent Street runs parallel to the Princes Highway on the western edge of the CBD. It is essentially a residential street of inadequate road pavement design. Currently, it acts as a filter for some through traffic.

The intersection of St Vincent Street with the highway at its northern end offers poor sight distance to the east and also would, in the immediate future, require traffic lights to control the traffic movement if more traffic is encouraged to use St Vincent Street. Traffic, once on the road, is offered a wide, long and open road which could invite excessive speeds and be dangerous to pedestrians, especially school children from the primary and high schools. Also, large sections of the street are residential.

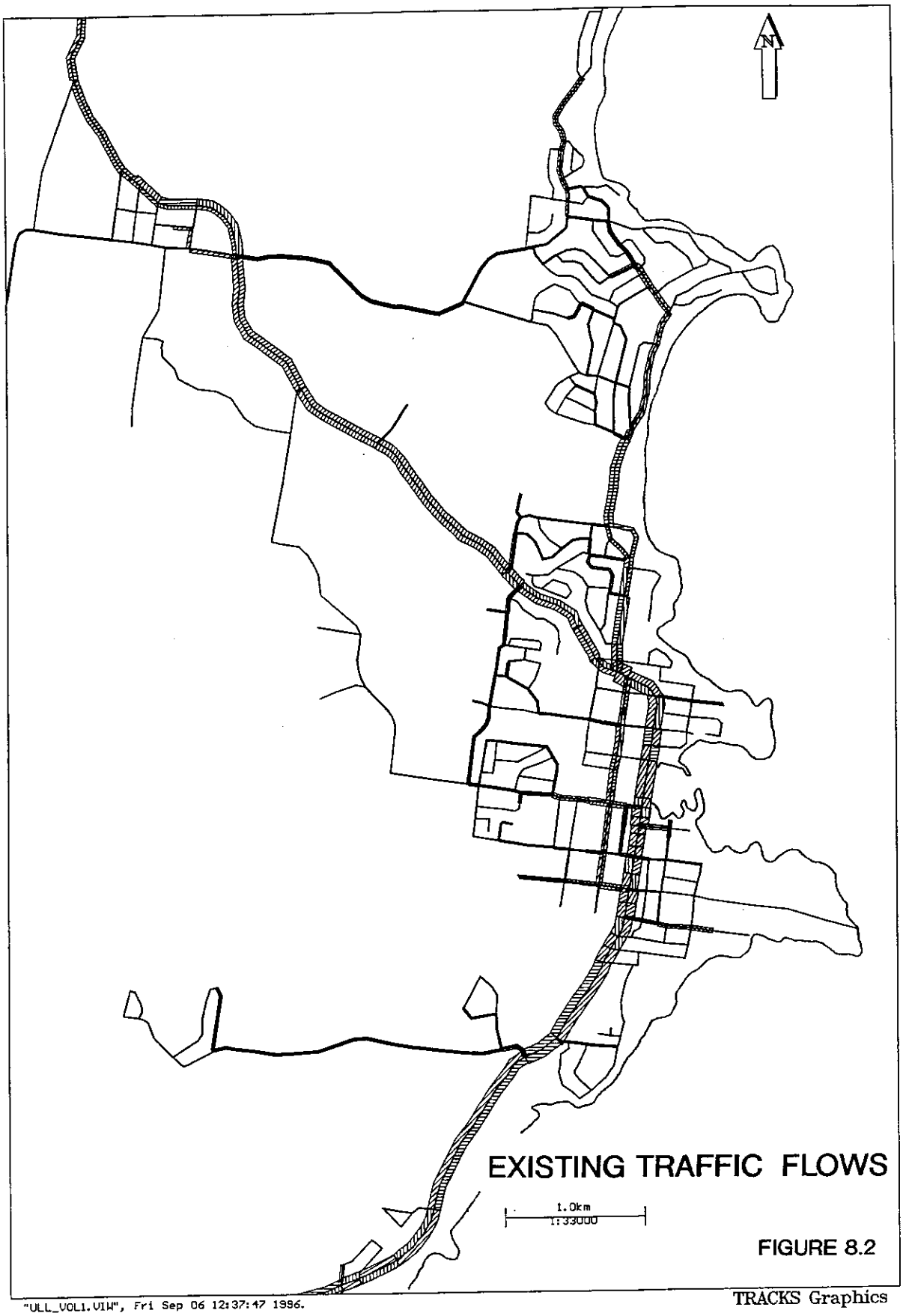


FIGURE 8.2

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TRACKS Graphics

The "open road" nature of St Vincent Street has been modified to a certain extent by the construction of a roundabout at Green Street.

Traffic will then need to re-enter the highway in the southern part of the CBD via Deering Street. By the late 1990s traffic lights or a roundabout would then be required at that intersection and, once established there, are likely to fix that as the southern outlet for the "through traffic" in the mid to long term. Since the land fronting the highway south of Deering Street is zoned for transitional business, it would be undesirable to channel major traffic movements along Deering Street.

St Vincent Street should, therefore, only be regarded as a minor means of relieving the highway congestion, since it would greatly increase congestion along its own length.

8.2.2 Option 2: Slaughterhouse Road Upgrade

This has more potential to help alleviate the problem by bringing CBD bound traffic in from the west via Green Street to the Boree Street car park area. However, the northern section of the road is not well located to capture future CBD bound traffic from Narrawallee, Mollymook and Mollymook Beach. Also, the horizontal and vertical road alignments in that section are poor, therefore, Council should not actively encourage greater use of the road along its existing alignment.

Improvements to the horizontal alignment and road surface have been made in recent years to Slaughterhouse Road between Green Street and Tuckerman Road.

8.2.3 Option 3: North-South Link Road

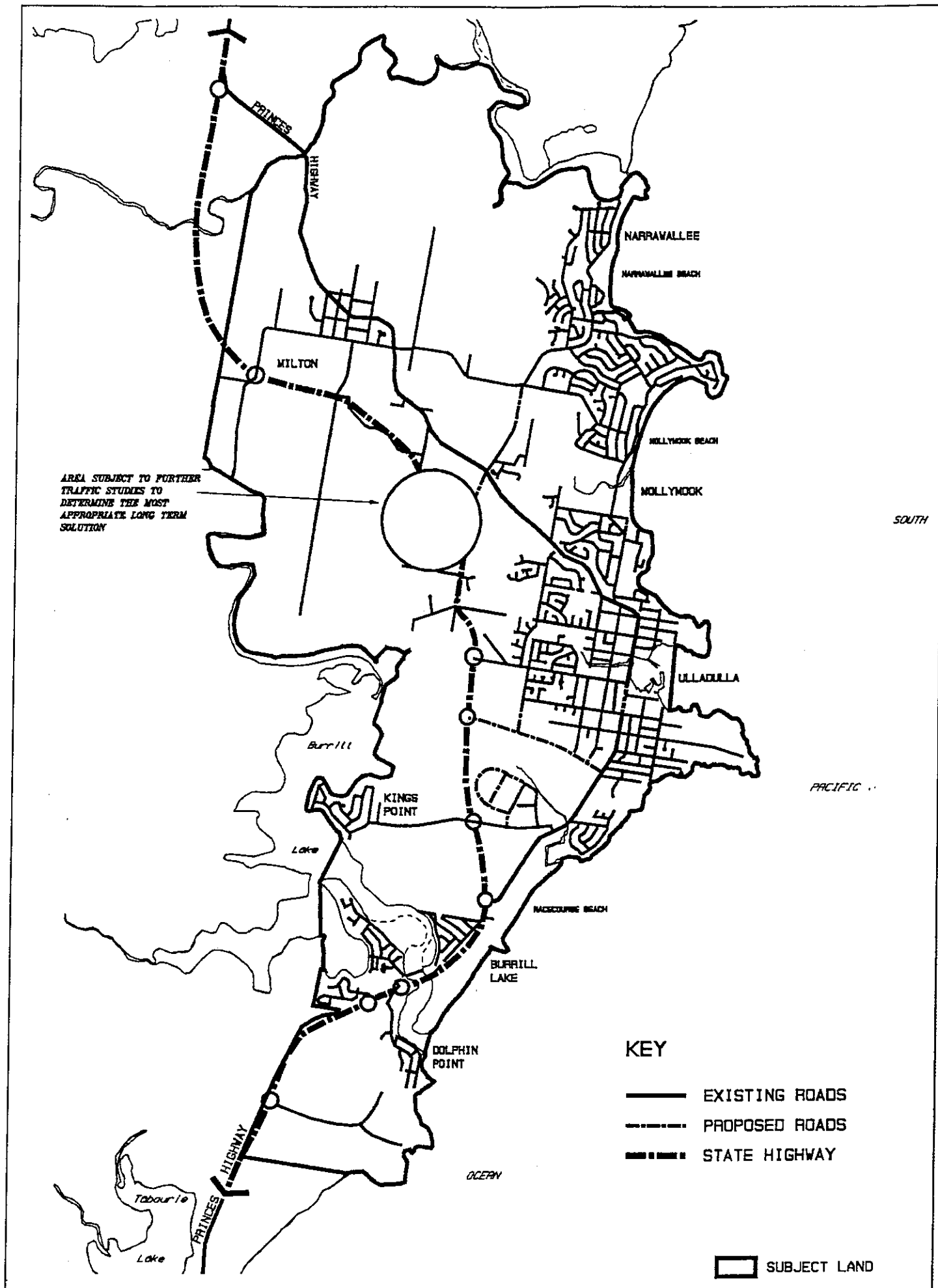
The most appropriate mid to long term solution to the CBD traffic congestion is seen as the construction of a north-south link road between Matron Porter Drive, Narrawallee in the north and the Princes Highway at South Ulladulla, just north of Burrill Lake.

This option has two sections:

- southern link road; and
- northern link road.

Southern Link Road
This link is likely to take considerably more traffic than the existing highway (west of Golf Avenue) and could, therefore, be construed as a de facto by-pass to Ulladulla CBD (Figure 8.3).

The southern link road traverses the ridge to the west of Ulladulla and incorporates the recently upgraded section of Slaughterhouse Road between Green Street and Tuckerman Road. It also extends north to the highway, to a point where traffic along the proposed northern link road from Narrawallee would interconnect.



POTENTIAL ROAD NETWORK

FIGURE 8.3

The southern extension of this road, through State land beyond Green Street, is located as close to the water service constraint line as possible to maximise possible future urban development. It would reconnect then with the highway south of Kings Point Road. The main lateral collecting roads would be:

- Green Street (existing) to the CBD;
- a new road to the north of the industrial area and the West Ulladulla Sports Complex, connecting with the highway just north of the existing sewage treatment works;
- new intersections with Kings Point Road;
- the northern (existing) alignment of Slaughterhouse Road would be realigned to "T" onto the new road just north of Tuckerman Road;
- a new road serving the urban expansion areas of West Ulladulla (west of Warden Street) almost opposite Tuckerman Road;
- Tuckerman Road would need to be closed at its junction with the southern link road to avoid an unsatisfactory four-way intersection. Access from Tuckerman Road would then have to be provided to the realigned Slaughterhouse Road to the north; and
- other minor roads.

The next stage would be to extend the southern link road south of Green Street to the extended east-west road near the STW. This would then create a de facto by-pass not impacting existing residential or commercial development to any great extent. Future extensions would then see the road extended to Kings Point Road and later further south back onto the highway.

Northern Link Road
This road option was first proposed in Shoalhaven LEP 1985. It is anticipated this link road would carry more traffic than the western part of Matron Porter Drive to Milton and would, therefore, become the dominant road. That link of Matron Porter Drive would, therefore, be realigned to form a "T" intersection with this northern link road. Individual property access to this northern link road should be minimised and normal residential lot sizes should only be encouraged to the east of the road.

8.2.4 Longer term Milton-Ulladulla By-Pass

The projected traffic volumes for the southern link road show clearly that this will act as a de facto by-pass in the mid-term. By the year 2007, the daily traffic flow (AADT) for that section from the highway south to Green Street will be some 17,000 vehicle movements, which will almost be to capacity and soon require upgrading to four lanes. Most other links would be within manageable limits and it would, therefore, be very unlikely that a major by-pass of the Milton-Ulladulla area to the west of Lake Burrill would be seriously considered by the RTA until the southern link road, expanded to a four lane width, is operating close to capacity.

Detailed traffic counts are not currently available for the Milton area, but from data along the highway south of Milton and for Matron Porter Drive it would appear that desirable capacity in AADT terms would be reached along the highway in Milton in the short term, with maximum capacity occurring in the late 1990s. During holiday traffic peaks, the highway through Milton is operating at maximum capacity. This will lead to increased congestion in the years to come.

Milton is perched on the top of a relatively steep hill and the terrain and existing road pattern unfortunately do not present easy, low cost solutions to relieving this traffic congestion. Myrtle Street is a narrow street inadequately designed to take significant numbers of traffic movements. It is purely a residential street which also provides some of a number of accesses to the rural areas south-west of Milton.

A "by-pass" on the eastern side has problems of very steep grades and poor sight lines on to the highway and is not considered a viable option.

A "by-pass" to the west appears feasible and could take off from the highway just north of Milton on the uphill approach and swing back to utilise parts of Corks Lane, then link to a realigned part of Windward Way before connecting with part of the Slaughterhouse Road alignment and finally linking into the southern link road. Detailed alignment investigations have not been undertaken for this route, but a route west of Milton rather than to the east of the settlement appears to be the most suitable.

In the very long term, a complete by-pass of Milton-Ulladulla would need to be considered west of Burrill Lake and probably commence as far north of Milton as the turn-off to Little Forest. The southern end of the road would need to reconnect with the existing highway south of Dolphin Point and most likely be close to the northern end of Tabourie Lake.

To date, the RTA has been ambivalent on the question of a by-pass for Milton-Ulladulla. It is doubtful that the RTA would commit itself at this stage to the timing or alignment on a long term by-pass west of Burrill Lake. However, some form of joint financial co-operation on the construction of the southern link road (de facto by-pass) is a greater likelihood although subject to further negotiations.

8.2.5 Potential Future Traffic Flows

The potential future traffic generated as a result of land use changes identified in the Structure Plan will be quantified utilising Council's Tracks traffic model. The model is based on 31 land use transportation zones that cover the entire Milton-Ulladulla district.

8.3 PUBLIC TRANSPORT

Public transport within the Milton-Ulladulla Structure Plan area is provided by two local bus lines and one taxi company. There is one external provider for travellers to destinations outside the study area.

Local Bus Services

Ulladulla Bus Lines have fifteen vehicles and operate a weekday bus service

which provides a link between Kioloa, Termeil, Tabourie and Burrill Lake in the south with Ulladulla, Mollymook, Narrawallee and Milton. Ulladulla represents the "hub" of the service. The greatest frequency is between Ulladulla and Milton and Burrill Lake (four return services per day). Mollymook and Narrawallee also have a total of four return services from Ulladulla with three returning to Ulladulla via Milton. The settlements south of Burrill Lake essentially have one service into Ulladulla in the early morning with a return service in the late afternoon. The service operates between 7.25am and 4.55pm. There are no services at weekends or on public holidays. According to the operators, patronage is relatively low (50-60 per day) and consists primarily of pensioners.

Kellems Bus Lines, who utilise ten vehicles, provide a similar service to the north and south-west of the Milton-Ulladulla area. They operate a weekday bus service linking Bendalong, Manyana, Hill Top, Conjola, Fishermans Paradise, Lake Conjola, Yatte Yattah, Pointer Road, the "H" Ranch and Little Forest in the north with the Milton-Ulladulla area. As well Kellems provide what is termed the "Bush" route, which covers Woodburn and Woodstock Roads to the south-west of the Milton-Ulladulla area. This route includes the Clyde River Road and the Wheelbarrow Road intersections on Woodburn Road, the Kyeema Drive and Evans Lane intersections on Woodstock Road, and the Showground on Croobyar Road. Again, the "hub" of the service is Ulladulla. These settlements have essentially one service a day with a morning pick-up and a late afternoon return. The service operates between 7.35am and 4.55pm. There are no services at weekends or on public and school holidays. Approximately twenty non-school related passengers are carried per week.

Both of these operations rely heavily on the State Government subsidised carriage of school children to maintain their economic viability.

External Bus Services

Pioneer Motor Services of Nowra provide a link between the study area and destinations to the north and to the south. Through services in the morning and afternoon stop at Milton, Ulladulla and Burrill Lake to pick up and drop off passengers. The services to the north links up with the rail services at Bomaderry as well as continuing on to Sydney. Services to the south provide a link to Bega and Canberra for residents and other travellers.

Taxi Services

The other form of public transport available is the taxi. There is one taxi cab company operating in the Milton-Ulladulla area. There are five vehicles in use, one of which is a van with a hydraulic lift suitable for wheelchairs. The company base is in the Ulladulla industrial complex and it has one waiting rank in Ulladulla (which is used the most) and another in Milton. There are courtesy telephones at both. The company is required to provide a service 24 hours a day, seven days a week. The area covers Bendalong in the north to Durras in the south. There are no discounts for pensioners, however, Subsidy Transport Vouchers are accepted. Travel outside the Milton-Ulladulla area is accepted on a quote basis or on meter charges. As with most businesses, patronage is seasonal with the busiest being the holiday period.

8.4 CAR PARKING

8.4.1 Ulladulla CBD

The Ulladulla CBD has a parking capacity of 2,071 vehicles. This consists of 830 vehicles on-street, 769 in ten Council car parks and 472 in seven non-Council car parks (Figure 8.4). On-street parking is either of one hour duration or unrestricted. Council car parks are of two and three hour duration, or unrestricted. The demand on these facilities peaks at 11am with 982 of the 2,071 spaces available being occupied (47%). The highest demand occurs in the CBD core. The Boree Street East car park achieves 88%, Boree West 84%, Marlin Hotel 84%, and the Civic Centre 77% (Figure 8.5). The Princes Highway between Green and Wason Streets achieves 81% and Green Street 77%.

Over the six week Christmas/New Year and the two week Easter holiday periods, the demand for these facilities far exceeds the existing spaces available to the residents and visitors.

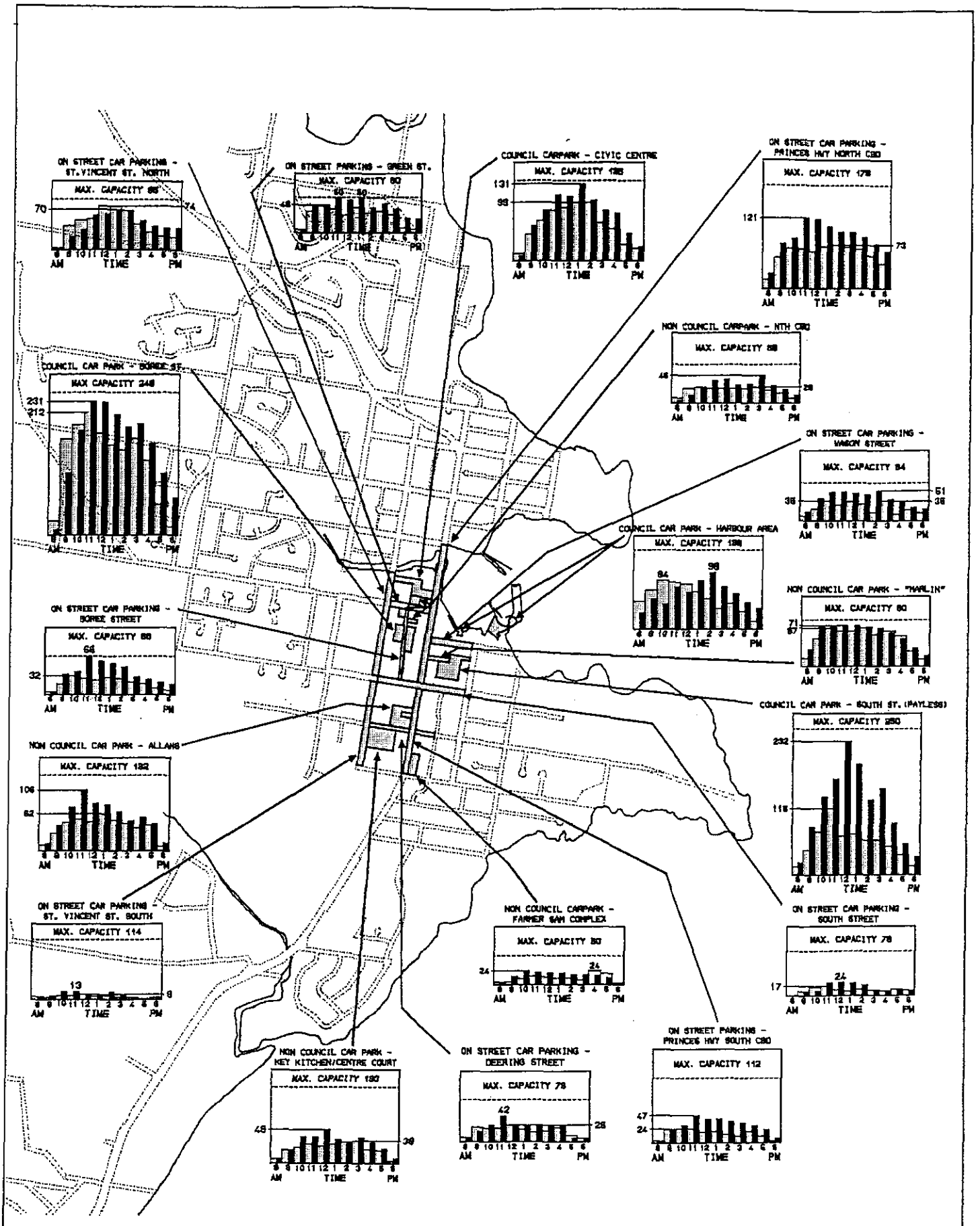
Development of parking facilities needs to be addressed. Expansion is limited by the lack of suitable vacant land. The provision of a multi-level car park on the existing Boree and South Street car parks has been suggested, however, these will negatively impact on the visual quality of the CBD and will most likely be resisted by local residents. It has also been suggested that the Princes Highway between the Millards Creek Bridge and Green Street be changed from parallel to 45° angle parking with provision for a small number of long vehicles (eg caravans and trailers) being made on both sides of the Princes Highway south of the Millards Creek Bridge.

8.4.2 Milton CBD

There is provision for 476 vehicles to be parked in the Milton CBD. There are three Council car parks with a capacity of 175 vehicles and two non-Council car parks holding 45 vehicles. On-street parking provides for a further 256 vehicles. Council car parks have no time limit, while on-street parking is of one hour duration or unrestricted.

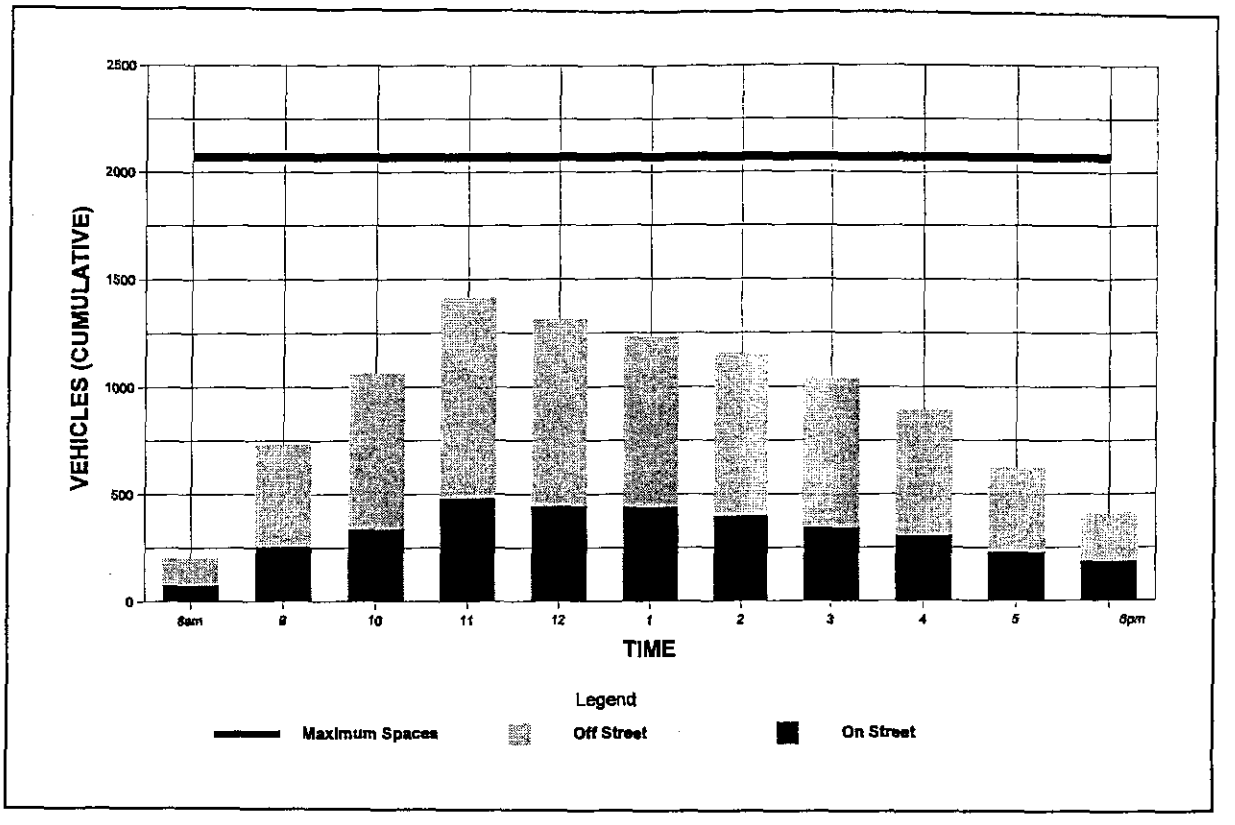
The maximum demand on these facilities occurs at 12 noon with 193 of the 476 spaces available being occupied (41%). The peak usage of off-street and on-street parking facilities also occurs at this time, with Myrtle Street car park achieving 55% and Wason Street car park 53%. The highest demand for on-street parking spaces occurs along the Princes Highway between Thomas and Gordon Streets with the area between Wason and Church Streets averaging 79% (Figure 8.9).

As with Ulladulla, the demand for parking facilities in the Milton CBD over the six week Christmas/New Year and the two weeks at Easter, far exceeds the number available to residents and visitors.

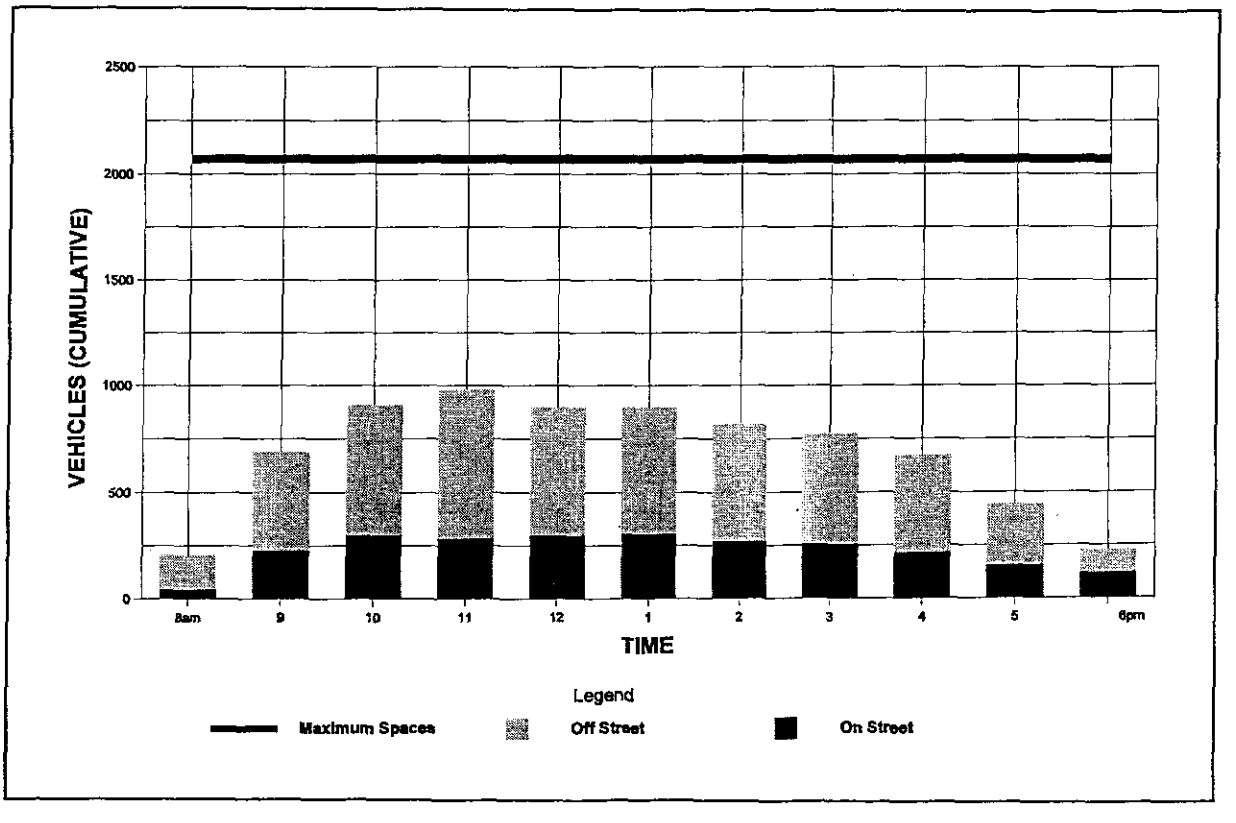


USE OF PARKING FACILITIES: ULLADULLA

FIGURE 8.4



A: Peak Period (11 January 1996) : Total Ulladulla CBD



B: Off Peak Period (9 November 1996) : Total Ulladulla CBD

Figure 8.5
USE OF PARKING FACILITIES : ULLADULLA : PEAK AND OFF PEAK

8.5 HARBOURS AND WATERWAYS

8.5.1 Ulladulla Harbour

Ulladulla Harbour undoubtedly represents the symbolic focus or "icon" of the area, since it was originally the reason for the Ulladulla township's existence. However, in transport terms it is a very much marginalised facility. The Ulladulla Harbour Management Plan prepared by consultants Webb McKeown and Associates in August 1995, reviewed the current use of the harbour and assessed its development potential (Figure 8.6)

Current Harbour Uses
The harbour is the site of a number of fishing and boating related activities, including:

- commercial fishing water and shore-based activities;
- Abalone fishing water and shore-based activities;
- boat launching;
- boat repairs and maintenance;
- Royal Volunteer Coastal Patrol;
- recreation boat moorings;
- commercial charter operations; and
- sport and game fishing.

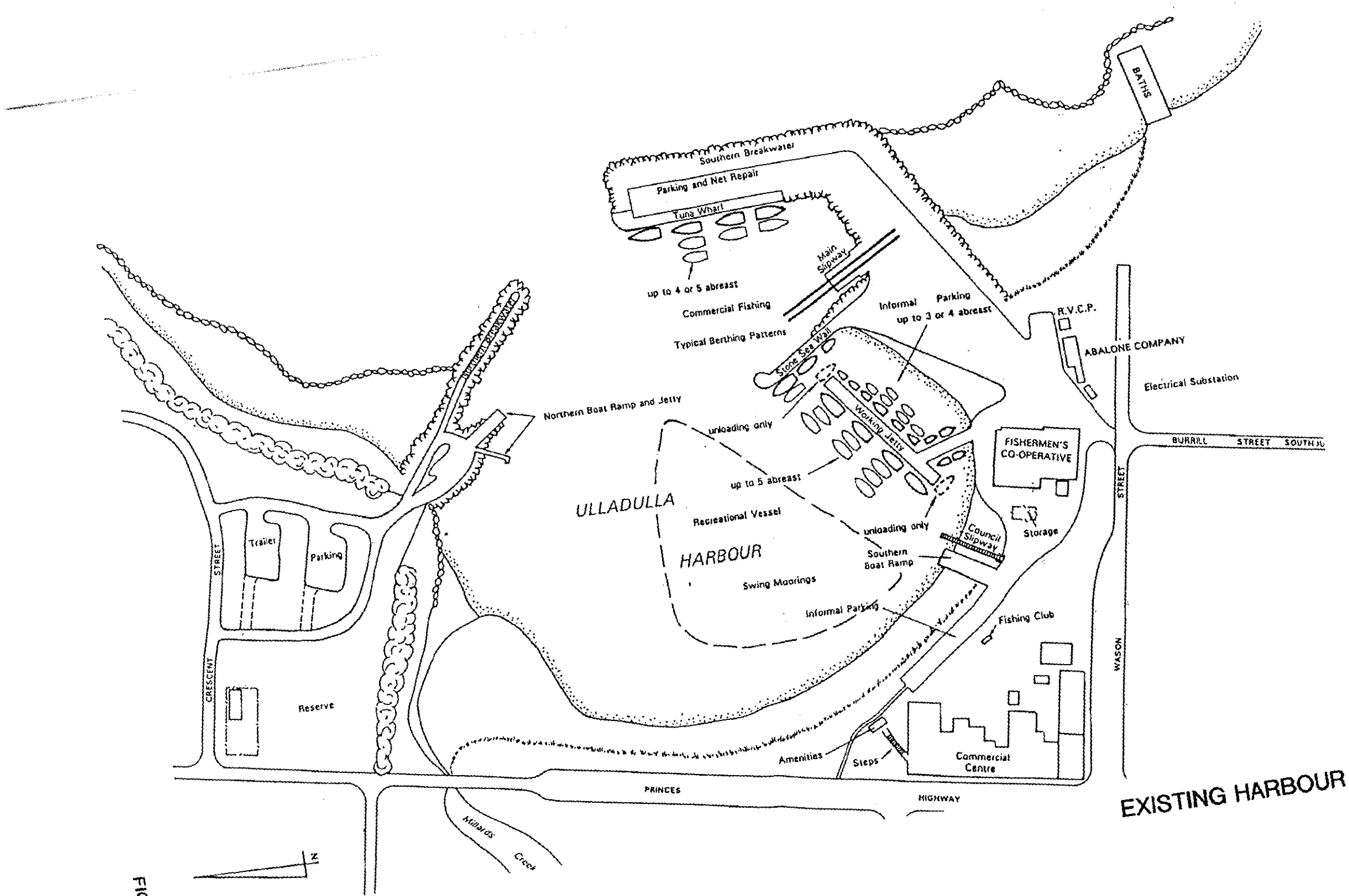
Commercial Fishing
There are currently 75 licensed fishing vessels which nominate Ulladulla as their home port. Of these, 41 regularly moor in the harbour, 11 are trawlers, 27 are longliners and the remaining vessels are trap and line boats and general runabouts. Depending on the season there can be as many as 50 vessels or as few as 20 moored in the port on a regular basis.

Access to the harbour between the northern and southern breakwaters is generally good. During major storms and periods of large ocean swell there are two bomboras near the entrance to the bay which require vessels to approach the harbour on a heading directly towards the southern break wall before swinging north and then west into the harbour. Inside the harbour, most boating facilities are on the southern side, where conditions are calmer and less subject to serge.

Commercial fishing vessels berth at the Working Jetty, the old stone breakwater or the Tuna Wharf. The wharf is a vital berthing facility for the larger vessels but, because of its proximity to the harbour entrance, is subject to severe seiching during major storms.

The number of berths in the harbour is limited to approximately twenty. There are no individually specified berths, although the ends of the Working Jetty are kept vacant for unloading, refuelling or temporary mooring. Vessels often tie up three or four abreast, causing congestion.

Abalone Fishing
There are 37 professional abalone divers operating along the NSW coastline, two of which operate out of Ulladulla. The divers boats are typically 5 metre long runabouts towed by a four wheel drive vehicle. When diving near Ulladulla, the northern harbour boat ramp is generally used.



EXISTING HARBOUR

SOURCE WEBB,MCKEOWN & ASSOC.P/L

FIGURE 8.6

Boat Launching
There are two boat launching ramps in the harbour. One ramp is just inside the northern breakwater. The southern boat ramp is the most popular, particularly for launching smaller vessels.

Boat Repairs and Maintenance
There are two slipways within the harbour. The larger main slipway to the east of the old stone breakwater, which is managed by the Ulladulla Fisherman's Co-operative (UFC), is capable of taking vessels over 100 tonnes. The smaller slipway, which is managed by the Council, is located west of the Co-operative building. Both slipways are well utilised and in good condition.

Royal Volunteer Coastal Patrol
The Royal Volunteer Coastal Patrol (RVCP) in Ulladulla is a fully accredited marine rescue station, which operates during the day from the RVCP building in the south-east corner of Ulladulla Harbour. The organisation owns and operates a 10 metre ex-police boat, which is moored at the Working Jetty. Stretcher casualties are transferred to shore at the northern boat ramp jetty. The RVCP also perform the role of "policing" the harbour during major events such as the "Blessing of the Fleet".

Recreation Boat Moorings
There are currently 42 swing moorings in the central portion of the harbour. There are no fixed recreational boat berths in the harbour.

Commercial Charter Operations
The Ulladulla Dive Shop operates three charter vessels from the harbour both for fishing and dive trips. These vessels are permanently moored at the base of the stone sea wall in water with a minimum depth of 1.5 metres.

Sport and Game Fishing
The 120 member Ulladulla Sport and Game Fishing Club operates from a building to the north-west of the UFC. There is significant congestion in the harbour during sport and game fishing competitions. The major event in the calendar is the week and two weekends after Australia Day, when up to 70 boats participate in the major carnival.

8.5.2 Burrill Lake

The key inland water body which that has navigable potential is Burrill Lake. Since the construction of the Princes Highway bridge causeway, the lake has sustained considerable siltation, making navigation difficult.

8.6 AIR TRANSPORT POTENTIAL

The need for an airfield in the southern Shoalhaven area was identified in the 1979 Milton-Ulladulla Structure Plan. To day, as then, a reasonable case can be made to justify the establishment of such a facility. This facility would bring Ulladulla to within 30 minutes flying time of Sydney, 25 minutes of Canberra, 20 minutes of Wollongong and 15 minutes of Moruya. By utilising existing routes, which overfly this area, it will promote the tourism and commercial activities in the southern Shoalhaven district. This could act as a catalyst to local industry and

commerce, encouraging the establishment of new business activities in the area. Local activities which would potentially benefit from such a facility could be hospitality, recreational, tourism, retail and the fishing industry.

Ideally the airfield would have a sealed east/west aligned runway of approximately 1,500 metres with a capacity to take a 36 seat twin-engined aircraft similar to a Shorts 360, a Radio Navigation Aid, either Automatic Direction Finder (ADF) or Visual Omni Range (VOR), pilot activated lighting (PAL), refuelling facilities, 2-4 hangers for storage and maintenance, and a small terminal building.

Activities on the airfield would be regular public transport (RPT) arrivals/ departures, aero club, general aviation/ultra-lite flying training, charter flights, joy flights, shark patrol, fish spotting, aircraft maintenance, conferences, and accommodation. Airfields are now owned and operated by the local council and are able to levy rents and landing fees on operators and aircraft movements into and operations on the airfield, therefore, the above activities would generate revenue to defer the maintenance of the airfield.

The siting of an airfield is critical so as to minimise disturbance to local residents, the environment and current airspace users. Therefore, the most suitable site would be in the forestry area south of Burrill Lake and away from the residential areas of Dolphin Point and Burrill Lake. Two sites have been identified as possible future airfields. The first is the original site identified in the 1978 Structure Plan. It is five kilometres south of Ulladulla and one kilometre south of Burrill Lake and west of the Princes Highway. It has the disadvantage of being too close to the urban areas of Burrill Lake and Dolphin Point. The second site, is 8 kilometres south of Ulladulla, west of the Princes Highway and adjacent to the Burrill Pines Motel. This area was burnt out in the 1994 bush fires and is relatively remote from urban development. Both sites have access to town utilities and the Princes Highway provides convenient access to the Milton-Ulladulla urban area.

Both of these sites are in the Nowra Control Region Restricted area R437C(2) which has its southern boundary at Crampton Island, Tabourie. However, with the down turn in the use of the airspace over this area by the Department of Defence (Navy), the restructuring of airspace in Australia as a whole and a change in operating procedures by Air Services Australia (formally Civil Aviation Authority), it should be possible to restructure a portion of the southern boundary of R437C(2) and extend the Danger Area D438 which operates south of R437C(2) to incorporate the proposed sites and associated designated flying training areas. In turn, the airfield would provide for the Department of Defence a viable emergency field in the southern Shoalhaven which it currently does not possess.

Table 8.2
Aircraft Movements at Comparable Airfields

Movement Type	Moruya	Merimbula	Albion Park
Regular Public Transport (RPT)	42	34	0
Other Air Traffic	36	87	209
Total Movements	**78**	**121**	**209**

Note: Other - business/corporate, recreation, charter and training
Source: Councils of Eurobodalla, Bega Valley and Shellharbour

8.7 OFF-ROAD NETWORKS

8.6.1 Cycleways

Shoalhaven City Council in its Shoalhaven Cycleway Strategy (1993) specifically acknowledged cycling as a legitimate form of urban transport. The Milton-Ulladulla urban area is considered to be an important component of the overall City strategy. Three key user groups are identified in the plan:

- school-aged children
- commuters
- recreational users

The cycle network comprises the following elements:

On-Road which includes the following four forms:
- shared traffic lanes;
- cycle/parking lanes;
- shoulder sealing; and
- dedicated cycle lanes.

Off-Road which includes the following two forms:
- shared cycle/pedestrian pathway; and
- exclusive bike path.

Priority Routes
The cycleway system has the following priorities:

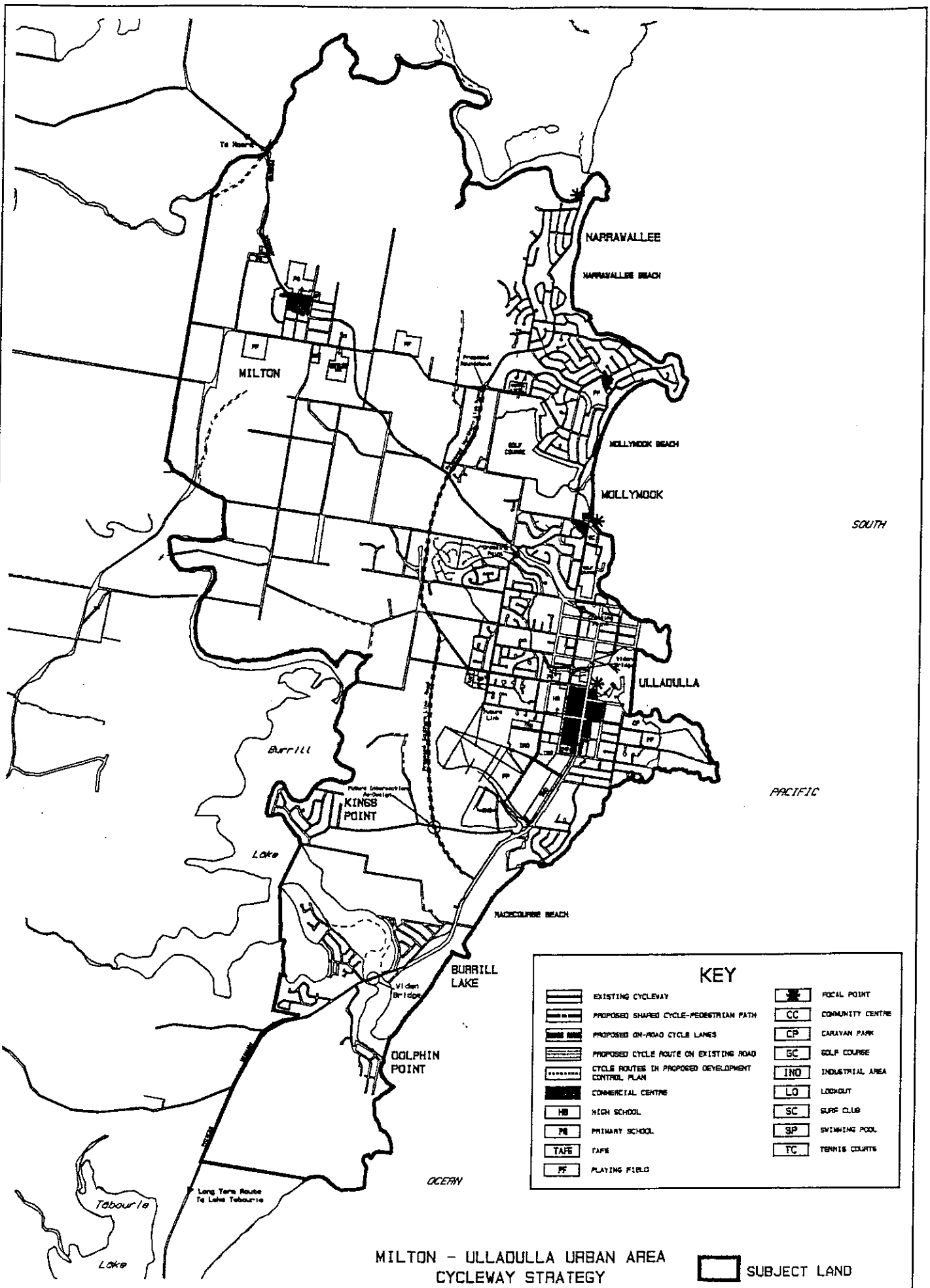
Priority 1	Frequently used cycle routes
Priority 2	Other less frequently used routes leading to schools
Priority 3	Frequently used commuter routes
Priority 4	Frequently used recreation and tourist routes
Priority 5	Other routes.

The bikeway system for Milton-Ulladulla seeks to connect major residential areas with major focal points such as Ulladulla Harbour, the Mollymook Surf Life Saving Club, schools, community centres and shopping centres (Figure 8.9).

Development Priorities
The priority for the development of the Milton-Ulladulla cycleway system is summarised in Table 8.3.

8.7.2 Bridle Paths

Although the residents of Milton-Ulladulla have a relatively high rate of horse ownership, there are currently no dedicated bridle paths or riding trails in the area.



OFF-ROAD NETWORKS

FIGURE 8.7

Table 8.3
Cycleway Priorities

Priority		Project Scope
S1	Ulladulla	Millards Creek Cycleway. Upgrade existing route (Geoffrey Street to North Street) extend route north-west from North Street to Village Drive.
S2	Mollymook	Village Drive to Golf Avenue via Boag Street (including Highway crossing)
S3	Ulladulla	St Vincent Street (Geoffrey Street to Highway) on-road cycle route.
S4	Milton	Croobyar Road (Highway to Show Ground)
S5	Milton	Highway (Croobyar Road to Primary School)
S6	Cycle Parking	Shopping centres: Ulladulla, Milton, Mollymook. Major recreation areas.
S7	Ulladulla	Camden Street (High School to West Ulladulla Sports Complex)
S8	Ulladulla	Village Drive (Green Street to Highway)
S9	Milton/M'mook	Matron Porter Drive (seal shoulders for use by cyclists)
S10	Mollymook	Mitchell Parade (Surf Club to Mollymook Beach Shopping Centre)
S11	Ulladulla	Princes Highway to Burrill Lake.

Source: Shoalhaven City Council (1993)

8.8 KEY STRUCTURE PLAN ISSUES

The salient feature of Milton-Ulladulla's transport system, that have implications for structure planning are summarised in Table 8.4

Table 8.4
KEY STRUCTURE PLAN ISSUES

Road Network:
- Princes Highway provides the spine to the district's road system, with an incomplete duplicate network.
- Need to develop St Vincent Street as an inner collector road to provide an alternative to traffic travelling through the CB.
- Traffic congestion and vehicle/pedestrian conflict at peak holiday periods.
- Recent residential subdivisions based on loops and culs de sac.
- Need to develop a complete Milton-Ulladulla by-pass within 10 years.

Public Transport:
- Low bus patronage (mainly school children and the elderly).
- Council's community and recreation/service club courtesy mini buses provide an important form of transport for the elderly.
- Taxis provide an important transport mode for low income families and the elderly.

Car Parking:
- Perceived lack of parking in Ulladulla CBD at peak holiday periods
- Parking in Ulladulla CBD adequate out of holiday peaks.
- Parking in Milton is not a significant problem.

Harbour:
- Currently Ulladulla is the home port to 75 licensed fishing vessels.
- Number of berths limited to 20.
- Harbour has two slipways and two boat launching ramps.

Air Transport Potential:
- Potential site for an airfield is located to the south of Burrill Lake.

Off-Road Networks:
- Incomplete off-road movement network: main focus on cycleways and coastal walkways.

Section Nine

INFRASTRUCTURE

Utility infrastructure provides the functional network that underpins the structure plan. Supply thresholds and reticulation networks are fundamental considerations, influencing the scale and pattern of development. This section addresses the issues of: water supply; sewerage treatment; drainage and flood control; electricity reticulation; communication networks; waste disposal; and environmental quality monitoring.

9.1 WATER SUPPLY

9.1.1 Existing System

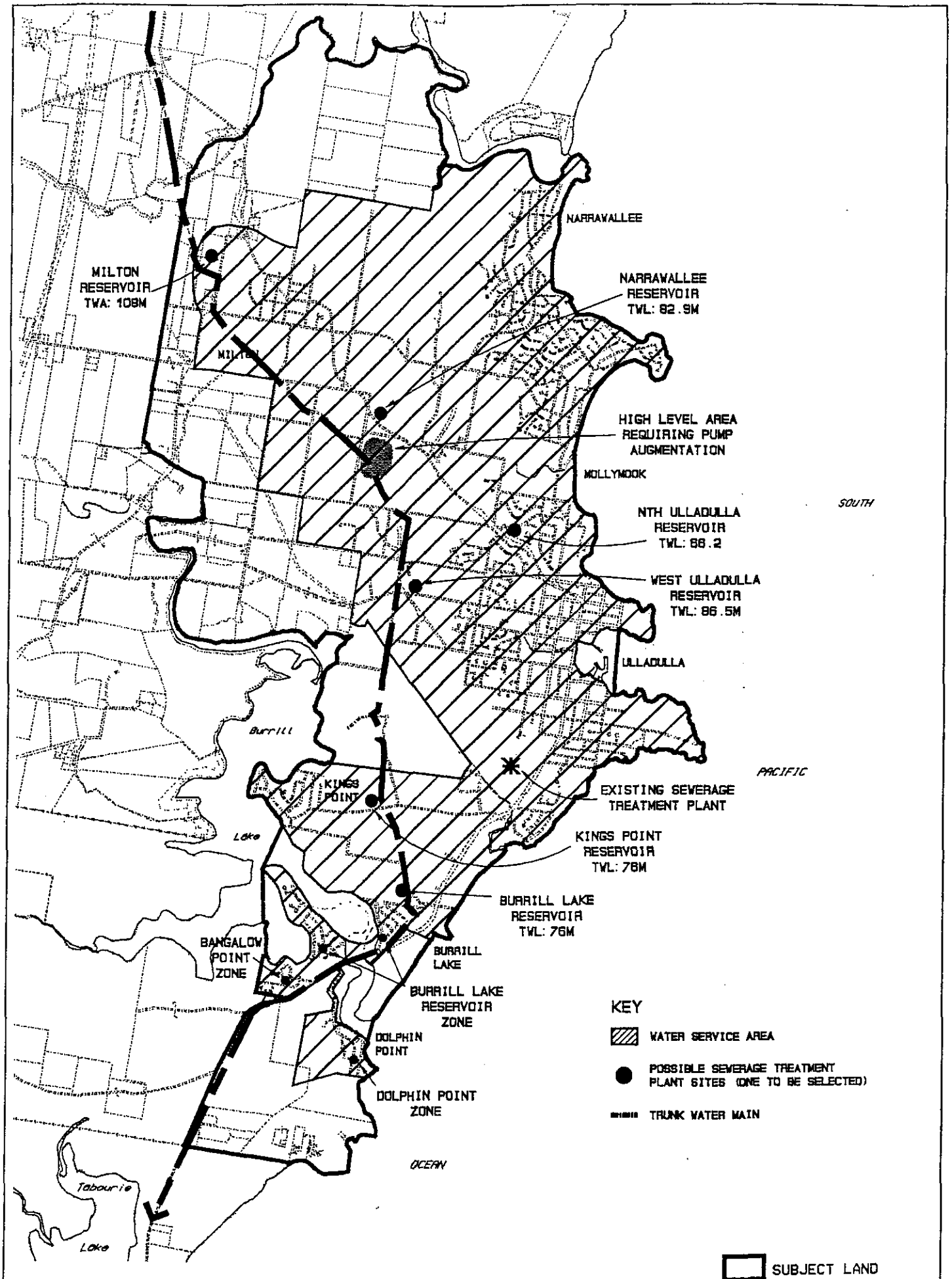
The water supply for the Milton-Ulladulla urban areas is taken from Porters Creek Dam (constructed in 1968, currently with an effective storage 1,900 Megalitres (ml)) and blended with fully treated water from the water purification plant near Lake Conjola. The supply enters the Milton-Ulladulla reticulation system at a storage reservoir to the north-west of Milton. From there water is supplied by a 600mm trunk main to storage reservoirs at Narrawallee, North Ulladulla, West Ulladulla and Burrill Lake (Table 9.1). The current area of water supply reticulation is illustrated in Figure 9.1.

High Level Supply Difficulties

Currently there are three elevated areas in the district that suffer from low pressure (Figure 9.1). These are located on either side of the Princes Highway between St Mary's School and Sarah Claydon Village in Milton (12 hectares); in the vicinity of the Slaughterhouse Road/Winward Way intersection (30 hectares); and the Slaughterhouse Road/Pirralea Road area (115 hectares). The supply difficulties experienced in these areas was addressed in an engineering report by Lyall and Macoun for the Department of Public Works and Services (1995). The report recommends a flow strategy for the trunk main, which provides for direct flow to these areas from tappings from the trunk main. The former option of a high level standpipe reservoir to service this zone has now been discarded due to cost efficiency. Some priorities on elevated land will be required to provide pressure booster pumps.

9.1.2 Current Demand

The key issues in assessing the adequacy of water supply in the context of the Structure Plan are drought security of the headworks, scheme capacity and water quality. The hydrological analysis for drought security is based on annual demand (current and future) and monthly demand patterns. Since the headworks may involve major dams with a life expectancy of at least 50 years, a design horizon in the order of 50 years is normally adopted. The peak day demand and the demand persistence during periods of high consumption represent important measures in sizing the water distribution system. The design horizon for distribution works is generally 20 years for specific proposals and up to 50 years for strategy purposes.



WATER SUPPLY RETICULATION

FIGURE 9.1

Annual Demand

During Fiscal 1993/94 the total demand for the Milton-Ulladulla area was 2,050.20 megalitres, an estimated 1,691.2 megalitres (82%) of which was domestic and 369 megalitres (18%) non-domestic (business, community and government). As demonstrated by Figure 9.2 this demand is unevenly spread over the year. The demand in January is three times that of the lowest demand month of May. There is a direct correlation between periods of high tourist visitation and water usage. The major peak occurs during the summer months (December/January/February), with subsidiary peaks corresponding with the spring holidays (October 1993) and the Easter period (April 1994). Of course, the high summer demand is exacerbated by the residents' high water usage during this period (extra showers, garden watering etc). Major non-domestic water users are some of the caravan parks, which are high users during the peak summer season.

Peak Day Demand

During Fiscal 1993/94 the peak day demand was 16.67 megalitres (8 January 1994). During the months of December and January, demand persisted above 10 megalitres/day for a total of twenty-nine days. The annual daily average for Fiscal 1993/94 was 5.63 megalitres. On the basis of recent Council records, relating to the Shoalhaven as a whole, the actual peak day demand for domestic users has been approximately 2,300 litres/day. During a hot dry summer, such as experienced in the early 1980s, the domestic peak could be as much as 2,500 litres/day.

Table 9.1
Milton-Ulladulla Service Reservoir Details

Name	Capacity	TWL (in AHD)	BWL (in AHD)
Milton	4.54 ml	107.2 m	99.55 m
Narrawallee	10.00 ml	82.9 m	74.7 m
North Ulladulla	2.27 ml	66.2 m	59.22 m
West Ulladulla No. 1	5.00 ml	86.45 m	79.50 m
West Ulladulla No. 2	10.00 ml	86.45 m	78.21 m
Burrill Lake	1.36 ml	50.5 m	52.9 m

Source: Shoalhaven Water (1995)

Table 9.2
Potential Household Water Savings from Demand Management Methods

Method	Potential Saving %
Community awareness and education	3-10
Pricing policies	20-30
Financial incentives	small
Water saving devices and appliances	20-40
Water saving practices	10-20
Supply regulation	5-15

9.1.3 Projected Demand

On the basis of the median population forecasts, the demand for fresh water is projected to increase from the 1991 figure of 1,618 megalitres in 1991 to 2,444 megalitres in 2021, on the basis of minimum demand management measures being implemented (Tables 9.2 and 9.3, and Figure 9.3).

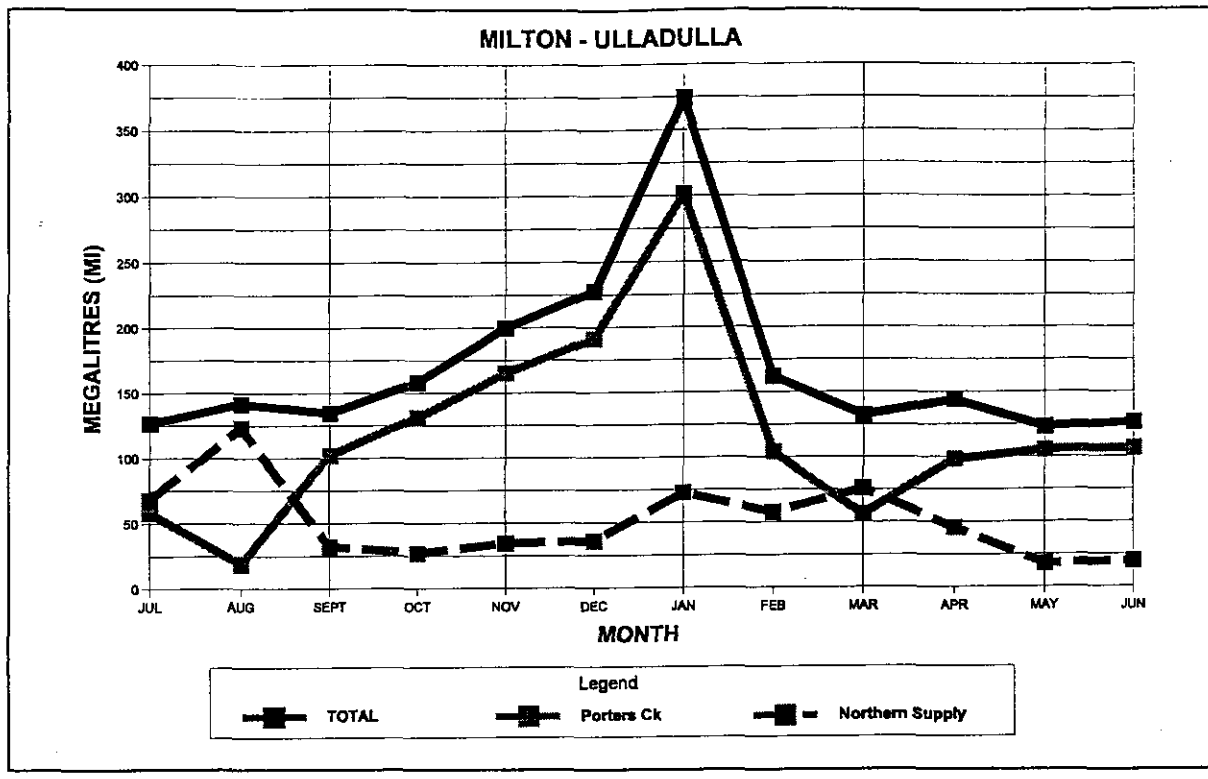


Figure 9.2
MONTHLY WATER DEMAND FISCAL 1993/94

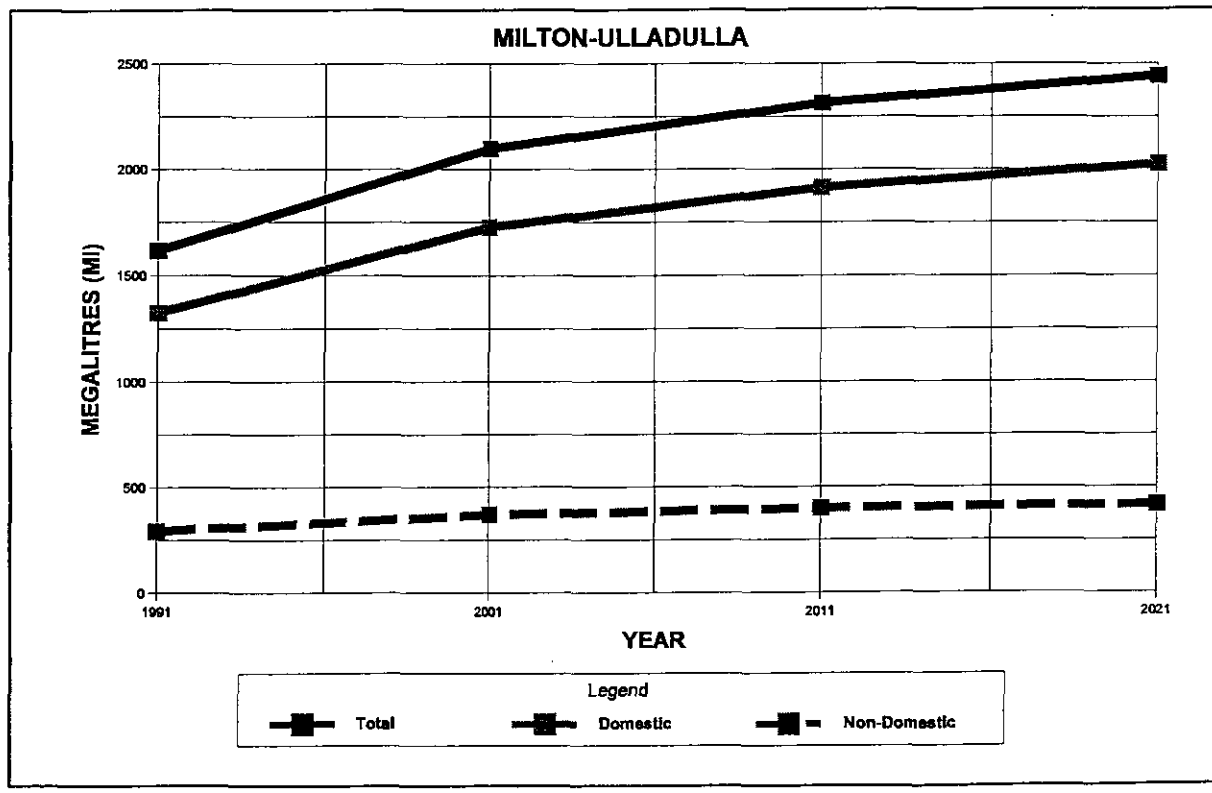


Figure 9.3
ANNUAL WATER DEMAND PROJECTION: 1991-2021

Table 9.3
Projected Water Supply Demand: 1991-2021

Demand Indicator	1991	2001	2011	2021
Permanent Winter Population	9,950	13,860	16,930	19,690
Peak Summer Population	22,350	30,940	38,370	45,800
Peak Day Demand (Megalitres)	13.9	17.9	19.7	20.5
Annual Demand (Megalitres)	1,618	2,098	2,314	2,444

Source: Adapted from Department of Public Works (1993)

9.1.4 Headworks Augmentation

Milton-Ulladulla's water supply will in the future be augmented via the new Bowong trunk main (450mm diameter) from Nowra Bamarang water filtration plant. Other augmentation options, such as raising the height of the Porter Creek Dam and constructing a new take-off at Clyde River, have now been discarded in favour of the Nowra supply option.

9.1.5 Water Supply Quality

The quality of Milton-Ulladulla's fresh water supply has been the source of several complaints to Council. The problem, manifest in the form of an unpleasant taste and discolouration, appears to be particularly acute during the peak holiday periods when demand is high. Currently, the water from Porters Creek Dam is given minimal treatment at source comprising: chlorination; conditioning by lime and carbon dioxide to reduce the aggressive nature of the water; and fluoridation. In addition, compressed air is diffused on the bed of the dam to oxidise iron and prevent stratification and occasionally alum is spread on the stored water to reduce iron, colour and turbidity. Available data, however, indicates that the current quality of the raw water is generally within the drinking water guidelines recommended by the National Health and Medical Research Centre (1987), with the notable exemptions of iron, colour and turbidity.

Milton Water Treatment Plant
To improve the district's water quality, a new water treatment plant is proposed to be located adjacent to the Milton service reservoir (SR) on the western slope of a cleared hillside. The site has been selected to consolidate Milton water works and to minimise pumping and operating costs. The raw water will be supplied to the treatment plant by gravity flow from Porters Creek Dam. The plant will be based on the "lagoon sedimentation process". With the exception of the chlorine dosing equipment, all other chemical treatment facilities will be relocated from the dam to the new plant. The new treatment plant is designed to have a nominal capacity of 132 litres/second, which corresponds to 10.5 megalitres/day on the basis of a 22 hour operating day. Based on the raw water quality at the dam, it has been decided to use a direct filtration process as the basis for treatment. The treatment plant would include the following components:

- two sludge lagoons with a surface area of 44m x 19m and a depth of 2.5m each and a settled water pump station;
- a chemical building and associated facilities, mainly including filters and chemical storage tanks; and

- a clear water tank (350m^3 capacity) and a pumping station.

9.2 SEWERAGE TREATMENT

9.2.1 Existing System

The urban districts of the Structure Plan area are served by a system of rising and gravity sewerage mains which connect to a Sewerage Treatment Works (STW) located to the south-west of Ulladulla. Treated effluent is then piped to an ocean outfall approximately midway between Warden Head and Burrill Beach. The sewerage system currently comprises three principal flow streams to the STW. These are:

- a system of nine pumping stations and associated rising mains and sewers serving the Narrawallee, Mollymook, Mollymook Beach and Ulladulla areas

- a network of seven pumping stations and associated rising mains and sewers serving the Burrill Lake/Dolphin Point area

- a series of four pumping stations and associated rising mains and sewers serving the Milton area.

The existing system, which has a total of forty pumping stations, was commissioned in 1975. The original STW, which consists of a trickling filter plant, was augmented with an extended aeration tank in 1981. The treatment plant has an existing capacity of approximately 12,500 EP (240 litres per person per day).

Existing System Capacity
The majority of the forty pumping stations in the existing collection and transportation system are overloaded under existing peak wet weather flows (PWWF). The capacity of the existing mains is considered adequate for wet weather conditions if limited surcharging at the manholes (within 600mm of ground level) is permitted. The wet weather overflows, which do occur, are attributable to inadequate downstream pumping station capacity, rather than inadequate main capacity.

9.2.2 Current Discharge

Currently the Milton-Ulladulla area discharges some 917 megalitres of effluent in a year (1993).

9.2.3 Projected Discharge

Annual effluent discharge is forecast to increase from 917 megalitres in 1993 to 1,603 megalitres by the year 2021 (Table 9.4 and Figure 9.5).

Table 9.4
Projected Wastewater Discharge: 1991-2021

Demand Indicator	1993	2001	2011	2021
Permanent Winter Population	11,300	13,860	16,930	19,690
Peak Summer Population	25,360	30,940	38,370	45,800
Effluent Discharge (Ml/year)	917	1,129	1,379	1,603

Source: Shoalhaven City Council: Shoalhaven Water Division (1995)

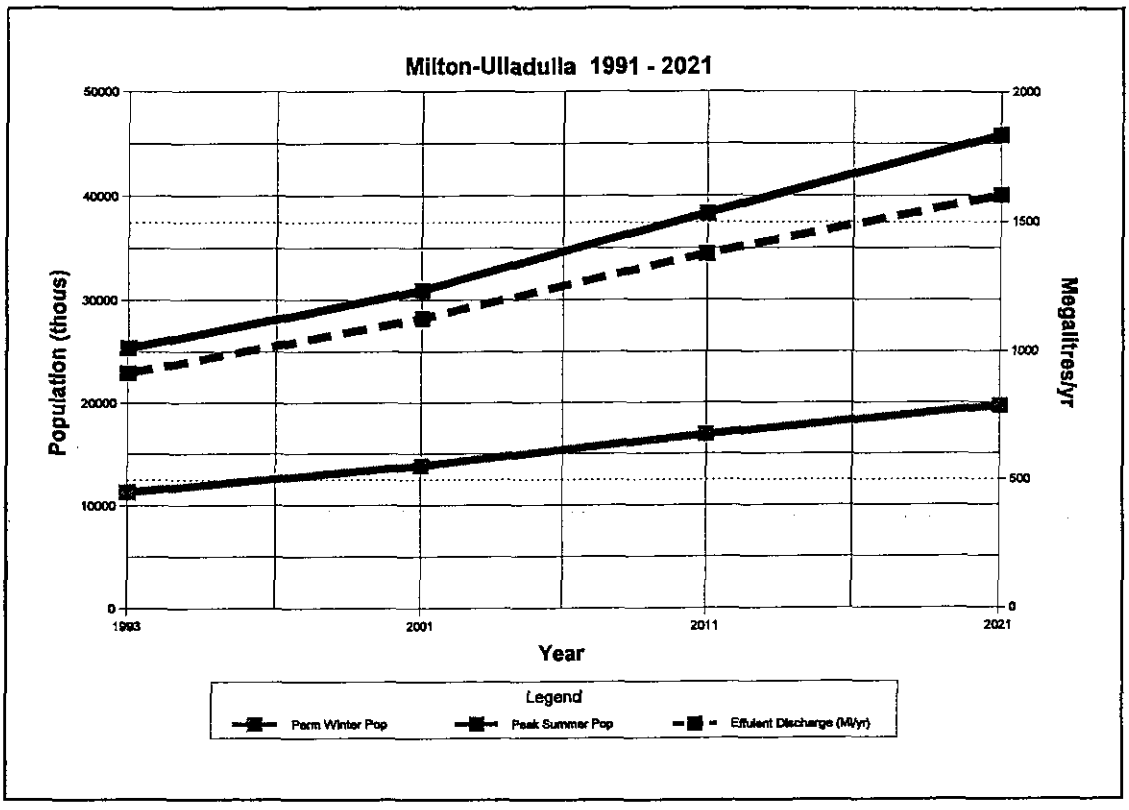


Figure 9.6
PROJECTED WASTE WATER DISCHARGE: 1991-2021

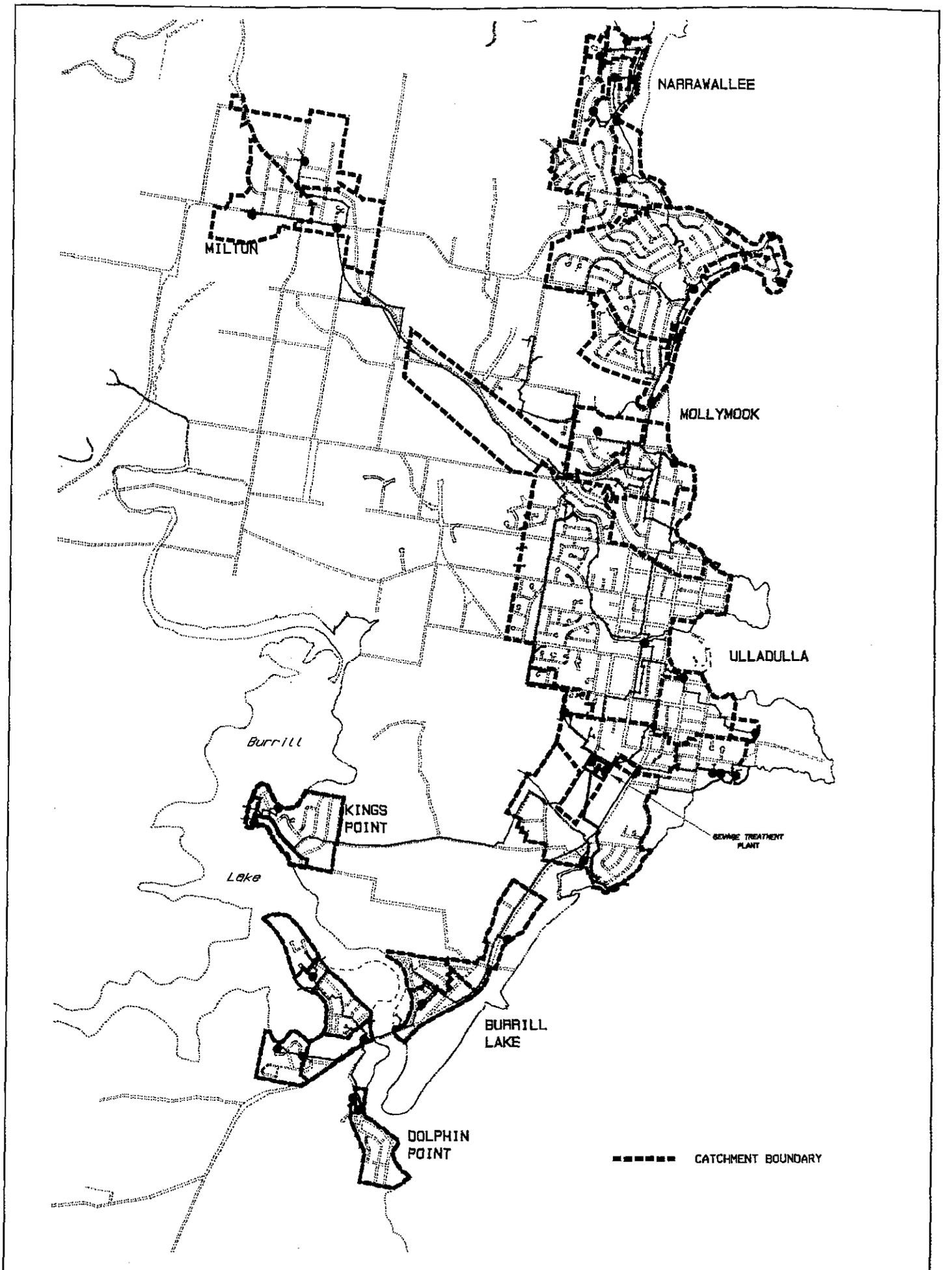
9.2.4 System Augmentation

Since its commission in 1975, the sewerage treatment plant has been progressively augmented to cater for increased urban growth and higher environmental standards. In response to a number of community and technical concerns regarding odour, ocean discharge and extent of the network, the 1994 Milton-Ulladulla Sewerage Augmentation Study was undertaken. The study report proposed a number of options regarding extending the transport network and upgrading treatment, a set of which were provisionally adopted by Council.

Community Consultation

A program of community consultation was conducted regarding these augmentation options. The following issues were raised by the community:

- relocation of the sewerage plant due to existing odour problems



SEWERAGE & WASTE MANAGEMENT

FIGURE 9.5

- treatment of effluent to a tertiary standard
- extension of the sewerage system to include Lake Tabourie.

As a result of the community consultation, Council undertook a statistically based survey to canvass community preferences for:

- relocation of the sewage treatment plant
- effluent management options
- willingness to pay.

The alternative locations considered are listed in Table 9.5 together with their estimated costs and environmental scores.

Table 9.5
Alternative Sewerage Treatment Plant Site Comparison

STP Site	Location	Total NPV Cost	Environmental Score
1	Green Street West	$M 47.8	22
2	Kings Point Road	$M 47.4	17
3	South-West Bangalow Park	$M 53.8	22
3A	South-West Bangalow Park	$M 55.5	22
4	Dolphin Point	$M 55.6	29
5	Dolphin Point South	$M 58.3	28
6	Slaughterhouse Road	$M45.7	18
7	Existing STP (EAT) Existing STP (Trickling Filter)	$M 43.4 $M 39.4	16

Note: Lower Score the better

9.3 DRAINAGE AND FLOOD CONTROL

Drainage

There are nine catchment areas that service the Milton-Ulladulla Structure Plan area (Table 9.6, Figure 9.7). In planning drainage facilities for this area, a "one in five years" plan is used.

Surplus water is collected using natural water courses and artificial utilities (pipes). Pipe sizes used for initial collection are 375 and 450mm diameter. They direct this initial collection into larger 600, 750, 900 and 1,800mm pipes. These larger sizes direct this water to natural water courses: creeks, rivers and lakes. As well, some direct this drainage into the ocean at South Pacific Crescent, Ulladulla; Dolphin Point; and Ulladulla Harbour beside the ocean pool.

The Ulladulla based section of the Engineering Works Division of Council carry out maintenance and repairs to the aforementioned pipes on a regular basis. Known critical locations are subject to an additional special inspection when the weather situation dictates it. Information is being gathered for this section to formulate a preventative maintenance program to implement at a later date.

Flood Control
Several areas within the study area are subject to flooding, particularly on two types of landforms, flood plains and drainage plains.

- **Flood Plains**
  These are located north of Dolphin Point, Burrill Lane and an area between Milton and Narrawallee. These areas are subject to major flooding and flood heights may be accentuated by tidal influence.

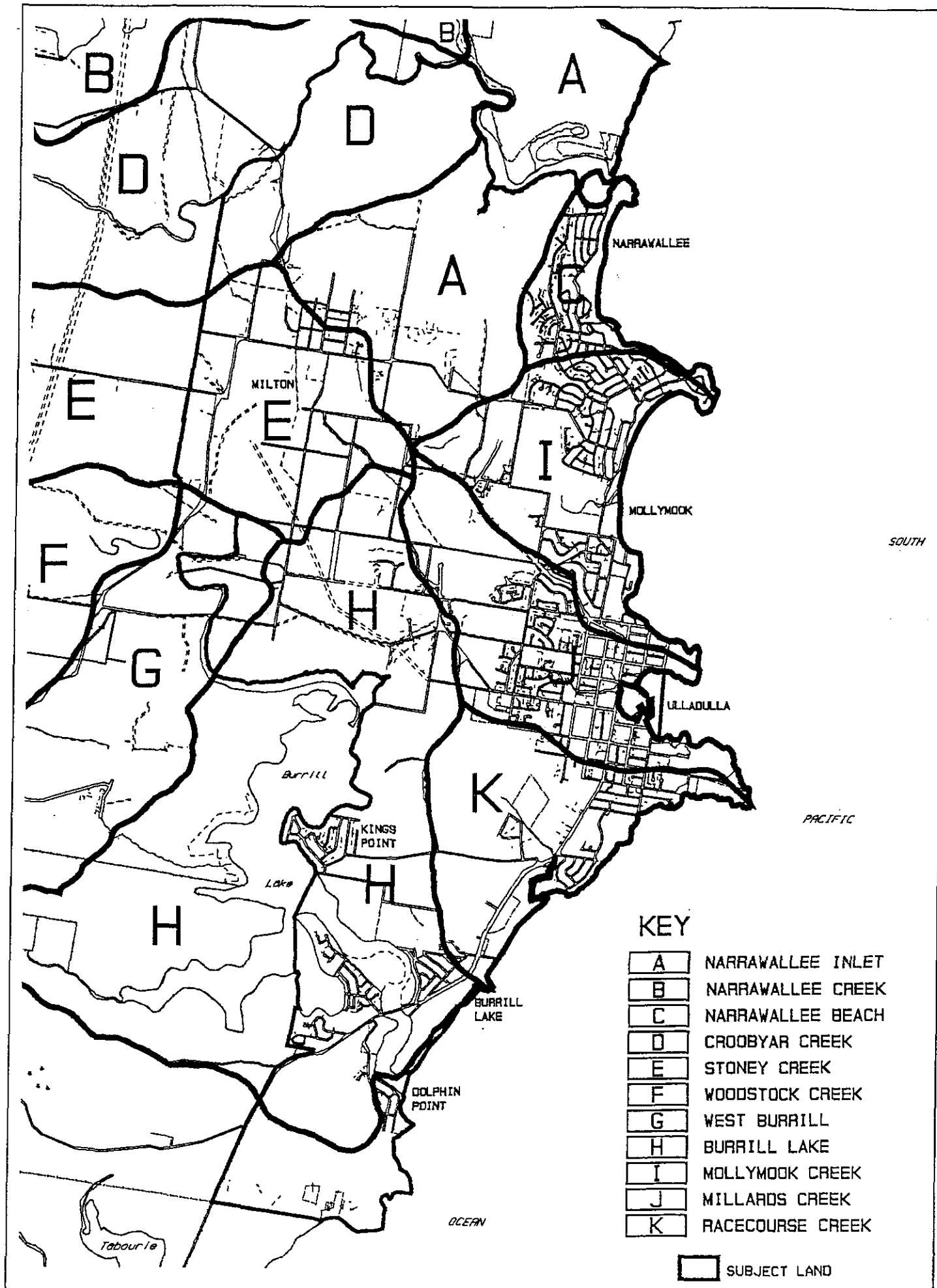
- **Drainage Plains**
  These areas are generally associated with tributaries above the flood and coastal plains. They are mostly affected by overland flow of water rather than prolonged inundation.

Known flood prone areas are indicated on Local Environment Plan (LEP) maps held in Council's office and are calculated using a "one in one hundred year flood" basis. *They also nominate the minimum floor level required in all building* applications received for that area. This information is used as part of the building application approval process by Council officers.

There is no flood control or flood mitigation plan operating within the Milton-Ulladulla Structure Plan study area. It is felt that, at this time, such a plan is not required. However, a plan may be required if urban development is approved along structure plan guidelines.

Table 9.6
Milton-Ulladulla Drainage Catchments

Catchment	Area (ha)	Area Serviced
Narrawallee Inlet	614	North Milton and associated rural area
Croobyar Creek	412	N/W Milton and associated rural area
Narrawallee Beach	168	Narrawallee urban area
Mollymook and Blackwater Creeks	509	Mollymook urban area
Stoney Creek	521	South Milton and associated rural area
Millards Creek	538	North, South and West Ulladulla Basin
Burrill Lake	1,110	Kings Point, Burrill Lake, Dolphin Point
Burrill Lake West	88	Burrill Lake headwaters
Racecourse Beach	504	South Warden Head/South End Racecourse



MAJOR DRAINAGE CATCHMENTS

FIGURE 9.7

9.4 ELECTRICITY RETICULATION

The Milton-Ulladulla area is serviced with electricity from Nowra by a pair of 132kV overhead power lines, which enter Ulladulla via a 132kV switching station at Evans Lane to the north-west. The key entry points are North Street and Green Street (Figure 9.8). The structure plan area is serviced by 11kV lines from the Ulladulla zone substation, located at the intersection of North Street and Village Drive. In addition to the 11kV network, a 33kV line leaves the substation to serve the Yatte Yattah area. The majority of the urban areas are served by overhead power lines, however, urban residential subdivisions, developed over the past 15 years, are provided with underground services. Currently, the peak power consumption of the area is 20 MVA (Mega Volt Amperes) during the long weekend in June.

9.5 COMMUNICATION NETWORK

9.5.1 Mobile Telephones

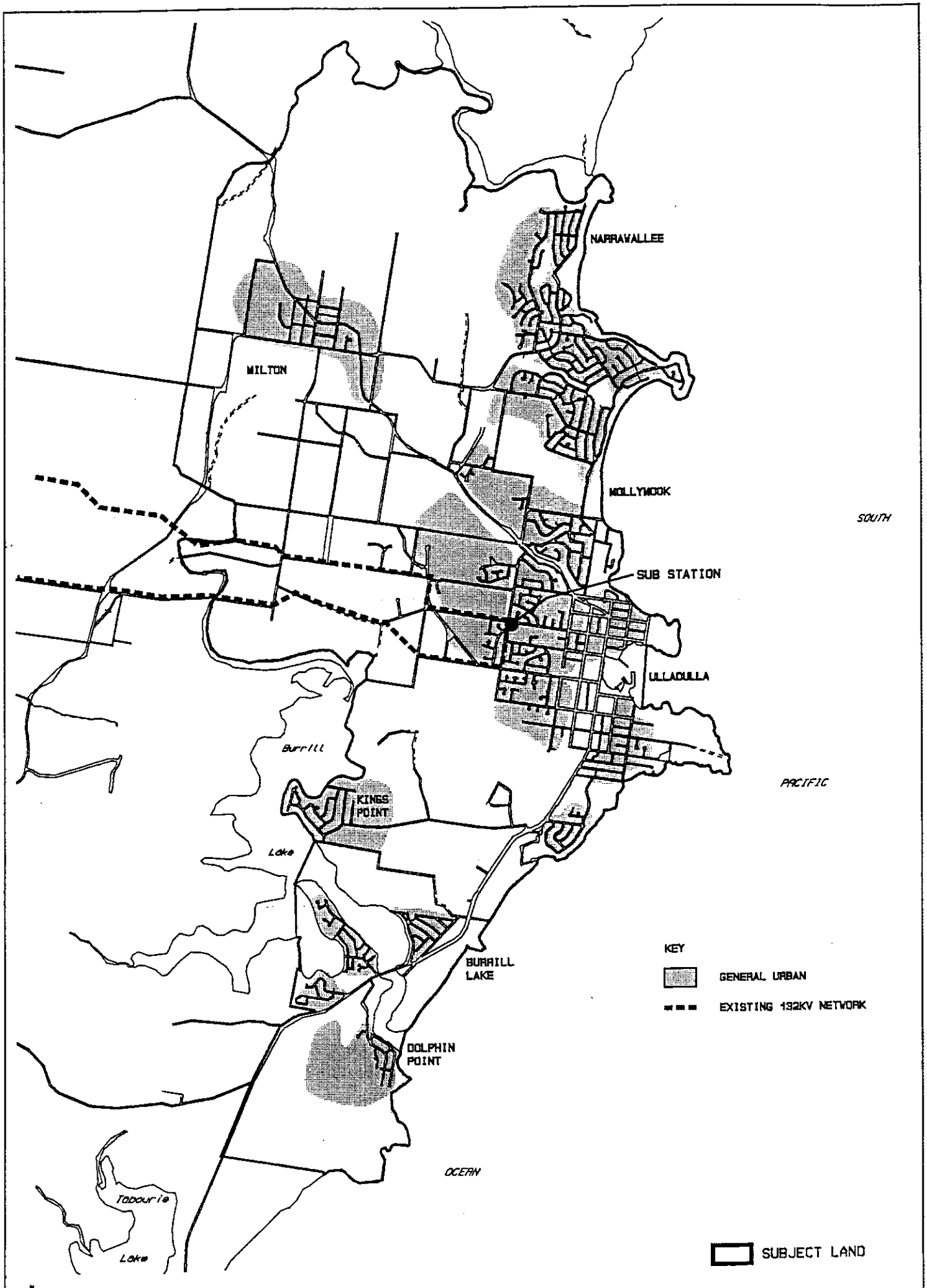
A feature of the communication network which is making a significant impact on the visual environment are the antennae for mobile telephones. There are currently three carriers operating in Australia: Telstra (Telecom), Optus and Vodaphone. Each carrier is in the process of establishing a digital mobile telephone network. Two systems are currently operational: analogue and digital. Telstra is the only carrier which provides the infrastructure for analogue telephone services. Optus also provides an analogue service based on Telstra's infrastructure. It is anticipated that the digital system will eventually supersede the analogue.

Antennae
Antennae used by the mobile telephone carriers vary from omni-directionamonopole wire type devices to highly sophisticated electronically controlled directional devices. The towers used by the various carriers have similar design requirements, supporting one or more antenna depending on the number of cells covered by the tower's base station. The siting of radio base stations is predominantly determined by demand. For instance, if a large number of users are located within a concentrated area, there may be more than one service cell required to provide an adequate service. Two aspects of siting are fundamental:

- line of sight; and
- effective height above ground.

In the Milton-Ulladulla area there is a developed network of masts, with a coverage to meet the demands of the local users. Generally, the most common structure type is a concrete or steel monopole, followed by a lattice tower. The carriers have almost universally selected a common mast height for the monopole design.

Emerging Technologies
The technology used by today's mobile phone system is advancing constantly. Antennae design does not advance as rapidly as other areas of electronics. The requirements to match the antenna to the atmosphere electrically do not change



ELECTRICITY & COMMUNICATIONS

FIGURE 9.8

although shape and design of the components of antennae vary with frequency and signal type.

Antennae generally become smaller as frequency increases. Antennae are based on dimensions of one half or one quarter of a wavelength. At the microwave frequencies used for mobile phones, the wavelength is about 10 centimetres. When this wavelength is considered against the physical size of the antenna systems installed by the carriers, they seem very large. It must be recognised that the antennae on the towers are in fact systems of antennae with multiple antennae on each tower at each frequency to serve the coverage area.

9.6 WASTE MANAGEMENT

9.6.1 Existing Tip Site

The current Ulladulla waste management site facility occupies a 7.4 hectare site at the intersection of Green Street and Pirralea Street. It has operated as the main district landfill facility for over 15 years. The site currently receives approximately 15,000 tonnes of solid waste per year. Approximately 90% of the site has been utilised for garbage disposal, with the active tipping area measuring approximately 3,600m^2 in extent. The site has three leachate dams (one temporary) and certain sections emitting significant volumes of methane. The east-west design profile of the tip has a marginal incline from the east with a steep batter to the west. The site has principally been used for the disposal of domestic and commercial-industrial waste. Although not rigorously controlled in the past, little toxic waste and extensive amounts of builders' rubble is understood to have been deposited on the site.

The current landfill operation is anticipated to cease in approximately 18 months time. The exact time period will depend on the availability of soil cover, which is currently in short supply. Once the landfill is complete, it is anticipated that the site will continue to be used as a waste transfer station.

9.6.2 Potential Tip Sites

Studies have been conducted to select the optimum location for a replacement landfill site, to serve the Milton-Ulladulla structure plan area as well as the majority of the southern Shoalhaven subregion. The leading candidate site is located west of Dolphin Point. However, the further study of the site has been deferred pending an investigation into the possibility of providing a single site west of Tomerong in the central part of the City area.

9.7 ENVIRONMENTAL QUALITY MONITORING

Environmental Quality Monitoring is conducted at the Councils' Environmental Health Laboratory in Ulladulla utilising filtration apparatus, dissolved oxygen meter, salinity/conductivity meter, pH meter and Turbidimeter.

Council monitors lakes, waterways and creeks at 91 sites four times a year, sampling temperature, salinity, conductivity, dissolved oxygen, ph, turbidity, faecal coliform, total nitrogen, total phosphorus, chlorophyll-A, oxides of nitrogen and ammonia. Of the aforementioned 91 sites, nine critical sites are sampled

four times a year for oxides of nitrogen and ammonia, total phosphorus, total nitrogen, and chlorophyll-A. The testing of these samples is carried out by independent laboratories as the facilities to conduct these tests locally are not available at this time.

The sewage outfall and the swimming areas at Racecourse Beach are monitored for faecal coliform at five sites on a weekly basis October through March and monthly April to September.

Samples are taken from Porters Creek Dam on a monthly basis and are subject to comprehensive chemical and algae analysis by the Department of Health Analytical Laboratory in Sydney.

The quality of drinking water is monitored at seven sites. Samples are collected by Council's Environmental Health Officers and forwarded to the Department of Health Analytical Laboratory for analysis.

Council Environmental Health Officers also monitor the water course draining from the Ulladulla landfill each month and test for a range of physical and chemical parameters.

Acoustic and air quality surveys are conducted by Council when the community requests such actions or in relation to a specific development using a sound level meter and Ringleman Smoke Charts respectively. At this time regular monitoring of acoustic levels and air quality is not considered necessary.

9.8 KEY STRUCTURE PLAN ISSUES

The key components of Milton-Ulladulla's utility infrastructure network, that have implications for structure planning are summarised in Table 9.7.

Table 9.7
KEY STRUCTURE PLAN ISSUES

Water Supply:
- The water supply network adequately services the Milton-Ulladulla area, with the notable exception of a number of high points to the north west of Ulladulla.
- Planned water treatment plant to the west of Milton will greatly improve drinking quality

Sewerage Treatment:
- The existing sewerage network is operating at capacity.
- The existing sewerage treatment plant, which is the source of unacceptable odours during summer, requires augmentation or relocation.
- Preferred site for its relocation is located to the west of Ulladulla.

Drainage and Flood Control:
- Stormwater drainage utilises natural water courses or is discharged direct into the ocean and lake.
- Currently there is no system of water quality control ponds and traps in place.

Electricity Reticulation:
- Electricity is supplied to Milton-Ulladulla from Nowra via a pair of 132 kV overhead power lines.
- Electricity is reticulated to the structure plan area in the form of 11 kV overhead lines, from the Ulladulla zone substation on North Street.
- Recent residential subdivisions are provided with underground electricity.

Communication Network:
- Location of additional mobile phone antennae and cable TV overhead cabling has the potential to be a major issue in the near future.

Waste Disposal:
- The existing tip is nearing capacity.
- The future disposal of urban waste is under review.

Environmental Quality Monitoring:
- Regular environmental quality monitoring is conducted at Council's environmental health laboratory in Ulladulla.

Section Ten

HERITAGE AND DESIGN

Heritage and design provide the "quality" component to the functional aspects of the built environment. The integration of good environmental design and heritage creates what can be termed a "living heritage". The concept of a "living heritage" seeks to draw out the salient and attractive vestiges of the district's heritage and, through a process of sensitive design, seeks to formulate a future environment, that is not only not inferior to that it supplants, but has the potential to offer greater lifestyle opportunities for its residents. The starting point for this process is a sound understanding of the district's cultural heritage, in terms of both its overall patterns and its finer details.

10.1 CULTURAL LANDSCAPES

In addition to the ecological/visual landscape addressed previously in this report (Section 2.4), the Milton-Ulladulla district has another landscape that reflects the cultural influences of past human societies and their activities. The cultural landscape of Milton-Ulladulla is the product of an extended, but currently less visible influence, of the regional Aboriginal culture, followed by the more visible influences of the early European settlement. Both cultures had a strong affinity with the physical landscape, being far more constrained in the extent of their activities by the area's terrain and micro-climate, than are current forms of settlement.

10.2 ABORIGINAL HERITAGE

10.2.1 Registered Sites

According to the NSW National Parks and Wildlife Site Register there are thirty-three archaeological sites and isolated artefacts within the boundaries of the Milton-Ulladulla Urban Expansion Area including the significant Burrill Lake Rock Shelter (NPWS Site No. 58-1-24). These sites are listed in Table 10.1 and indicated in Figure 10.1.

The list shows that of the thirty-three sites known in the urban expansion area twenty-five are shell middens; however, only three have associations of stone artefacts. Most of the middens were recorded by White (1987) and are clustered around Kings Point and Dolphin Point. Some are located around Bungalow Park and others behind Burrill Beach. Middens are also present at Blackburn Point and beneath Warden Head. Aside from Burrill Lake Rock Shelter the only other site types known in the area are an open camp site near the Princes Highway at Bungalow Point, a silcrete quarry at Bannisters Point and the carved tree site near Milton.

Table 10.1
Registered Aboriginal Archaeological Sites in Milton-Ulladulla

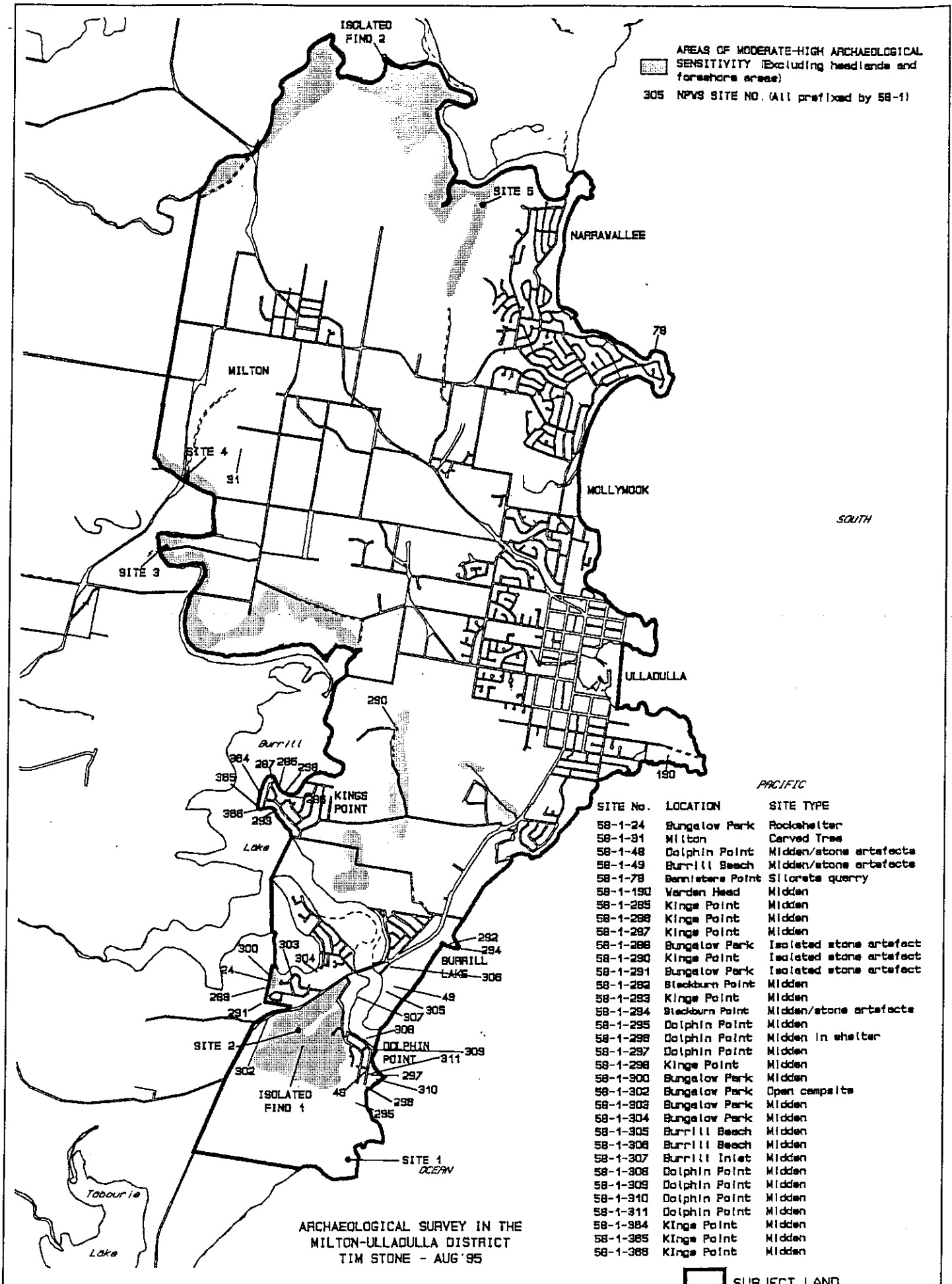
Site No.	Location	Site Type
58-1-24	Bungalow Park	Rock Shelter*
58-1-31	Milton	Carved tree
58-1-48	Dolphin Point	Midden with stone artefacts
58-1-49	Burrill Beach	Midden with stone artefacts
58-1-78	Bannisters Point	Silcrete quarry
58-1-190	Warden Head	Midden
58-1-285	Kings Point	Midden
58-1-286	Kings Point	Midden
58-1-287	Kings Point	Midden
58-1-288	Bungalow Park	Isolated stone artefact
58-1-290	Kings Point	Isolated stone artefact
58-1-291	Bungalow Park	Isolated stone artefact
58-1-292	Blackburn Point	Midden
58-1-293	Kings Point	Midden
58-1-294	Blackburn Point	Midden with stone artefacts
58-1-295	Dolphin Point	Midden
58-1-296	Dolphin Point	Midden in shelter
58-1-297	Dolphin Point	Midden
58-1-298	Kings Point	Midden
58-1-300	Bungalow Park	Midden
58-1-302	Bungalow Park	Open Camp Site
58-1-303	Bungalow Park	Midden
58-1-304	Bungalow Park	Midden
58-1-305	Burrill Beach	Midden
58-1-306	Burrill Beach	Midden
58-1-307	Burrill Inlet	Midden
58-1-308	Dolphin Point	Midden
58-1-309	Dolphin Point	Midden
58-1-310	Dolphin Point	Midden
58-1-311	Dolphin Point	Midden
58-1-364	Kings Point	Midden
58-1-365	Kings Point	Midden
58-1-366	Kings Point	Midden

**NOTE:* Significant site
Source: NSW National Parks and Wildlife Service (1995)

10.2.2 Survey Results

A total of five archaeological sites and two isolated finds were located during the survey (Figure 10.1). The five sites are all open camp sites represented by scatters of stone artefacts. The first site was located above a cliff line at Lagoon Head and overlooks the sea. The second overlooks an infilled arm of Burrill Lake west of Dolphin Point. The third and fourth sites are located along freshwater reaches of Stony Creek. The fifth was located on a forested sandstone bench overlooking the tidal reaches of Croobyar Creek. The isolated finds comprise single silcrete flakes. The first was located on a slope above the infilled arm of Burrill Lake and the second adjacent to Croobyar Creek. These sites are described fully in the appendix.

The largest site recorded in terms of size of exposure and density of artefacts was Site 5 located don the forested bench overlooking Croobyar Creek. This site is of some scientific significance because it is the only rich open camp site known in the local area and is largely intact. The other four sites are much smaller and have been severely damaged by erosion and European land use practices. Their scientific value appears to be low, although less disturbed remnants of these sites may be present beneath adjoining surfaces covered by grass.



SITE No.	LOCATION	SITE TYPE
58-1-24	Bungalow Park	Rockshelter
58-1-91	Milton	Carved Tree
58-1-48	Dolphin Point	Midden/stone artefacts
58-1-49	Burrill Beach	Midden/stone artefacts
58-1-78	Bannisters Point	Silcrete quarry
58-1-190	Warden Head	Midden
58-1-285	Kings Point	Midden
58-1-286	Kings Point	Midden
58-1-287	Kings Point	Midden
58-1-288	Bungalow Park	Isolated stone artefact
58-1-290	Kings Point	Isolated stone artefact
58-1-291	Bungalow Park	Isolated stone artefact
58-1-292	Blackburn Point	Midden
58-1-293	Kings Point	Midden
58-1-294	Blackburn Point	Midden/stone artefacts
58-1-295	Dolphin Point	Midden
58-1-296	Dolphin Point	Midden in shelter
58-1-297	Dolphin Point	Midden
58-1-298	Kings Point	Midden
58-1-300	Bungalow Park	Midden
58-1-302	Bungalow Park	Open campsite
58-1-303	Bungalow Park	Midden
58-1-304	Bungalow Park	Midden
58-1-305	Burrill Beach	Midden
58-1-306	Burrill Beach	Midden
58-1-307	Burrill Inlet	Midden
58-1-308	Dolphin Point	Midden
58-1-309	Dolphin Point	Midden
58-1-310	Dolphin Point	Midden
58-1-311	Dolphin Point	Midden
58-1-384	Kings Point	Midden
58-1-385	Kings Point	Midden
58-1-386	Kings Point	Midden

ABORIGINAL ARCHAEOLOGICAL SITES

FIGURE 10.1

The stone artefacts recorded during the survey displayed little variety in artefact type. Most of the artefacts identified were unmodified flakes with only a few showing signs of retouch. Cores were recorded occasionally but the only nearly fashioned artefact identified was a unifacially flaked discoidal implement located at Site 2. The raw materials used for artefact manufacture were mainly silcrete, chert and quartz. These artefacts compare with those Kuskie (1995) excavated near Fishermans Paradise with silcrete being the predominant raw material.

The cavernous weathering which produced Burrill Lake Rock Shelter was not observed anywhere else in the area and consequently similar sites are highly unlikely in the Milton-Ulladulla Urban Expansion Area. Axe-grinding grooves and quarries are also unlikely as most outcropping rock beyond the headlands and foreshore is restricted to loose boulders. The search made for the carved tree and bora ground reported by Etheridge (1918) was unsuccessful as the landscape has been so changed by agriculture that these features are no more.

10.2.3 Archaeological Sensitivity

The results of the field survey together with records of site locations held by the NSW National Parks and Wildlife Service allow zones of archaeological sensitivity in the Milton-Ulladulla Urban Expansion Area to be identified. Zones of moderate to high archaeological sensitivity are shown in Figure 10.1. All headland and foreshore areas are also of moderate-high archaeological sensitivity but have not been highlighted to emphasise inland areas more likely to be impacted upon by future development. Zones of moderate-high archaeological sensitivity are those areas where archaeological sites have been recorded previously or are likely to be present. Zones of low sensitivity are areas where sites are unlikely to be encountered.

The most archaeologically sensitive areas are the headlands between Dolphin Point and Lagoon Head, the Burrill Beach barrier and the foreshore of Burrill Lake. The western edge of Bungalow Park is particularly sensitive because of the presence of the significant Burrill Lake Rock Shelter and a number of stone artefacts finds in its vicinity. The infilled arm of Burrill Lake between Dolphin Point and Bungalow Park is also likely to have been a focus of Aboriginal occupation. One open camp site and an isolated find have already been located on slopes above this arm and more archaeological material can be expected.

Figure 10.2 indicates that zones of moderate-high archaeological sensitivity, particularly near its mouth where there is a series of low sandstone benches perched above swampland. The alluvial flats along Croobyar Creek are similarly sensitive as is the undeveloped ridge line west of Narrawallee.

10.2.4 Aboriginal Concerns

The Aboriginal people of the Milton-Ulladulla district of New South wales are concerned about any developments which might impact upon Aboriginal sites in the area. Barry Carriage, a representative of the Ulladulla Local Aboriginal Land Council participated in the survey and his views were sought on the proposal for urban expansion around Milton-Ulladulla. A brief discussion was also held with Land Council Co-ordinator, Shane Carriage, on this matter.

The connection these Aboriginal representatives have with the local area is a strong one and they ask to be consulted about any decision which might affect Aboriginal sites in the area and land they regard as traditionally theirs. Ulladulla Head and Warden Head overlooking Ulladulla Harbour, are of particular importance to them as these headlands are remembered by Aboriginal people as traditional camping places and were used by them well into the historic period.

The Aboriginal representatives stated that the sites previously recorded around Burrill Lake and on headlands such as Blackburn Point are highly significant to the local Aboriginal community. Barry Carriage considered Site 5 to be the most important site located during this survey and he would not like to see it disturbed. Other concerns include the possible impact of development on sites around the infilled arm of Burrill Lake west of Dolphin Point and the possibility of burial sites being uncovered during the course of development.

Overall, the Ulladulla Local Aboriginal Land Council does not oppose future urban growth around Milton-Ulladulla providing the local Aboriginal community is kept informed of development proposals and is consulted when planning decisions are being made. At this stage, the local Land Council has noo specific objections to the Milton-Ulladulla Structure Plan but would like to see that every effort is made to protect and preserve Aboriginal sites.

10.3 URBAN HERITAGE

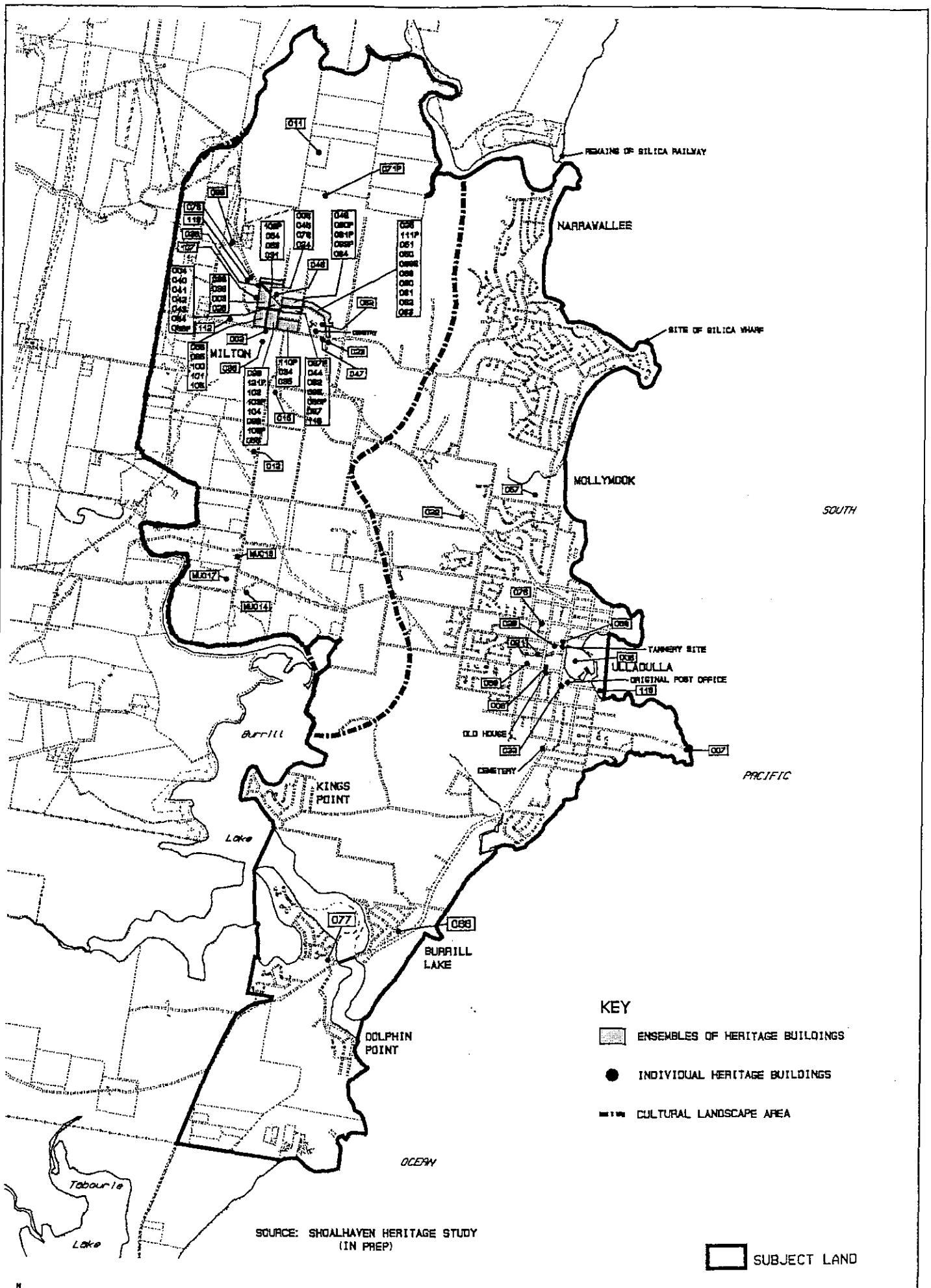
The district represents an interesting pattern of historic and more modern urban environments, set within open and forested contexts, both on the coast and inland. A total of ninety-two structures have been identified as having "building", "archaeological" or "historical" significance in Milton-Ulladulla (*Figure 10.2*).

10.3.1 Milton

Milton is without doubt the best example of urban heritage in the district. Set on a rise above open pasture land, it has a tightly-knit urban core with a fine collection of public, commercial and residential buildings, dating for the most part from the late Victorian period, when economically Milton was at its zenith. Milton's buildings are valued both as individual specimens and as ensembles. Noteworthy buildings include:

- Milton Courthouse;
- National Australia Bank (former CBC Bank);
- Milton Town Hall (former);
- Methodist Church (former);
- Uniting Church (former Congregational Church);
- Pickering's Old Store Group; and
- Cottages and homesteads within and around Milton.

In total the Milton area has seventy-six nominated heritage sites, sixty-seven of which are contained with the Milton township. There are nine rural properties of significance in the Milton rural area; to the north are "Narrawilly" on the Princes Highway and "Englemere" on Garrards Lane, whilst seven are located to the south, five on Wilfords Lane: "Applegarth", "Tilba Tilba", "Pine View", "Lochleven" and "Riverview"; and two on Croobyar Road: "Claydon Park" and "Old Croobyar Farm".



EUROPEAN SETTLEMENT HERITAGE SITES

FIGURE 10.2

Milton is currently suffering a crisis of function, resulting from the closure of several of its retail businesses and the reduction of its public service role in the district in favour of Ulladulla.

10.3.2 Ulladulla

Set on the landward side of a small natural harbour, the settlement of Ulladulla straddles and extends between the two ridges which define the catchment of Millards Creek. The settlement is characterised by its general openness and by its grid-iron road structure that, Roman-like, defies the natural topography. In contrast to Milton, it has only a modest collection of surviving heritage buildings, that are scattered about the settlement, for the most part absorbed within the evolving, generally lacklustre, urban fabric. Notable historic buildings are limited to:

- a scatter of cottages (Millards, Fishermans, Feitches and Springfield); and
- Ulladulla Lighthouse at Warden Head.

Ulladulla has a total of thirteen nominated heritage sites located between "Springfield" to the north and the cemetery (headstones) adjacent to the Princes Highway to the south.

Ulladulla is currently suffering a crisis of form because of its: lack of "focal" buildings and a definable urban core; its "gun-barrel" main street; its general openness; and lack of structural landscaping. The harbour, however, in terms of both its form and function, continues to be Ulladulla's greatest asset.

Two nominated heritage sites are located in Burrill Lake: the Open Air Theatre and The Burrill Lake Community Hall, whilst Mollymook has one: the Sandridge General Cemetery.

10.4 MAIN STREET PROGRAM

10.4.1 Main Street Objectives

The Milton-Ulladulla Main Street Program, which was established in September 1994, concentrates on five key elements of town and community improvement:

- Bringing together diverse groups, local government and community representatives with the objective of promoting positive change.

- Improvements which enhance the physical appearance of all the elements which convey the town centre's image.

- Capitalising on the unique character of the place and recognising the importance of heritage as a familiar part of everyday experiences.

- Strengthening existing businesses and creating new opportunities for growth.

- Marketing the town centre to visitors and locals alike, through special events and the promotion of its identity and retail services.

10.5 *Signage*

Major official and private advertising signage within the district can be classified as: entry signs; directional signs; free standing private advertising signs; and private advertising signs attached to buildings and other structures.

10.5.2 Entry Signs

There are Council tourist signs ("Welcome to Ulladulla and Districts") located approximately seven kilometres to the north of Milton and some five kilometres to the south of Burrill Lake. These are supplemented by entry signs to the north and south of Milton; to the north and south of Ulladulla; to the north and south of Mollymook Beach; to the north of Mollymook; to the east of Kings Point; to the north and south of Burrill Lake; and to the north of Dolphin Point. Entry information boards indicating"Ulladulla Urban Area: Population 8,500" are located adjacent to the highway to the north of Ulladulla and to the south of Burrill Lake.

10.5.2 Directional Signs

International tourist directional signs are located adjacent to the highway at Milton, indicating the commencement of Tourist Drive 3. Tourist information, "i" signs, are located to the north of Millards Creek in Ulladulla and at Burrill Lake. RTA traffic signs tend to be well located at major approaches to the districts' villages and urban centres.

10.5.3 Private Free-standing Advertising Signs

Free-standing private advertising signage is a feature of the highway at Burrill Lake (tourist accommodation); south Ulladulla (industrial/commercial); north Ulladulla (tourist accommodation); and north Milton (tourist accommodation). With the notable exception of the south Ulladulla industrial/commercial strip, free-standing advertising signage within the district is generally not visually intrusive.

10.5.4 Private Advertising Signs Attached to Buildings

Advertising signage, either attached to the front facias or side elevations of retail and commercial businesses are features of the Ulladulla CBD and central Milton. Generally signage within the CBD, although subdued in scale, tends to be lacklustre in quality.

However, a handful of large advertising statements on the side walls of buildings further detract from the generally lacklustre visual quality of the Ulladulla CBD.

10.6 KEY STRUCTURE PLAN ISSUES

The salient feature of Milton-Ulladulla's heritage and design, that have implications for structure planning are summarised in Table 10.2.

Table 10.2
KEY STRUCTURE PLAN ISSUES

Aboriginal Heritage:

- High probability of Aboriginal features located adjacent to coastal headlands, lakes and major creeks.
- significant archaeological site identified adjacent to Croobyar Creek.
- Aboriginal community concerned about any development that may compromise significant archaeological sites.

Urban Heritage:

- Milton represents the district's key centre of urban heritage.
- Milton is the focal point for a wider cultural landscape.
- Ulladulla has a modest collection of surviving heritage buildings, scattered about the settlement.
- Ulladulla is characterised by a generally lacklustre urban fabric.
- The harbour setting and formation represents Ulladulla's most important heritage asset.

Section Eleven

CONSTRAINTS AND OPPORTUNITIES

This concluding section of the first volume of the structure plan represents a distillation of the key features of the components of the urban-rural system, that have the potential to act as significant constraints on development or offer opportunities for positive change. This distillation is addressed in the form of: key issues; major constraints; key opportunities; and potential trade-offs.

11.1 KEY ISSUES

The key issues identified and evaluated in the study can be summarised under the headings of:

- lifestyle;
- visitor experience;
- economic viability;
- movement;
- form;
- function; and
- sustainability.

11.1.1 Lifestyle

The question of lifestyle embraces the full spectrum of activities and facilities that influence the resident's quality of life. It has particular reference to the residential environment.

(a) General maintenance of the social justice principles of access and equity

There is a need to generally provide residential and community facilities in a manner that is both accessible and fair so as to create a set of residential environments which adequately meet the needs and aspirations of each of the socio-economic groups living in Milton-Ulladulla.

(b) Provision of a Range of Residential Options

There is a need to, as far as possible, provide and locate a range of residential options, including traditional suburban, medium density, special needs (aged, youth and disability) as well as rural residential. The bulk of the demand for rural residential development will be provided to the west of Milton beyond the study area boundary. It is essential that existing and future urban land be treated as a scarce resource in terms of resultant residential densities.

(c) Equitable Provision of Community and Cultural Facilities

There is a need to provide community facilities and services equitably throughout the main centres of population. Inevitably there will be a preponderance of community facilities associated with the commercial

centres in the Ulladulla CBD and central Milton, where often they are most accessible to the majority of the population.

11.1.2 Visitor Experience

Visitor experience includes the full spectrum of facilities, services, plan and infrastructure that influence the quality of the visitor's stay in Milton-Ulladulla. It has particular reference to the district's attractions, accommodation and tourist support services in the area.

(a) Maintenance of a Range of Natural and Built Attractions

There is a need to maintain, and where necessary enhance, the quality of Milton-Ulladulla's natural attractions, which principally comprise its beaches. There is a need to increase the quality and range of the district's relatively limited built attractions and associated facilities. In particular, there is a need for a designated area for broadacre tourism development for such activities as a karting circuit.

(b) Provision of a Range of Accommodation Forms

There is a need to provide a range of accommodation forms which range from sophisticated boutique hotels, motel-holiday apartments, holiday apartments and cottages, guesthouses and bed and breakfast, cabin/caravan parks and camping grounds. There is a need to provide accommodation at both ends of the budget range from relatively inexpensive caravan and cabin parks to up market boutique hotel/guesthouses. There is, however, a declining role for the traditional motel located adjacent to the highway.

(c) Provision of Adequate Tourism Support Facilities

There is a need for the provision of a range of visitor support facilities and services, which also enhance the lifestyle of the resident. These include: service stations, post offices, public telephones and public toilets, together with the full spectrum of visitor information services.

11.1.3 Economic Viability

Economic viability includes those activities which provide the economic raison d'etre for the settlements of Milton-Ulladulla.

(a) Development of a Viable Tourism Sector

Development of those issues identified under the heading of "visitor experience" to create a viable local tourism industry. There is a need to further capitalise on the peak season, to extend the peak season; and to further develop the spring and Easter sub-peaks. There is also the opportunity to target the midwinter season for further development.

that reflects the area's Aboriginal associations and early European settlement.

(d) Central Ulladulla Design Upgrade

There is a priority need to improve the urban design quality of central Ulladulla. This is linked to the future pedestrianisation of the central area. There is a priority need to create a definable urban core and to modify the "gun barrel" form of Ulladulla's main street.

11.1.6 Function

Function includes the full range of utilities and infrastructure networks that enables the urban-rural system of Milton-Ulladulla to function efficiently and without undue impact on the environment.

(a) Relocation of Sewerage Treatment Plant

There is a need to relocate the sewerage treatment plant to a site between Ulladulla and Milton. This move will free-up the existing site for future sporting facilities, locate the facility where the effluent water could be used for agricultural purposes, as well as providing a buffer thwarting the development of southern Milton.

(b) Augmentation of Water Supply

There is a need to augment the area's water treatment facilities. This would be achieved by the development of the planned water filtration plant south west of Milton.

(c) Stormwater Drainage System Upgrade

There is a need to upgrade Milton-Ulladulla's drainage system both in terms of catchment and water quality control.

11.1.7 Sustainability

Sustainabilty is an elastic term, resonating within a wide range of meaning. It embraces the need to generally maintain biodiversity at one end of the spectrum and the desirability of solar passive design and atmospheric and water-borne emission controls at the other.

(a) Maintenance of Biodiversity

There is a need to recognise and maintain the ecological values of the district, including wildlife corridors, the provision of environmental protection zones and the general maintenance of biodiversity. Particular habitats have a priority need for conservation.

These include wetlands (SEPP 14), forest habitats (including Koala habitats: SEPP 44), coastal heathland and strategic wildlife corridors.

(b) Maintenance of a Viable Retail and Commercial Structure

There is a need to balance the concentration of retail and commercial activity within the Ulladulla CBD with the requirement to provide neighbourhood based facilities.

There is a need to halt the southward expansion of the Ulladulla CBD.

(c) Development of a Business Park

There is a need to develop a definable business park with a "new age" image and to deduce the extent of strip industry, particularly along the highway at south Ulladulla.

(d) Maintenance of a Viable Primary Industry Sector

Although their relative economic importance has declined over the years, there is deemed to be a need to maintain and, where possible enhance, the economic viability of Ulladulla's fishing industry and Milton's dairy industry. These traditional industries provide an authentic industrial adjunct to the developing tourism and service industries of the district.

(e) Exploitation and Management of Extractive Industries

There is a need to restrict the exploitation of minerals within the study area. Where the extraction of minerals is deemed to be of paramount economic importance, their exploitation should only be undertaken with stiff operational safeguards.

11.1.4 Movement

Movement embraces both on-road and off-road means of transport, private and public transport together with the supply and demand for parking. It should provide for:

(a) Development of a Genuine Bypass for Milton-Ulladulla

There is a need to hasten the programing of the Southern Link Road's construction to enable it to act as a genuine bypass for Ulladulla. This would be coupled with the need to define the most suitable points of access to the central area of Ulladulla. There is also a need to consider the longer term bypass of both Milton and Ulladulla.

(b) Expansion of the Urban Road Network

To cater for the anticipated urban growth of Milton-Ulladulla, there would be a need to expand the existing network of collector and access roads in a form that, wherever possible, predominantly complements the traditional "grid iron" pattern of the two settlements. "Dead worms" should be kept to a minimum.

(c) Development of a Pedestrian Precinct in Ulladulla's CBD

Following the construction of the Southern Link Road, there is a need to create a pedestrianised precinct in the Ulladulla CBD. The exact extent and nature of this area would be the subject of further study.

(d) Provision of Responsive Small Scale Public Transport

There is a need to facilitate the provision of a responsive small-scale public transport service which particularly caters for the young, the aged and the visitor. It is acknowledged that the economic viability of such a service would be problematic, given the relatively small population of the district.

(e) Provision of Adequate Parking Facilities

There is a need to provide car parking facilities within and adjacent to the Ulladulla CBD and central Milton, to cater for the anticipated future growth in trips to these centres as the subregion expands. Future parking provision would need to meet the maximum demand during the off-peak period, but not that of the peak season.

(f) Development of Off-Road Movement Network

There is a need to develop cycleway and riding trail (bridle paths) networks in Milton-Ulladulla that link residential area with major community facilities and areas of open space.

11.1.5 Form

Form embraces the notion of defined space and the maintenance of cultural landscape.

(a) Maintenance of Seven Distinct Villages

There is a need to maintain and enhance the urban-rural image or theme for the area as a whole, as well as its major components of Milton, Narrawallee, Mollymook, Ulladulla, Kings Point, Burrill Lake and Dolphin Point. There is a need to maintain definable urban/rural interfaces, particularly in relation to prime crop and pasture land. In particular, there is a priority need to limit ribbon development along the Princes Highway between Milton and Ulladulla.

(b) Maintenance of Coastal and Rural Landscapes

There is a need to maintain the character and integrity of the district primary landscape attributes; its coastal, estuarine and lake foreshores, together with its agricultural and forested rural landscapes.

(c) Maintenance of Cultural Landscapes

There is a need to maintain the integrity of the district's cultural landscape

(b) Maintenance of Water and Air Quality

There is a need to maintain acceptable standards of water and air quality throughout the district. Whilst air quality is starting from a high datum, water quality in the district is currently highly variable.

(c) Subdivision and Building Design

There is a need to encourage subdivision and building designs that maximise solar passivity, water conservation and natural ventilation so as to minimise the use of fossil fuels and contain atmospheric and water pollution.

11.2 CONSTRAINTS

An analysis of the area's constraints serve to define development capability. Constraints to development can be summarised under the headings of physical, conservation and utility servicing.

11.2.1 Physical Constraints

Key physical constraints comprise the two principal development determinants of terrain and water quality.

Urban Capability

The Milton-Ulladulla district is characterised by an undulating terrain, rising from sea level to a maximum height of 86 metres to the east of the Milton slaughterhouse. The area is traversed by a system of ridgelines that have a generally north-west to south-east orientation. Steep slopes are a feature of the coastal headlands and the lakeside cliffs to the south of Kings Point and to the west of the Burrill Lake entrance; the Milton Knoll; and to a lesser extent the Narrawallee Ridge (Figure 11.1). High water tables, waterlogging and flooding are features of the low lying land between Milton and Narrawallee; the creek line between Wilfords Lane and Woodstock road an extensive area to the north of the confluence of Stoney Creek and Burrill Lake, Racecourse Creek; and a significant area to the west of Dolphin Point. An extensive dunal system makes up the Burrill Lake peninsula landform.

The urban capability analysis, summarised in Table 11.1, defines the potential urban use of the landforms (slope, soil type and drainage characteristics) present in the district. Classes A and A6 are suitable for all forms of urban development including extensive building complexes such as shopping centres; high schools and tertiary institutions; residential complexes; as well as industrial parks. Classes B to C are considered to be suitable for residential development, which can tolerate significant slopes and areas with a relatively high water table. Classes D-1 and D-2 are considered to be suitable only for passive recreation or other forms of reserves. Land designated as either Class E-1 or Class E-5 should be left in its native state.

Table 11.1
Urban Capability Classification

Class	Slope	Soil Type	Drainage	Erosion Hazard	Major Limitations	Development Capability
A	<5%	Deep sandy gradational soils & yellow-brown duplex clayey profiles	Adequate	Low	None	Extensive Building Complexes
A-6	<5%	Clayed duplex soils	Seasonally wet	Low	High water table	Extensive building complexes
B	5-10%	Monzonite & sedimentary soils	Poor-adequate	Moderate	Slope	Residential
B-6	5-10%	Clayed duplex soils	Poor-adequate	Moderate	High water table	Residential
C	10-20%	Various soil types	Adequate	High	Slope	Residential
D-1	20-25%	Shallow brown loams	Adequate	Very high	Slope	Reserve
D-2	10-20%	Various clays	Liable to flood and waterlogging	Very high	Flooding	Reserve
E-1	25%	Coastal cliffs & sandstone escarpment	Liable to inundation by ocean	Extreme	Slope	Remain undeveloped
E-5	5-20%	Sand dunes	Liable to inundation by ocean	Extreme	Coastal dunes	Remain undeveloped

Note: Extensive building complexes include schools, shopping centres, office complexes and industrial parks
Source: Adapted from Soil Conservation Service urban capability analysis of Milton-Ulladulla

Water Quality

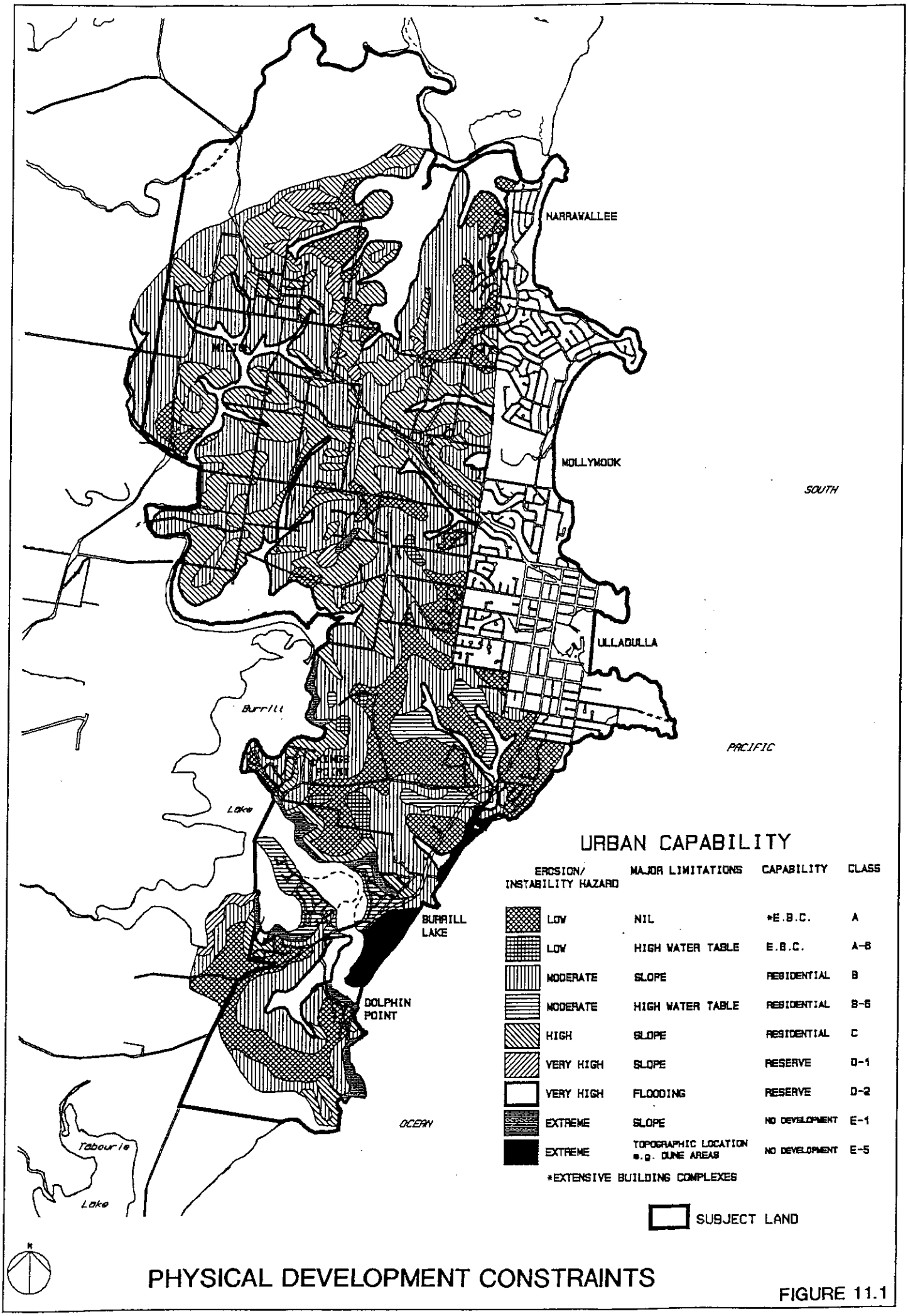
There is a fundamental requirement to conserve the area's water quality, which is important to both lifestyle quality and the maintenance of biodiversity. Milton-Ulladulla's water bodies include: freshwater creeks; tidal water bodies; and ocean water bodies.

Freshwater Creeks

Currently Milton-Ulladulla's creeks act as conduits for the majority of urban stormwater run-off. Millards Creek in particular has recorded relatively high pollution levels.

Tidal Water Bodies

The district has two tidal water bodies: Narrawallee Inlet and Burrill Lake. Both water bodies are subjected to the formation of barriers across their ocean entrances. In the case of the Burrill Lake entrance a pronounced tidal delta has formed. The construction of the current causeway and bridge in the 1950s (replacing a timber bridge built in 1889) has severely limited the opportunity for ocean flushing at high tides and during storm events (flood tide has a higher velocity than an ebb tide). This has resulted in extensive siltation of the lake entrance. A natural siltation process that would normally take thousands of years could be accomplished in a hundred years. The water quality of the lake could be put at serious risk should development without adequate water quality control measures be permitted within its catchment.



PHYSICAL DEVELOPMENT CONSTRAINTS

FIGURE 11.1

Ocean Water Bodies
The ocean water bodies that are influenced by development within the district include the major beaches; Narrawallee, Mollymook; Racecourse and Burrill Lake; and the harbour area. Currently, the only beach that is affected by pollutants is Racecourse Beach as a result of the sewer ocean outfall. The enclosed harbour area is affected by siltation and pollution from Millards Creek as well as oil spills and other forms of pollution from shipping and other harbour activities.

11.2.2 Conservation Constraints

Principal conservation constraints are: flora and fauna; prime crop and pasture; Aboriginal archaeology; and early European heritage.

Flora and Fauna
The key areas of natural habitat, that are candidates for conservation, include the following:

- Narrawallee Inlet wetlands
- Burrill Lake wetlands
- Forested ridges to the east of Burrill Lake
- Wildlife corridor linking the ocean to Burrill Lake.

Prime Crop and Pasture
The rich Milton monzonite soil represents a scare resource which should not be developed for non agricultural use unless there is a compelling reason to do so. The argument that Milton itself was built by the early settlers on this monzonite soil cannot be used as a pretext for further loss of this unique resource. In particular it should not be squandered for rural residential subdivision. A limited area of farmland adjacent to Narrawallee Creek is designated as Class 2 agricultural land, however, the majority of the land in the Milton area has been given a Class 3 designation. Both classes come within the NSW Agriculture's definition of prime crop and pasture.

Aboriginal Archaeology
Areas which are deemed to have a high probability of Aboriginal archaeological features are principally located adjacent to Narrawallee Creek, to the east of Burrill Lake and to the west of Dolphin Point.

Early European Heritage
The district contains a wealth of heritage buildings located both within urban and rural contexts. The Milton area is by far the most important in terms of its value as a cultural landscape.

Visual Landscape
The visual landscape represents the resultant of the previous four conservation constraints. Key visually sensitive areas are located adjacent to Burrill Lake and the Princes Highway, between Milton and Ulladulla. Significant ridge lines and creek lines throughout the district represent important landscape features which should, as far as possible, be conserved.

11.2.3 Servicing Constraints

Key service constraints include water supply treatment and reticulation, sewerage collection, transport and treatment, and electricity supply and reticulation. Milton-Ulladulla has the difficult problem of having to cater for a peak holiday demand in January that, in the case of water supply, is approximately three times the average resident demand.

Sewerage Treatment
The existing sewerage transport and treatment system has the capacity to accommodate the needs of a peak population of 30,000 before significant augmentation is necessary (ie either augmenting the existing treatment plant or the construction of a new plant in a new location).

Water Supply
The current water supply system has the capacity to accommodate the needs of a peak population of some 30,000 before there is a need for a major augmentation (ie headworks and filtration plant).

Electricity Supply
The current electricity supply, transformation and reticulation has the capability to accommodate the needs of a population of approximately 40,000 before a major system threshold is crossed.

11.3 OPPORTUNITIES

The development of the Milton-Ulladulla area has in recent times changed from the traditional pattern whereby the engine for development and growth comprised primary activities such as agriculture, timber and fishing to a local economy driven principally by tourism and residential development. Other elements of the economy represented vestiges of the district's traditional base such as the fishing industry, dairy industry, saw milling and stock slaughtering, together with retail, commercial and fabrication and other light industries which service the residential population. It is important to maintain a balanced and diversified economic base. In the past, a number of opportunities did not eventuate because they were enticed to Batemans Bay. There are a number of opportunities which can form the basis of the structure plan.

11.3.1. Tourism Development

Opportunities exist to develop self catering accommodation at both ends of the budget spectrum. There are opportunities for the development of low impact tourist resorts at:

- Narrawallee Inlet
- west of Burrill Lake
- south of Dolphin Point.

Milton has the potential to act as a centre for heritage style guesthouses and bed and breakfast, similar to that successfully developed in Port Fairy in Victoria.

11.3.2 Retail and Commercial Development

Milton-Ulladulla has the potential to act as the retail and commercial centre for the southern Shoalhaven. However, its catchment is inroaded to the north by the regional centre of Nowra and by Batemans Bay to the south. In recent years Batemans Bay has expanded rapidly. To redress the current limited retail range in Ulladulla and to effect an adequate provision of shopping centres in the district, there are opportunities to develop the following:

- a major supermarket (Woolworths/Franklins) in Ulladulla
- leisure retail in Ulladulla and Mollymook
- limited neighbourhood retail at west Ulladulla and Dolphin Point
- limited speciality and heritage/leisure retail in Milton.

11.3.3 Light Service Industry

Light industry in the district has developed at a relatively modest rate in the past ten years. It is anticipated this will grow in parallel with the growth in residential development.

11.3.4 Information Age Industries

The attractive coastal environment of the district offers the opportunity to attract information technology based conventional industries as well as SOHO (Small Office Home Office) activities. This can be assisted via initiatives like the "Bega Telecottage", which can bring local business into contact with the World Wide Webb. By gaining direct access to the information super highway local business can sell to interstate and overseas markets without the need to go through middlemen in metropolitan centres.

11.3.4 Residential Development

As discussed earlier, the prospects for residential development in the district are currently not as sanguine as they were in the late 1970s and 1980s. Nevertheless, there are opportunities to develop the following:

- medium density residential
- retirement residential (with support)
- standard residential
- public housing.

The demand for rural residential development will be accommodated in a designated rural lifestyle zone to the west of Milton, well beyond the study area boundary.

11.3.5 Traditional Industries

Both the fishing and dairy industries have undergone a number of adjustments and restructuring over the past twenty years. It is anticipated there will be an on-going need to restructure and change in the future. This may result in a smaller fishing fleet in the case of the fishing industry and further farm amalgamation in the case of the dairy industry.

In addition to the two staple primary industries, there are a number of agricultural niche activities which could be undertaken without excessive subdivision that are worthy of investigation:

- wineries
- market gardens
- orchards
- boutique cheese making
- deer farming
- ostrich farming.

11.3.6 Other Opportunities

Other potential opportunities which would assist the diversification of the local economy cited by stakeholders during the study process include:

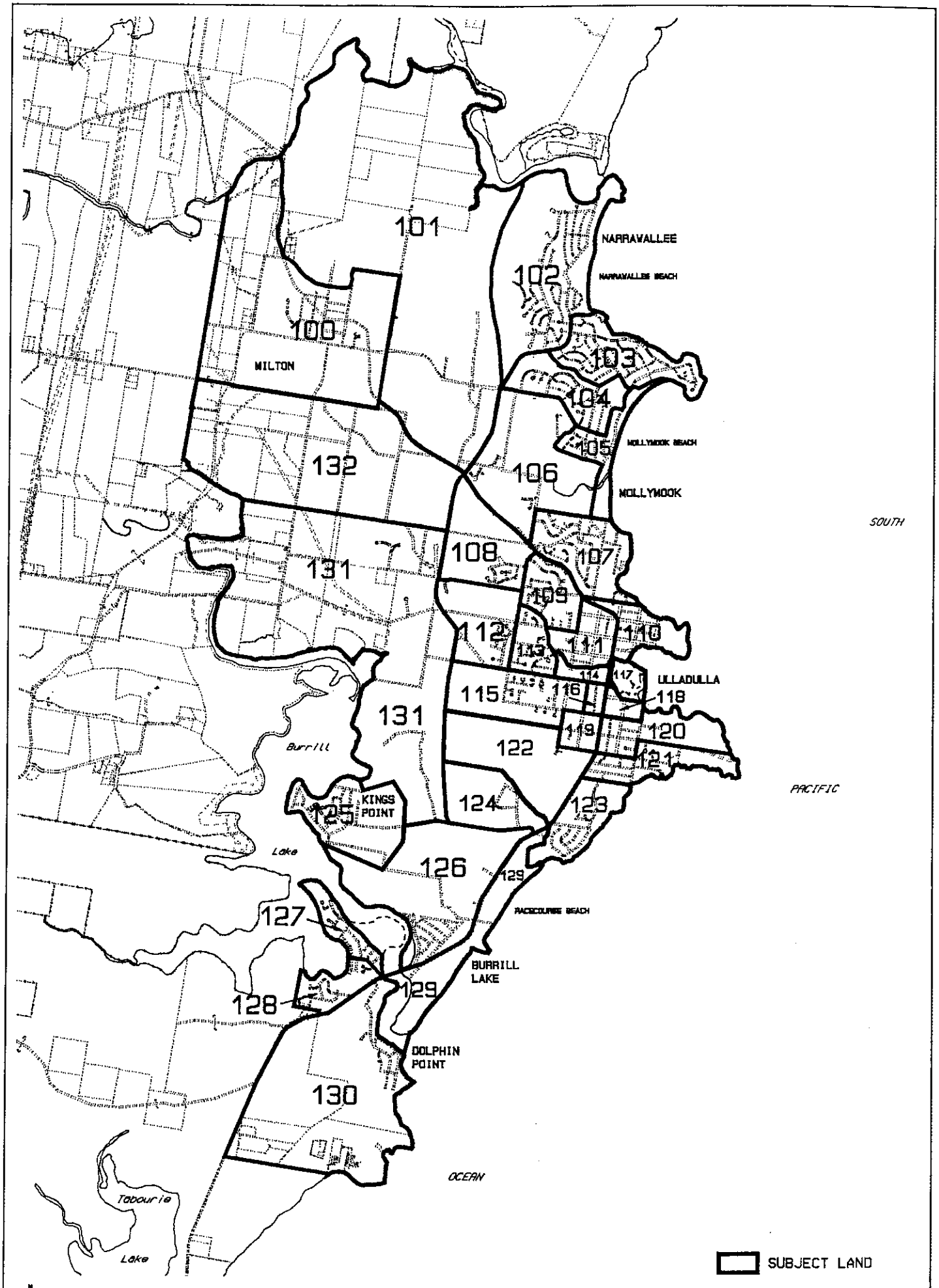
- private school summer campus (eg Scotts College field study centre)
- university campus annex
- private prison
- racecourse.

11.4 TRADE-OFFS

Essentially, planning is about the allocation of a limited supply of land to an array of competing uses. Milton-Ulladulla is no exception. Therefore, there will inevitably be compromises and trade-offs to accommodate competing demands. Generally, the trade-off is between the desire to achieve the highest and best use for the land and the need to take into account the intrinsic values of the environment and the resulting overall quality of life. Such decision-making is based on value judgments. This begs the question: whose values? The whole question of community values and the community's aspirations for the future is addressed in the Community Vision section contained in Volume 2 of this document.

Appendix A

LAND USE INVENTORY



TRACKS LANDUSE TRANSPORTATION ZONES

FIGURE A1

Table A1
Land Use Inventory Base Year: 1995

Zone	Dwellings	Population	Employment	Retail (m^2)	School Enrolments
100	321	940	329	2,180	536
101	43	70	2	0	
102	612	724	23	50	
103	647	852	34	1,220	
104	378	559	20	750	
105	255	274	16	0	
106	196	256	24	0	
107	504	851	78	0	
108	104	230	10	0	
109	266	588	12	0	
110	166	310	29	0	
111	208	389	44	0	
112	77	125	12	0	
113	244	456	10	0	
114	16	30	43	60	609
115	266	497	154	0	832
116	23	43	273	6,590	
117	0	0	112	0	
118	74	139	182	5,100	
119	75	173	169	6,500	
120	193	442	90	1,950	
121	275	480	23	0	
122	9	17	196	0	
123	198	318	25	60	
124	1	1	121	0	
125	218	381	9	115	
126	296	435	23	240	
127	204	250	7	0	
128	199	334	23	380	
129	32	48	27	180	
130	129	165	5	0	
131	39	63	4	0	
132	25	41	0	0	
Total	**6,293**	**10,481**	**2,129**	**25,375**	

Table A2
Activities by Zone

Zone	Retail (m^2)	Commercial (m^2)	Industrial (m^2)	Government (m^2)	Employment
100	2,180	520	10,100	240	329
101	0	0	0	0	2
102	50	0	0	0	23
103	1,220	130	0	0	34
104	750	0	0	0	20
105	0	0	0	0	16
106	0	35	220	0	24
107	0	0	0	0	78
108	0	0	0	0	10
109	0	0	0	0	12
110	0	0	0	0	29
111	0	150	690	0	44
112	0	0	935	0	12
113	0	0	0	0	10
114	60	0	430	4,220	43
115	0	140	2,250	0	154
116	6,590	2,283	245	0	273
117	0	0	2,425	0	112
118	5,100	2,243	410	0	182
119	6,500	160	7,320	0	169
120	1,950	80	1,680	0	90
121	0	0	0	0	23
122	0	400	7,850	0	196
123	60	27	540	0	25
124	0	0	14,475	200	121
125	115	0	0	0	9
126	240	80	0	0	23
127	0	0		0	7
128	380	0	190	0	23
129	180	0	0	0	27
130	0	0	0	0	5
131	0	0	0	0	4
132	0	0	0	0	0
Total	**25,375**	**6,248**	**49,930**	**4,660**	**2,129**

Table A3
Employment by Zone

Zone	Full Time Employees	Part Time Employees	Working at 9am
100	32	220	291
101	2	1	2
102	23	5	17
103	34	44	35
104	20	16	10
105	16	11	18
106	24	7	26
107	78	81	41
108	10	3	10
109	12	17	14
110	29	55	28
111	44	16	37
112	12	6	9
113	10	2	7
114	43	40	43
115	154	32	139
116	273	180	245
117	112	14	40
118	182	275	179
119	169	56	159
120	90	46	74
121	23	7	12
122	196	25	180
123	25	17	14
124	121	55	113
125	9	2	6
126	23	16	23
127	7	3	3
128	23	9	24
129	27	4	18
130	5	1	4
131	5	1	4
132	0	0	0
Total	**2,129**	**1,267**	**1,825**

Appendix B

HERITAGE INVENTORY

SHOALHAVEN CITY COUNCIL - HERITAGE INVENTORY

Number	Address	Suburb	Category	Description
MU 002	Croobyar Rd	Milton	Bu Ar	Methodist Church and graveya (former)
MU 003	71 Princes Hwy	Milton	Bu	Milton Library (former School o Arts)
MU 004	107 Princes Hwy	Milton	Bu	Former CBC Bank (now offices
MU 005	64 Princes Hwy	Milton	Bu	Milton Courthouse and former Police Station
MU 006		Ulladulla	Ar Ot	Ulladulla Harbour, Breakwaters and Piers
MU 007	Deering Street	Ulladulla	Ot	Warden Head Lighthouse
MU 008	Green Street	Ulladulla	Bu	Cottage
MU 011	Princes Hwy	Milton	Bu	"Narrawilly" and cottage
MU 012	Wilfords Lane	Milton	Bu	"Applegarth"
MU 014	Wilfords Lane	Milton	Bu Ar	"Lockleven" farm, outbuildings, plantings and cisterns
MU 015	Wilfords Lane	Milton	Bu Ar	"Pine View"
MU 017	Wilfords Lane	Milton	Bu	"Riverview"
MU 021	Millards Creek	Ulladulla	Ot	Weir
MU 022	Princes Hwy	Ulladulla	Bu	"Springfield"
MU 023	176 Princes Hwy	Milton	Bu	Candlemakers Cottage
MU 024	Wason Street	Milton	Bu	Former Ulladulla Council Chambers
MU 025	130 Princes Hwy	Milton	Bu Ar	"Eyrie Bowie"
MU 026	*53 Wason Street*	*Ulladulla*	*Bu*	*Former Post Office*
MU 028	Church Street	Ulladulla	Ar	Millard's Creek Mill and Fig
MU 031	9 Thomas Street	Milton	Bu	Milton School residence
MU 032	Cnr Wason St/Princes Hwy	Ulladulla	Bu	Hotel Marlin
MU 033	Corks Lane	Milton	Mu	Star of the Sea Catholic Churc
MU 034	Croobyar Road	Milton	Bu	Uniting Church (former Congregational Church)
MU 035	Croobyar Road	Milton	Bu	Former Congregational Manse
MU 036	Croobyar Road	Milton	Bu	"Claydon Park"
MU 037	61 Princes Hwy/Cnr Myrtle Street	Milton	Bu	Christels Restaurant (former shop/residence)
MU 038	67 Princes Hwy	Milton	Bu	Old Bakery
MU 039	69 Princes Hwy	Milton	Bu	Milton Cinema
MU 040	93-99 Princes Hwy	Milton	Bu	"The Settlement Row"
MU 041	Princes Hwy (inside Settlement Row)	Milton	Bu	Former Post Office/Store
MU 042	101-103 Princes Hwy	Milton	Bu Hc	Blackburn & Sons Stores
MU 043	111 Princes Hwy	Milton	Bu	St Peter and St Pauls Anglicar Church
MU 044	135 Princes Hwy	Milton	Bu	Medical Centre
MU 045	68 Princes Hwy	Milton	Bu	Milton Post Office
MU 046	82 Princes Hwy	Milton	Bu	Star Hotel
MU 047	Princes Hwy cnr Croobyar Road	Milton	Bu	Hackett's Restaurant

MU 048	92 Princes Hwy	Milton	Bu	Milton Ulladulla Bakery
MU 050	122 Princes Hwy	Milton	Bu Fmr	Ulladulla Lighthouse Keeper's Cottage
MU 051	150 Princes Hwy	Milton	Bu	"Melrose"
MU 052	179 Princes Hwy	Milton	Bu	Candlemakers Cottage
MU 053	1 Thomas Street	Milton	Ar Bu	Old Manse (former Wesleyan parsonage and graveyard)
MU 054	7 Thomas Street	Milton	Bu	Milton Public School
MU 055	Cnr Wason and Charles Streets	Milton	Bu	"King House"
MU 056	63 Wason Street	Milton	Bu	Residence
MU 057	Mitchell Pde	Mollymook	Ar	Sandridge Cemetery
MU 058	Green Street	Ulladulla	Bu Fmr	Ulladulla School residence
MU 059	Cnr Princes Hwy & Church Street	Ulladulla	Bu	Millard's Cottage Restaurant
MU 066	Commonwealth Ave	Burrill Lake	Bu	Burrill Lake Community Hall
MU 070P	Croobyar Creek	Milton	Bu Ar	"Old Croobyar Farm"
MU 071P	Garrards Lane	Milton	Bu	"Englemere"
MU 076	56 North Street	Ulladulla	Bu	"Mascot"
MU 077	Balmoral Road	Burrill Lake	Bu	Burrill Lake Open Air Theatre
MU 078	Princes Hwy	Milton	Ot	Milton Ulladulla District War Memorial
MU 079	51 Princes Hwy	Milton	Ar	"Times Past" Bed and Breakfa
MU 080P	94 Princes Hwy	Milton	Bu	Cottage (former bootmakers shop)
MU 081P	100 Princes Hwy	Milton	Bu	"Emmaus" Cottage
MU 082	131 Princes Hwy	Milton	Bu	"The Governor's Rest"
MU 083P	102 Princes Hwy	Milton	Bu	Hospital Annexe
MU 084	Princes Hwy	Milton	Bu	"Garrard House"
MU 085	141 Princes Hwy	Milton	Bu	House (former Salvation Army Hall)
MU 086P	145 Princes Hwy	Milton	Bu	House
MU 087	147 Princes Hwy	Milton	Bu	Denture Clinic
MU 088P	126 Princes Hwy	Milton	Bu	House
MU 089	128 Princes Hwy	Milton	Bu	Masonic Temple
MU 090	138 Princes Hwy	Milton	Bu	House
MU 091	140 Princes Hwy	Milton	Bu	House
MU 092	146 Princes Hwy	Milton	Bu	House
MU 093	148 Princes Hwy	Milton	Bu	House
MU 094	Church Street	Milton	Bu	Anglican Church Hall
MU 095	61 Wason Street	Milton	Bu	Former Corner Store
MU 096	45 Church Street	Milton	Bu	House
MU 097P	Princes Hwy	Milton	Bu	Butchers Shop
MU 098P	42 Wason Street	Milton	Bu	House
MU 099	54 Wason Street	Milton	Bu	Old Milton Studio
MU 100	69 Wason Street	Milton	Bu	"Esaux Villa"
MU 101	73 Wason Street	Milton	Bu	House
MU 102	62 Wason Street	Milton	Bu	House
MU 103P	66 Wason Street	Milton	Bu	House
MU 104	70 Wason Street	Milton	Bu	House
MU 105	79 Wason Street	Milton	Bu	Mudge's Corner
MU 107	17 Myrtle Street	Milton	Bu	"Chatburn"

MU 108P	19 Thomas Street	Milton	Bu	House
MU 109P	47 Church Street	Milton	Bu	House
MU 110P	62 Church Street	Milton	Bu	House
MU 111P	156 Princes Hwy	Milton	Bu	"Hillside"
MU 112	118 Croobyar Road	Milton	Bu	Milton Cheese Factory
MU 114		Milton		Milton Pastoral Landscapes
MU 116		Ulladulla	Ot	Ulladulla Seawater Pool
MU 118	137 Princes Hwy	Milton	Bu	Coolool Counselling and Thera Centre
MU 119	Mick Ryan Park	Milton	Ar	Fig Tree (Mick Ryan Park)
MU 121P	60 Wason Street	Milton	Bu	House
MU 122	Church & Main St	Ulladulla	Bu	Court House and Police Statior
Pending	Beside 187 Princes Hwy	Ulladulla	Pending	Cemetery (headstones)

Legend:
Bu - Building
Ar - Architectural
Ot - Other

Appendix C

COMMUNITY SERVICES: MISSION STATEMENTS AND GOALS

COMMUNITY SERVICES - GENERAL

Mission Statement

To recognise the principles of equity and social justice for all residents and to ensure accessibility to community services and facilities is maximised regardless of income and price, employment opportunities, access to transport, physical disability, language, race and other prejudices, access to information and capacity to inform Governments of their needs.

Goals

1. To promote the principles of community development, independence and self-management within community organisations.

2. To promote the development of Government and non- Government services to meet identified community needs.

3. To assist in the establishment, funding, management and training of community-based organisations.

4. To assist in the provision of accessible and adequate services for isolated communities as well as for more populated areas.

5. To integrate services to maximise the effectiveness and resource sharing and to minimise duplication of services.

6. To support and resource the community sector in the offering of an effective range of services to the community.

ABORIGINAL SERVICES

Mission Statement

To develop understanding, mutual respect and co-operation between Aboriginal people and non-Aboriginal people with the Shoalhaven and to promote equality of access to all community members.

Goals

1. To ensure equitable access to a range of facilities and services required by Aboriginal people.

2. To assist in the provision of these services and facilities where appropriate.

3. To enhance Aboriginal access to the decision-making processes which affect them.

4. To promote the implementation of reconciliation processes wherever possible.

SERVICES FOR THE AGED

Mission Statement

To provide accessible, effective and equitable services to all aged persons living in the Shoalhaven region in order to achieve optimal quality of life.

Goals

1. To enable the aged to reside in their own homes as independently as possible through the provision of adequate support for both the aged and their carers.

2. To seek the provision of a suitable range of accommodation for the aged within their own community when they are no longer able to reside in their own homes.

3. To ensure aged persons who are frail, chronically ill or suffering from any psychiatric, physical impairment or disability will be assisted to obtain an optimal level of functioning and quality of life through adequate provision of services to both the aged and their carers.

CHILDREN'S SERVICES AND FACILITIES

Mission Statement

To provide a comprehensive network of children's facilities and services throughout the Shoalhaven which allow for:

(a) the personal development, health and well-being of children; and

(b) the personal development, health and well-being of parents and carers.

Goals

1. To assist in the provision of an adequate range of facilities and services for children within the community to meet identified needs.

2. To ensure all children's services and facilities within the community offer a safe, caring and stimulating environment for children.

3. For Council and the community to continue to act as advocates for children's services within the Shoalhaven.

CULTURAL DEVELOPMENT

Mission Statement

To foster creative ways of enriching, celebrating and developing local communities to the benefit of the whole of the Shoalhaven.

Goals

1. To promote greater community awareness of, and accessibility to, cultural activities.

2. To expand the range of options for community involvement in cultural activities.

3. To engender a greater sense of confidence and pride in the City of Shoalhaven through culture and the recognition of character and identity.

SERVICES FOR PEOPLE WITH DISABILITIES

Mission Statement

To enable people with disabilities to achieve equality, dignity and quality of life through enhancement of access and acceptance within the community.

Goals

1. To assist the individual with a disability to achieve a level of maximum function and independence.

2. To assist people with disabilities to reside within their choice of accommodation within the community.

3. To assist people with disabilities to participate in a wider range of employment and educational opportunities.

4. To provide opportunities for expanding the social networks of people with disabilities within the community and to enable them to participate in a wide range of social experiences.

EDUCATION

Mission Statement

To ensure there are facilities and services in place to allow people of all ages, backgrounds and geographic locations in the Shoalhaven to participate in educational endeavours to meet their social, vocational or personal development needs.

Goals

1. To establish the required number of compulsory and post-compulsory facilities to meet the educational needs of the current population across the Shoalhaven.

2. To respond to the projected continuous growth in population by planning for a system of educational facilities throughout the area.

3. To monitor educational and training needs of young people and adults and to enhance access to appropriate learning facilities across the area.

4. To link training with employment opportunities to enhance employment prospects for Shoalhaven residents.

HEALTH SERVICES

Mission Statement

To work towards the highest standard of health achievable within the community through the provision of an optimal range of effective, accessible and equitable services and families.

Goals

1. To promote and maintain the physical, social and emotional health of all individuals within the community.

2. To encourage the individual to accept responsibility of his/her own health through education and the promotion of healthy lifestyles.

3. To ensure the community is involved at both the individual and organisational level in the planning, provision and evaluation of health services within the Shoalhaven area.

4. To enhance and extend the co-ordination and co-operation between health service providers and other community services and Government Departments to facilitate maximum usage and effectiveness.

5. To ensure the Shoalhaven area receives its appropriate amount of the available health funding.

HOUSING AND ACCOMMODATION

Mission Statement

To attract a range of both public and private housing stock to cater for current population needs and the projected increase population and to include the needs of special groups within the community.

Goals

1. To improve the level of affordability of housing.

2. To provide for quality of choice and a reasonable range of housing.

3. To ensure there are adequate levels of housing stock for people with special needs including people with disabilities, people with limited financial resources and women with young children.

4. To ensure people who are permanent residents within caravan parks have access to facilities and services to obtain a basic standard of living.

INDUSTRY AND COMMERCE

Mission Statement

To attract appropriate, sustainable, labour-generating industries to the Shoalhaven through the presentation of the area as an attractive location resulting in an acceleration of job opportunities.

Goals

1. For Council to review existing policies in the area of development applications and commercial, employment and industrial development activities.

2. To recommend changes to Council's existing policy and practices to ensure the offering of adequate support for suitable developments within the City.

3. To ensure the overall industry and development needs of the Shoalhaven are considered and that localised responses to these concerns are taken into account whenever practical.

4. To ensure Shoalhaven City Council is aware of all the various employment and training assistance packages through both Commonwealth and State Government Departments.

MULTICULTURAL

Mission Statement

To assist people from non-English speaking backgrounds to access existing services, to be aware of information available and to establish methods of support.

Goals

1. To ensure multi-cultural residents residing in the Shoalhaven receive appropriate support which will allow them equitable access to a wide range of community facilities and services which are accessible by the broader community.

2. To promote in the community an increased awareness and understanding of the needs of multi-cultural groups.

3. To promote an increased acceptance of multicultural groups and their culture, particularly those from non-English speaking backgrounds.

SPORT AND RECREATION

Mission Statement

To provide and maintain a quality range of safe, attractive and affordable recreation and leisure facilities which service a suitable mix of multi-purpose, passive and active recreation needs of the community.

Goals

1. To develop a comprehensive Council policy and strategic plan on the provision of sport and recreation facilities.

2. To design and build sporting and recreational facilities.

3. To set in place appropriate management plans for the most efficient use of these resources.

4. To support and liaise with community-based management committees of these facilities.

5. To oversee the safety and efficient management of beaches and swimming pools.

TRANSPORT

Mission Statement

To ensure transport access to all villages and towns in the Shoalhaven through the provision of an integrated road, rail and bus network of public transport.

Goals

1. To identify and develop public transport options.

2. To identify and to develop traffic, parking and cycling options.

3. To assess the operation and financial implications of these options.

4. To select an appropriate range of improvement programs.

WOMEN'S SERVICES

Mission Statement

To help all women in the community to realise their true potential through the removal of traditional gender based stereotyping and associated social, financial, educational and employment disadvantages.

Goals

1. To work towards gender-based equity and equal access to all services in the Shoalhaven.

2. To identify areas of disadvantage and discrimination to women.

3. To respond in a planned and affirmative manner to areas of discrimination.,

4. To seek enhanced access for skills development, training and employment for women in the Shoalhaven.

YOUTH SERVICES

Mission Statement

To ensure young people have maximum capacity to optimise their skills and personal development through accessing a comprehensive range of services and facilities.

Goals

1. To improve the level of services and facilities for young people in the Shoalhaven.

2. To improve access of young people to existing services and facilities.

3. To develop mechanisms where young people can play an increased role in the decision-making processes which affect them.

4. To provide positive avenues for personal development of young people and opportunities for them to contribute to the Shoalhaven.

Appendix D

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