

creating place



NOWRA BOMADERRY  
STRUCTURE PLAN

Shoalhaven City Council

# Preface

The Nowra Bomaderry structure plan comprises two parts: Strategic Direction and Background Report.

The Background Report provides the rationale and technical support to the Strategic Direction. The Background Report provides an analysis of the Nowra Bomaderry settlement system within its landscape setting. It looks in detail at the key components that make Nowra Bomaderry what it is today and identifies the motivators and trends that will, to varying degrees, influence its future transformation. The Strategic Direction and Background Report, together, will set Nowra Bomaderry's development-conservation agenda for the next 20-30 years.

The Nowra Bomaderry structure plan was prepared by Shoalhaven City Council with assistance from The Planning Group planning consultancy. It has also drawn on a number of studies undertaken by consultants specifically commissioned for this project, as well as relevant studies commissioned by other government and non-government organisations. Whilst the preparation of this structure plan has principally been the responsibility of Council's Strategic Planning Group, a 'whole-of-Council' approach has been adopted.

# Acknowledgement

Council wishes to acknowledge the valuable contribution of the late Ken Murray, whose inspiration, intellect and dedication is manifestly evident in the spirit and form of this structure plan.

**Note:**

The Structure Plan is not a legal planning document but rather one that provides strategic direction and guidance. It does not rezone land for development. It identifies land that will be further investigated in detail for possible rezoning and development through a public and transparent process as required in the Environmental Planning and Assessment Act 1979.

Adopted by:

Shoalhaven City Council  
24<sup>th</sup> October 2006

Endorsed by:

NSW Department of Planning  
25<sup>th</sup> February 2008

Shoalhaven City Council  
PO Box 42  
NOWRA NSW 2541  
telephone (02) 4429 3111  
facsimile (02) 4422 1816  
e-mail [planning@shoalhaven.nsw.gov.au](mailto:planning@shoalhaven.nsw.gov.au)  
internet [www.shoalhaven.nsw.gov.au](http://www.shoalhaven.nsw.gov.au)

**Disclaimer**

Every effort has been made to provide accurate and complete information. However, Shoalhaven City Council assumes no responsibility for any direct, indirect, incidental, or consequential damages arising from the use of information in this document.

**Copyright Notice**

No part of this publication may be reproduced in any form, or stored in a database or retrieval system, or transmitted or distributed in any form by any means, electronic, mechanical photocopying, recording, or otherwise without written permission from Shoalhaven City Council. All rights reserved.

Copyright © 2006, Shoalhaven City Council

---



place

## FOREWORD

It is with great pleasure that I present, on behalf of Shoalhaven City Council, this draft plan which will provide the framework for growth and development opportunities and conservation measures in the Nowra Bomaderry area for the next 20 years.

Nowra Bomaderry is the largest service centre south of Wollongong and is the Shoalhaven's main growth centre. The Shoalhaven area has been one of the fastest growing local government areas in New South Wales, over the last 30 years. Proximity to Sydney and Canberra, magnificent natural values and its varied recreation and employment opportunities has provided the impetus.

The Nowra Bomaderry Structure Plan is the second stage in the process of determining and implementing a strategic planning framework for the future of Nowra Bomaderry and follows on from the Nowra Bomaderry Concept Plan. This plan looks at the implications of the ongoing growth of the urban area and Nowra Bomaderry's long term role as the regional service provider. It addresses the need to balance this role with the need to conserve the significant environmental attributes of the area.

The Draft Structure plan will enable Shoalhaven City Council to implement policy and make planning decisions that ensure the three prime goals of the Plan – sustainable living, economic vitality and community wellbeing - are achieved.

I hope that all interested in the future of our area will take the time to review the contents and provide Council with community input which is so essential for the future planning of our City.



Greg Watson  
Mayor

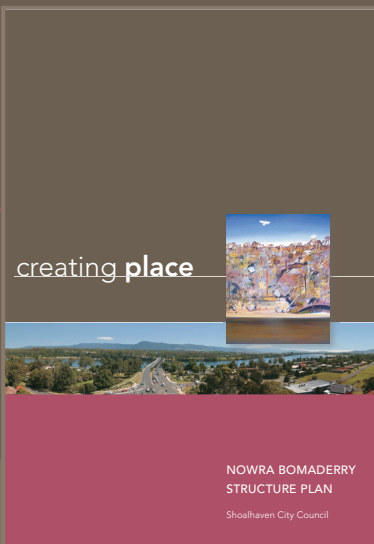
Shoalhaven City Council

---





# Strategic Direction





# Table of Contents

<b>1.</b>	<b>INTRODUCTION</b> .....	<b>1</b>
1.1	BACKGROUND .....	1
1.2	GOALS AND PRINCIPLES .....	1
1.3	URBAN STRUCTURE .....	3
<b>2.</b>	<b>LIVING AREAS</b> .....	<b>5</b>
2.1	EXISTING LIVING AREAS .....	5
2.2	NEW LIVING AREAS .....	11
<b>3.</b>	<b>CONSERVATION AREAS</b> .....	<b>29</b>
3.1	OBJECTIVES .....	29
3.2	VEGETATION COMMUNITIES .....	29
3.3	BIODIVERSITY RECOMMENDATIONS .....	29
3.4	THREATENED SPECIES .....	31
3.5	RIPARIAN CORRIDORS .....	31
3.6	CORE CONSERVATION AREAS .....	33
<b>4.</b>	<b>EMPLOYMENT</b> .....	<b>34</b>
4.1	COMMERCIAL AREAS .....	34
4.2	INDUSTRIAL AREAS .....	38
<b>5.</b>	<b>COMMUNITY FACILITIES</b> .....	<b>40</b>
5.1	OBJECTIVES .....	40
5.2	SCHOOLS .....	40
5.3	RECREATION AREAS .....	40
5.4	COMMUNITY FACILITIES .....	44
<b>6.</b>	<b>TRANSPORT</b> .....	<b>45</b>
6.1	OBJECTIVES AND PRINCIPLES .....	45
6.2	ROAD NETWORK .....	45
6.3	PUBLIC TRANSPORT .....	50
6.4	PATHWAY NETWORKS .....	50
<b>7.</b>	<b>URBAN INFRASTRUCTURE</b> .....	<b>51</b>
7.1	OBJECTIVES .....	51
7.2	WATER SUPPLY .....	51
7.3	WASTE WATER .....	51
7.4	SOLID WASTE .....	51
7.5	OTHER INFRASTRUCTURE .....	54
<b>8.</b>	<b>IMPLEMENTATION</b> .....	<b>55</b>
8.1	PATTERN OF DEVELOPMENT .....	55
8.2	DEVELOPMENT OF NEW LIVING AREAS .....	55
8.3	DEVELOPMENT OF EXISTING LIVING AREAS .....	55
8.4	DEVELOPMENT OF COMMUNITY FACILITIES .....	57
8.5	DEVELOPMENT OF COMMERCIAL AND INDUSTRIAL FACILITIES .....	57
8.6	LOCAL ENVIRONMENTAL PLAN (LEP) PROVISIONS .....	57

## List of Figures

Figure 1.1: Nowra Bomaderry: A Liveable Settlement

Figure 3.1: Riparian Corridor and Bushfire Asset Protection Zone

## List of Maps

Map 1.1: Urban Structure

Map 1.2: Structure Plan

Map 2.1: Existing Living Areas: Potential Urban Consolidation

Map 2.2: New Living Areas

Map 2.3: New Living Area 1: Moss Vale Road North

Map 2.4: New Living Area 2: Moss Vale Road South

Map 2.5: New Living Area 3: Bangalee Road West

Map 2.6: New Living Area 4: Crams Road.

Map 2.7: New Living Area 5: Mundamia

Map 2.8: New Living Area 6: Cabbage Tree Lane

Map 2.9: New Living area 7: Worrigeer

Map 3.1: Biodiversity Recommendations

Map 4.1: Proposed Commercial Areas

Map 4.2: Proposed Industrial Areas

Map 5.1: Proposed Education Facilities

Map 5.2: Proposed Recreation Facilities

Map 6.1: Proposed Road Network

Map 6.2: Public Transport Opportunities

Map 7.1: Proposed Water Supply

Map 7.2: Proposed Waste Water

Map 8.1: Possible Development Phasing: New Living Areas



place

# 1. INTRODUCTION

## 1.1 BACKGROUND

The 'Strategic Direction', together with the 'Background Report', form the Nowra Bomaderry Structure Plan. The Strategic Direction sets the development-conservation agenda for Nowra Bomaderry for the next 20-30 years. The Background Report provides the analysis and justification for the direction taken. The background trend, constraints and opportunities, and structure planning principles are articulated in the chapters and appendices of the Background Report.

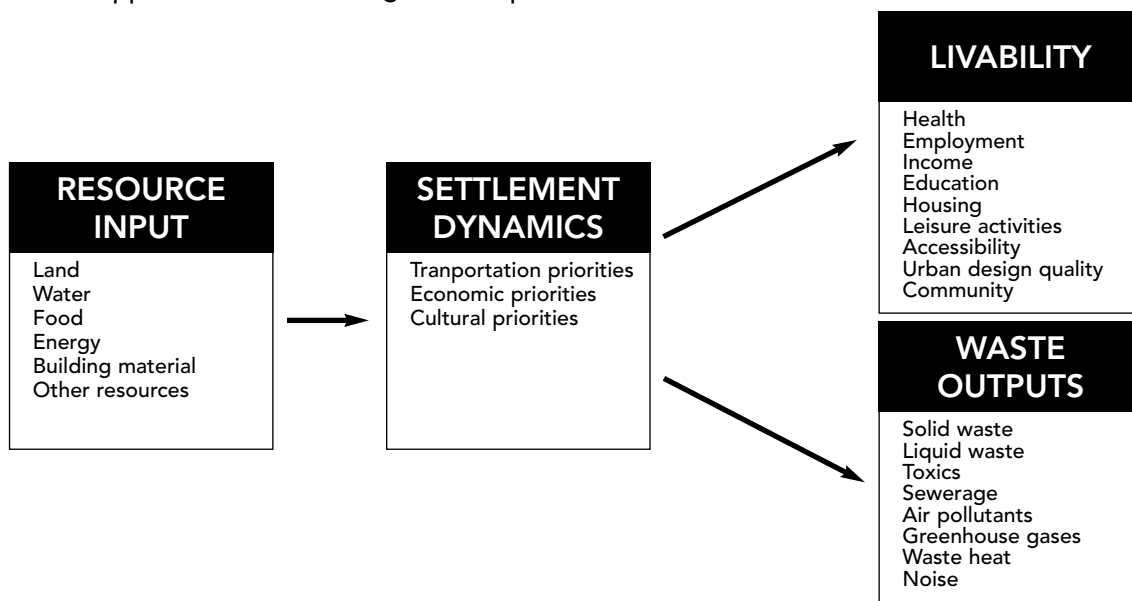


Figure: 1.1: Nowra Bomaderry: A Liveable Settlement

Source: After Peter Newman (1999)

## 1.2 GOALS AND PRINCIPLES

### 1.2.1 Goals

Three prime goals have been identified as the basis for the development-conservation of Nowra Bomaderry:

#### (1) Sustainable Living

Manage development and change to accommodate economic and population growth, in a manner which endorses community values, conserves natural resources and safeguards ecological systems (Figure 1.1).

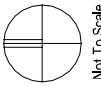
#### (2) Economic Vitality

Facilitate the diversification and expansion of Nowra Bomaderry's economy by building on the town's human resources, skills base and environmental quality of the Shoalhaven whilst strengthening regional linkages, providing efficient support networks, fostering innovation and rewarding enterprise.

#### (3) Community Wellbeing

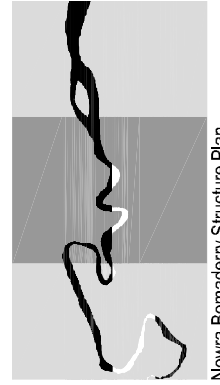
Provide living areas in Nowra Bomaderry, which maximise lifestyle quality and choice by engendering a healthy, caring and harmonious society where both individual and collective rights are respected and there is fair and reasonable access to facilities and services.



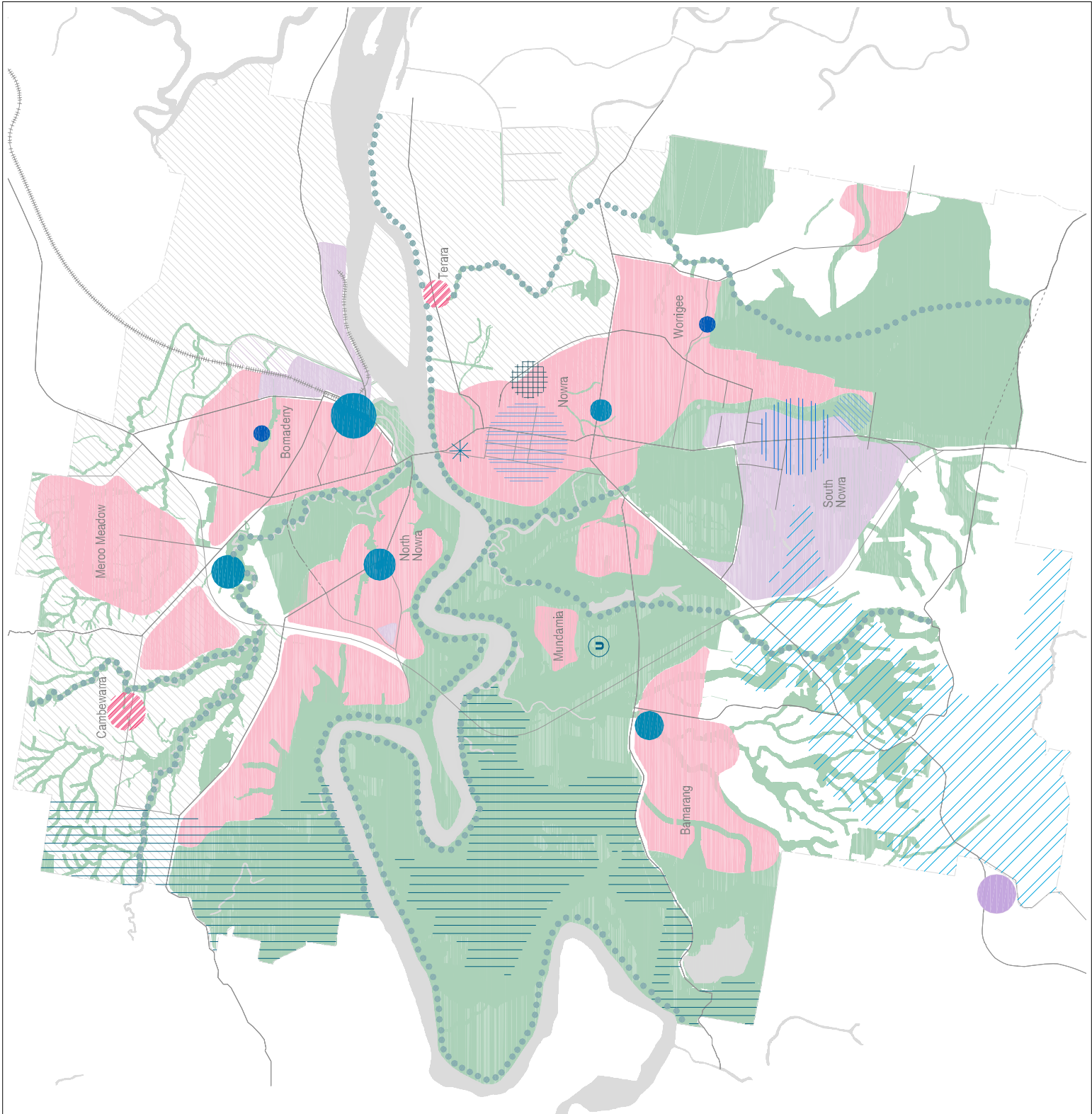


- Legend**
- Structure Plan Boundary
  - Pastoral Landscape
  - Conservation Area
  - Wildlife Corridor
  - HIMAS Albatross Operation Protection Zone
  - Possible Industrial Area
  - Industrial Area
  - Living Area
  - Village
  - Nowra CBD
  - Neighbourhood Centre
  - Local Centre
  - Bulky Goods Centre
  - Other Commercial
  - Major Sports Complex
  - Cultural and Convention Centre
  - Aviation Technology Park
  - Possible Off Road Movement Network
  - University

**Urban Structure**



Nowra Bomaderry Structure Plan



Map 1.1

### 1.2.2 Principles

The structure plan has the following sets of principles to guide the development of Nowra Bomaderry towards these goals:

#### ***Sustainable Living***

- Facilitate the delivery of environmental benefits
- Respond to local features
- Respect the past and present when creating the future
- Engender continuing adaptation and change
- Facilitate the achievement of high quality design

#### ***Economic vitality***

- Plan for the 'post industrial economy'
- Provide for the traditional 'industrial economy'
- Develop the urban areas in a cost-effective manner

#### ***Community Wellbeing***

- Endeavour to distribute benefits widely within the community
- Respond to community needs
- Engage the interest of the community

## 1.3 URBAN STRUCTURE
































An urban structure is proposed that will accommodate the level of forecast growth in accord with these goals and principles. This is illustrated in Map 1.1. This provides the foundation for the Nowra Bomaderry Structure Plan which is illustrated in Map 1.2.

A basic tenet of the structure plan is that Nowra will remain the primary urban centre within the region, accommodating much of the City of Shoalhaven's predicted growth. The structure plan makes provision within Nowra Bomaderry for:

- **Living Areas:** Consolidating existing urban areas and identifying new neighbourhoods.
- **Conservation Areas:** Protecting threatened species and vegetation communities, providing riparian corridors and habitat linkages.
- **Employment Areas:** Supporting existing retail centres, developing new neighbourhood centres and identifying future industrial land.
- **Community Facilities:** Providing for new primary and high schools and identifying future recreation and community facility provision.
- **Transport:** Identifying a western bypass road and district road network.
- **Urban Infrastructure:** Providing for new infrastructure to service new neighbourhoods.
- **Implementation:** Proposing an indicative implementation phasing sequence.

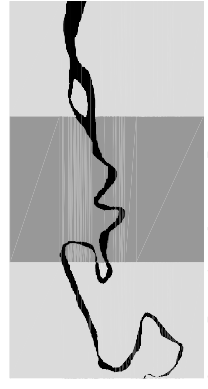
The following chapters articulate these facets of the structure plan.

Legend

-  Structure Plan Boundary
-  Existing Living Area
-  Future Living Area
-  Possible Future Living Area
-  Future Long Term Living Area
-  Existing Rural Residential
-  Existing CBD Area
-  Existing Neighbourhood Centre
-  Future Neighbourhood Centre
-  Existing Local Centre
-  Future Local Centre
-  Existing Other Commercial
-  Future Other Commercial
-  Existing Industrial Land
-  Future Industrial Land
-  Existing School/TAFE
-  Future School
-  Existing University & TAFE Campus
-  Existing Active Recreation
-  Future Active Recreation
-  Conservation & Riparian Area
-  Future Active/Passive Open Space or Conservation
-  Future Advanced Screening
-  Scenic Protection Areas
-  Rural Area
-  Future Western Bypass
-  Bypass alignment in this location subject to further detailed investigation as part of LEP
-  Main Roads
-  Local Road Network
-  North Nowra Link Road Options
-  South Coast Correctional Centre Site

Adopted by Council on 24th October 2006 and 25th September 2007.  
 Endorsed by the Department of Planning 28th February 2008.

Structure Plan

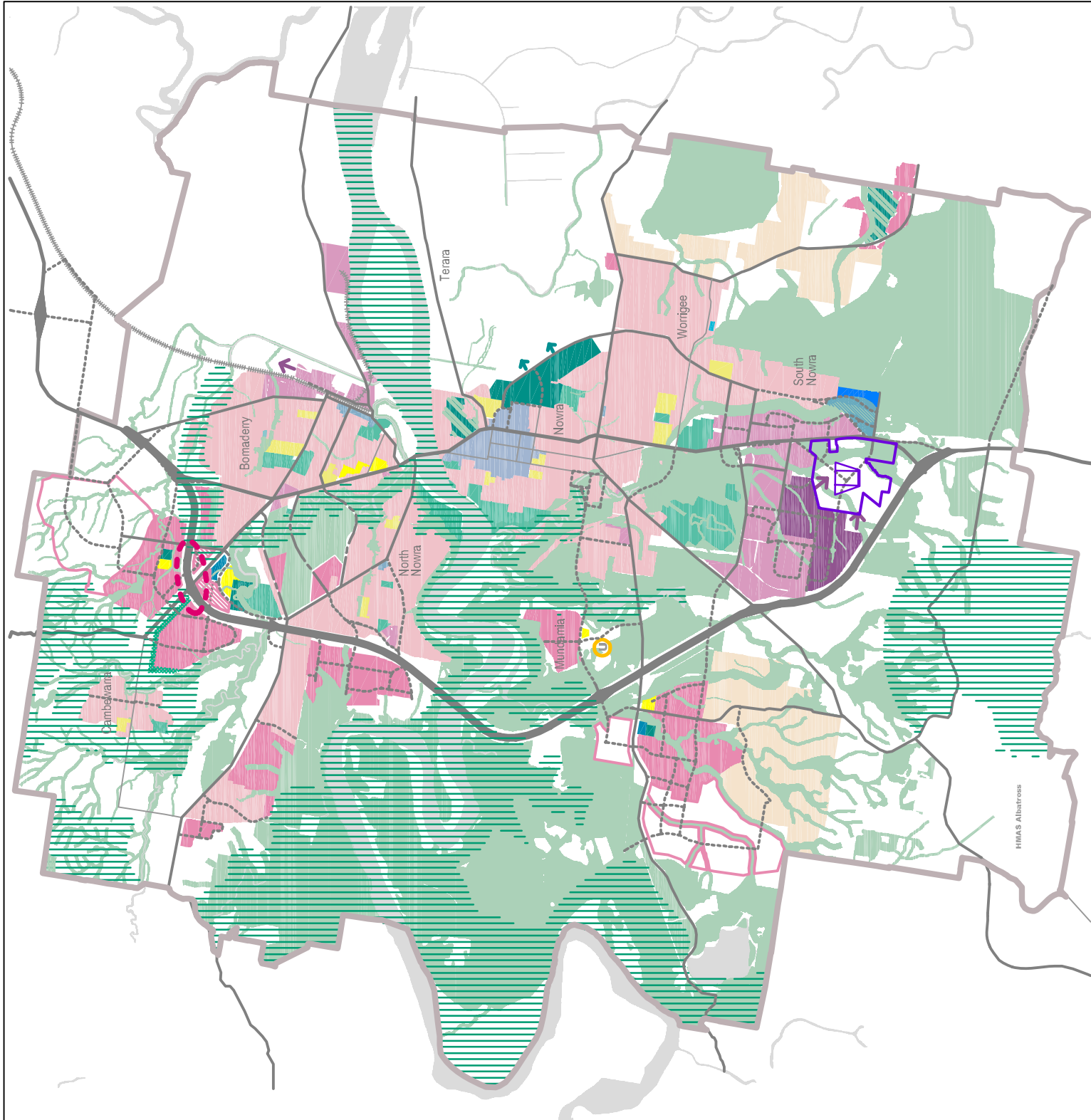


February 2008



Not To Scale

Nowra Bomaderry Structure Plan





place

## 2. LIVING AREAS

Strategic directions are provided for both existing and new living areas. The strategy seeks to balance pressure for the establishment of new living areas with the need to revitalise and, where appropriate, restructure existing neighbourhoods. Introducing higher densities in the existing areas will tend to:

- Make these areas more viable in terms of urban and community services.
- Reduce the urban footprint thus conserving land with high agricultural and biodiversity value.

This is consistent with State Government Policy which advocates a range of dwelling types and living opportunities including a strong component of urban consolidation where infrastructure supports increased densities.

Areas within Nowra Bomaderry nominated for further investigation in this regard meet with the locational criteria normally associated with such areas. Community input is sought on the extent of such investigation areas which acknowledges that only a proportion of the areas will in fact be taken up either through the subsequent Local Environmental Plan process or developed after any rezoning has been effected.

The Department of Housing has expressed a general desire to provide a range of opportunities on its sites.

### 2.1 EXISTING LIVING AREAS

The existing living areas of Nowra Bomaderry comprise:

- Bomaderry
- Cambewarra
- North Nowra
- Nowra
- Terara

#### 2.1.1 Bomaderry

**Opportunities:** Bomaderry provides a number of opportunities for future development:

- Bomaderry has a diversity of economic activities providing employment including offices and shopping centres at Meroo Street and Lyndhurst Drive, trade areas on the Princes Highway and Bolong Road, industrial areas east of the railway line and along Bolong Road, retail along the Princes Highway and schools.
- A unique location for industrial land alongside the Shoalhaven River with access to the railway line.
- The area is well served by transport infrastructure. The Bomaderry Railway Station is a transport node for rail and bus for tourists, local residents and commuters. The Princes Highway provides road access to regional and local destinations. An existing road hierarchy provides for local access.
- Potential for urban housing renewal (and diversity of housing types) in close proximity to Meroo Street shopping centre.
- The existing subdivision pattern and grid street layout west of the shopping centre is well suited to medium density redevelopment.
- Community facilities such as open space and schools are generously provided.

**Constraints:** The following constraints may impact on future development of Bomaderry.

- Location of a number of land uses in close proximity can lead to conflicts over operational requirements.
- Proximity to intermittent odour producing activities – sewerage treatment plant, industrial waste water facilities.
- Meroo Street shopping centre in need of upgrading and centre revitalisation.
- Uncertainty of maintaining long term passenger train services.
- Shoalhaven River and flood prone land to the north and east.

## Desired Future Character

Bomaderry will continue to be a significant part of the Nowra area with a diversity of activities and a strong community focus. An invigorated and active shopping centre at Meroo Street will provide a revitalised focus for Bomaderry. Increasing the number of people living in close proximity to the shopping centre will support the centre's revitalisation and increase the diversity of housing types within Bomaderry. The range of employment opportunities will be retained supporting the long term future of the neighbourhood.

Consolidation of residential dwellings within 800 metres of the Meroo Street shopping centre will increase the number of people living within approximately 10 minutes walk of the shops. Renewal of this area will:

- Diversify housing in Bomaderry, therefore increasing housing type choice.
- Contribute towards revitalisation of the shopping centre.
- Enable greater use of existing infrastructure, providing areas for increased development with lower costs than new subdivision areas.
- Be consistent with the recommendations of the Shoalhaven Housing Strategy of July 2001.

Residential flat buildings will provide intensive medium density housing immediately to the west of the shopping centre (approximately 7.5 hectares). The transition between the intensive development surrounding the shops and the detached housing to the west will be achieved through a transition area of less intensive medium density housing, such as terraces, townhouses and villas (approximately 11 hectares).

Bomaderry shopping centres (Meroo Street and Lyndhurst Drive) will continue to provide for the convenience retail needs of the local community. The long term viability of the Meroo Street shops will be enhanced by increasing the population living in close proximity to the shops. This will increase the patronage of local businesses and promote a diversity of activity needed in a viable shopping centre. Revitalisation of the shopping centre and urban design improvements to public spaces will also contribute towards improving the vitality and viability of the shops. Mixed use development in a retail centre is appropriate where design, siting and construction minimise conflicts between commercial and residential properties.

Bomaderry will remain a valuable area for industrial development requiring a location in close proximity to the river with convenient access to a railway line. Future renewal of existing sites will maintain employment opportunities and the diversity of economic activity within Bomaderry. Given the close proximity of the industrial land to houses and neighbourhood centres, the suitability of future industry in Bomaderry will require consideration of the environmental impacts of the industry's operation, such as traffic, odour emissions and air quality.

The Bomaderry Railway Station and its role as a transport node is an important component of the neighbourhood's future. It creates a local and regional focus at the Meroo Street local centre and is an important component of the neighbourhood's future. Proximity to the existing transport node is an important consideration in recommending land for medium density development. Continued operation of the South Coast Railway service is supported. The Princes Highway will be retained as the main road through Bomaderry. No major changes to the existing road network in the Bomaderry area are envisaged.

Heritage properties in Bomaderry provide character and connection to the town's history. Items of Environmental Heritage have recently been included in a draft Local Environmental Plan.

Bomaderry Creek is a valuable natural feature providing an attractive natural landscape in an urban setting. It will be retained and protected through a 100m wide riparian corridor to protect the environmental performance of the creek, its sandstone cliffs, and vegetation. An open space network alongside the creek, incorporating a pedestrian and bicycle route, will provide an important connection to residential areas to the north west of Nowra and Bomaderry, including new residential areas proposed in this plan. Mulgen Creek flows into Abernethys Creek and both creeks will have a riparian corridor of 60m.

---

### 2.1.2 Cambewarra

Cambewarra will remain a discrete village in a rural landscape. The existing village character will be retained and no further expansion of the village is proposed. Infill and re-development will continue to occur within the village.

The rural outlook from Cambewarra to the east will be altered by a new living area, being Area 2 at Moss Vale Road South. Good Dog Creek and its associated riparian corridor will provide physical separation and a visual buffer between the two areas. A planted buffer is also provided between Area 2 and Main Road, which is the main approach to Cambewarra.

### 2.1.3 North Nowra

**Opportunities:** Opportunities for the future development of North Nowra include:

- Proximity to Nowra CBD provides access to a wide range of retail and commercial services.
- An existing neighbourhood shopping centre, centrally located on the corner of Illaroo Road and McMahons Road.
- Proximity to open space and recreation facilities (passive and active) including the northern bank of the Shoalhaven River.
- Potential for housing renewal in keeping with the existing character of the neighbourhood.
- Established native vegetation provides a valuable contribution to the neighbourhood's identity, with well-planted streets and views to bushland surrounds.

**Constraints:** The following constraints may impact on the future development of North Nowra.

- Illaroo Road provides the only vehicle access between North Nowra and the Princes Highway. The intersection of Illaroo Road and Princes Highway is often congested.
- A curved street network with many cul-de-sacs provide few through routes.
- Native vegetation and bushfire risk issues on the edges of North Nowra.

#### Desired Future Character

North Nowra will remain a residential suburb of Nowra. Consolidation of residential housing, as low scale medium density development, is appropriate along main roads and in close proximity to the shopping centre. Suitable areas are located along the urban sections of McMahons Road and Illaroo Road, as well as select areas between these two roads, to the west of the shopping centre.

The future development of North Nowra will maximise access and connectivity of streets. A new road is proposed between Illaroo Road and the Princes Highway, joining the Princes Highway at West Bunberra Street, Bomaderry. Another new road is proposed further to the northwest, between Illaroo Road and Moss Vale Road. This will provide North Nowra with access to the new neighbourhood centre and high school at Moss Vale Road.

The Shoalhaven River and the vegetation along its banks will continue to provide a valuable natural setting in North Nowra, as well as views along the river. A riparian corridor with a minimum width of 60m from the top of the river's bank applies. The Bomaderry Creek to the east of North Nowra is also an important natural resource. The riparian corridor protecting this creek is outlined in the section on Bomaderry.

Proximity to Bomaderry Creek provides convenient access to the open space network along this creek, including the regional pedestrian and bicycle path along the Bomaderry Creek. The landscape attributes and pleasant streetscapes within the neighbourhood are to be retained.



## 2.1.4 Nowra

**Opportunities:** A number of opportunities exist for the future development of Nowra.

- Nowra is an existing regional employment and retail centre, with access to regional services including a hospital and university campus.
- It is well served by an existing transport network, with regional and local roads and public transport (buses).
- Situated on the southern bank of the Shoalhaven River, is within convenient walking distance from Nowra CBD. The river's edge is part of a valuable open space network.
- Potential for urban housing renewal in proximity to the centre of town.
- Existing streetscapes are of high quality and provide views to the escarpment. The grid street pattern provides convenient access and legibility.
- Industrial land exists (and could be expanded) in South Nowra to provide employment opportunities and further services for residents.

**Constraints:** The following constraints impact on the future development of Nowra:

- Terara Swamp constrains land to the east.
- Shoalhaven River defines the northern boundary of Nowra.
- Steep, vegetated land and Nowra Creek form the western boundary.
- Heavy reliance on the Princes Highway and single river crossing can cause traffic congestion.
- The town centre (or CBD) straddles the Princes Highway.

### Desired Future Character

Nowra will remain the primary commercial and administrative centre for the region. Opportunities for consolidating development within Nowra focus on the existing Nowra CBD as environmental constraints limit further outward urban expansion.

Opportunities exist for consolidating residential development within the existing CBD, west of the Princes Highway, in the form of mixed use developments. This form of development would see commercial uses on lower floors with residential above. In order to maintain the long term amenity and function of mixed use developments, it is important that buildings be designed and sited to minimise conflict between different uses within the one building. Residential land within 800m to the west and south of the Nowra CBD also has potential to increase the population living in close proximity to the centre. Increasing the number of people living in close proximity to Nowra CBD would:

- Support the long term future of a vibrant, active centre.
- Provide housing in close proximity to a major employment centre.
- Reduce car travel to shops and services.
- Provide housing for an increased population within the existing urban area.
- Diversify housing types in Nowra, therefore increasing choice.
- Utilise and support existing infrastructure.

It is important to achieve transitions between areas, such that the intensive built form within central Nowra steps down in building size and scale to detached housing and eventually to the non-urban edge of town. The interface between urban and non-urban areas is also very important to the future character and amenity of Nowra, as it provides recreation facilities and opportunities for views to natural features.

The Shoalhaven River is a significant environmental feature in the region. It is also of high scenic importance as the river and its vegetated banks provide many impressive views, contrasting with the urban environment of Nowra. The environmental quality and natural setting are to be retained and future development along its banks will be secondary to the natural landscape. A riparian corridor with a minimum width of 45m from the top of the river's southern bank applies. Views to the escarpment along streets are to be retained. Heritage properties will provide valuable character and diversity within Nowra.

The Princes Highway is the main road route through Nowra, the commercial and office uses along this road will be retained. The principle of consolidating land uses in the centre of Nowra applies to land adjacent to the Princes Highway. However, residential uses in this area are excluded. Industrial development will continue in South Nowra, along the Princes Highway and in the Flinders Industrial Estate.

## 2.1.5 Terara

Terara will be retained as a small village. The location of the village on the floodplain of the Shoalhaven River, with flood prone agricultural land surrounding the town and the Shoalhaven River immediately to the north, provide significant environmental constraints to further expansion of Terara. Terara is a historic village and is an important component of the history of Shoalhaven, thus the heritage character of Terara will be maintained.

## 2.1.6 Current Capacity Situation

Within currently zoned areas of Nowra Bomaderry there is a realistic potential for the development of a further 1,863 dwellings (1,497 detached and 366 medium density dwellings) (Table 2.1). On the basis of anticipated demand and take-up rates, this could be fully developed by 2011.

Table 2.1: Existing Living Areas: Existing Residential Zoned Land Capacity

Locality	Existing Development			Potential Development			Total Dwelling Capacity		
	Detached	Medium	Total	Detached	Medium	Total	Detached	Medium	Total
	Dwellings	Density	Dwellings	Dwellings	Density	Dwellings	Dwellings	Density	Dwellings
Bomaderry	2,351	503	2,854	80	161	241	2,431	664	3,095
Cambewarra	395	3	398	10	0	10	405	3	408
North Nowra	2,170	282	2,452	205	17	222	2,375	299	2,674
Nowra	5,184	671	5,855	1,202	188	1,390	6,386	859	7,245
<b>Total</b>	<b>10,100</b>	<b>1,459</b>	<b>11,559</b>	<b>1,497</b>	<b>366</b>	<b>1,863</b>	<b>11,597</b>	<b>1,825</b>	<b>13,422</b>

Notes: Includes recent urban rezonings.  
Excludes development in the Bomaderry Creek area & some State land.  
Excludes state land north of the water treatment plant at West Nowra and allows for further medium density development.

## 2.1.7 Urban Consolidation and Revitalisation

A preliminary assessment of the residential yield from urban consolidation and revitalisation indicates a crude net increase of 6,670 dwellings within the six areas (Map 2.1 and Table 2.2).

Table 2.2: Existing Living Areas: Consolidation & Revitalisation: Dwelling Yield

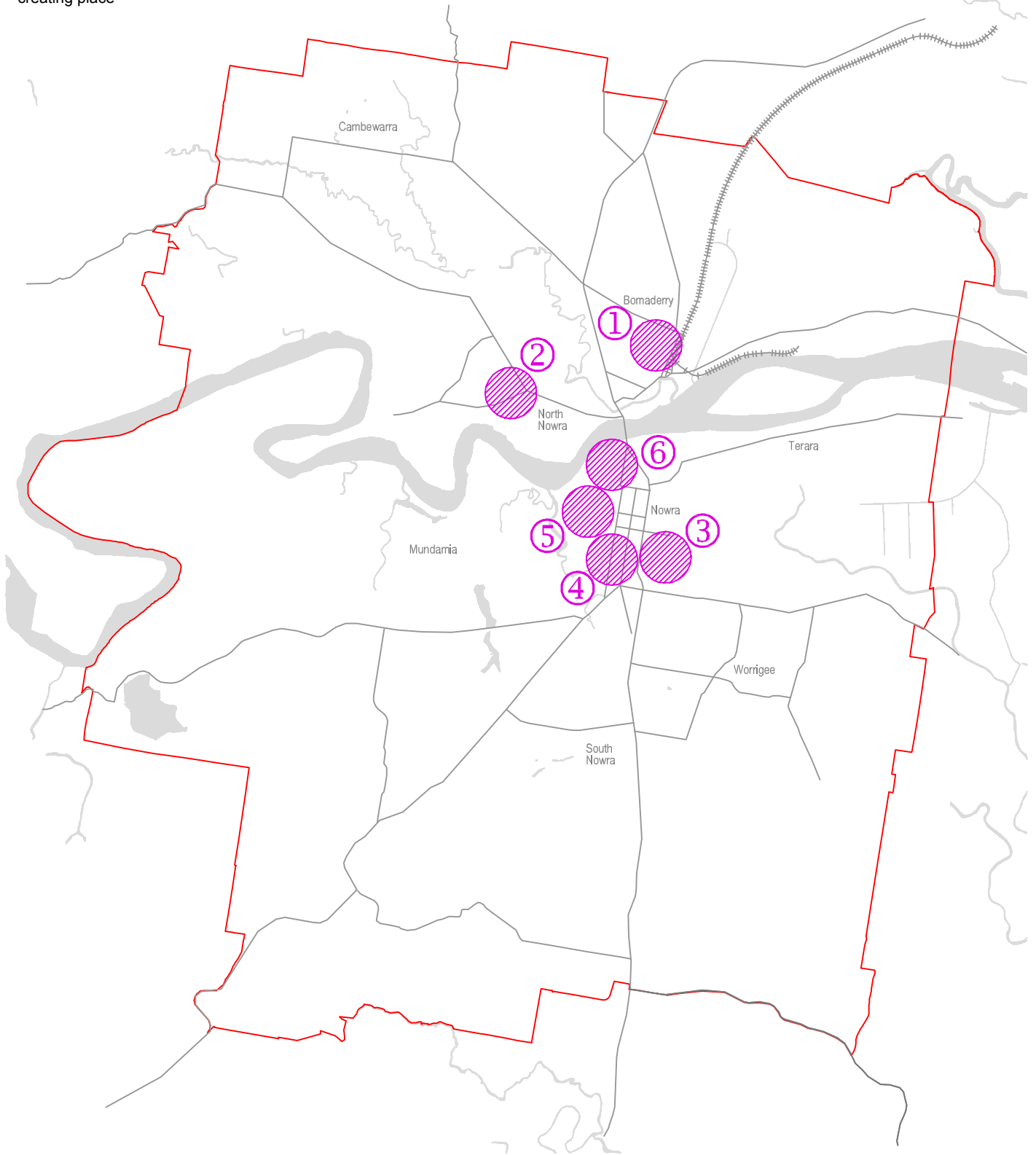
Location	Area ha	Existing Dwellings	Additional Dwellings	Dwelling Net Increase
Bomaderry	30.14	399	1821	1482
North Nowra	35.64	518	2323	1805
CBD East	39.73	479	2094	1615
CBD South	31.95	423	1738	1315
CBD West	7.71	108	370	262
CBD North	5.80	87	278	191
<b>Total</b>	<b>150.97</b>	<b>1954</b>	<b>8624</b>	<b>6670</b>

*There will be a need for increasing housing densities in appropriate locations within the Nowra Bomaderry Structure Plan study area to provide affordable housing choice to accommodate projected growth, meet the needs of the aging population and to satisfy the requirements of State government policy. Further information can be found in Section 9.5 of the Background Document. Incentive based criteria for developers who meet some or all of the criteria that will result from the strategies, may be put in place to encourage timely and appropriate development. These strategies are as follows:*

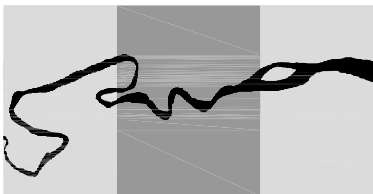
Medium density housing is encouraged within close proximity to commercial centres in the identified locations of Bomaderry, North Nowra and Nowra.

Potential redevelopment projects should meet neighbourhood specific urban design principles that will be created for these identified areas.

The mixing of compatible commercial and residential land uses is encouraged when it will reduce dependence on car usage or improve the balance between jobs and housing without creating incompatible land use relationships.




**Existing Living Areas:  
 Potential Urban Consolidation**



Nowra Bomaderry Structure Plan

**Legend (Options For Further Investigation)**

-  ① Bomaderry
-  ② North Nowra
-  ③ CBD East
-  ④ CBD South
-  ⑤ CBD West
-  ⑥ CBD North



October 2006



## 2.2 NEW LIVING AREAS

This strategy identifies seven new living areas for future development (Map 2.2 and Table 2.3). Existing characteristics and landscape features form the basis from which the character of each neighbourhood will be developed. Future subdivision and development of the new living areas will achieve the goals and objectives of this plan and are guided by design principles.

Table 2.3: **New Living Areas: Development Capacities**

New Living Area	Area ha	Density Dwells/ha	Dwellings No	Population No
Area 1: Moss Vale Road North	108.0	12/ha	1,300	3250
Area 2: Moss Vale Road South	99.3	12/ha & 15/ha	1,250	3125
Area 3: Bangalee Road West	16.3	12/ha	200	500
Area 4: Crams Road	89.9	12/ha	1080	2700
Area 5: Mundamia	53.0	12/ha & 20/ha	720	1800
Area 6: Cabbage Tree Lane	182.4	12/ha	2180	5450
Area 7: Worrigeer	32.6	12/ha	390	975
<b>Total</b>	<b>581.5</b>		<b>7120</b>	<b>17800</b>

Note: (1) Area 4 Crams Road's area will be reduced because of riparian corridor.  
(2) Population based on projected 2016 household size (2.5).

### 2.2.1 Area 1: Moss Vale Road North

Area: 108 hectares

#### Existing Considerations

Existing considerations for the future development of Area 1 (Map 2.3) include:

- Undulating topography with steeper gullies in the south western part of the area.
- Abernethys Creek and associated tributaries extend across Area 1, flowing into the Shoalhaven River.
- The area is part of an impressive pastoral landscape that is of high scenic value.
- The area is predominantly cleared for agricultural purposes, with contained areas of Spotted Gum-Grey Ironbark Forest.
- Bells Lane extends through Area 1 connecting to Moss Vale Road.
- The predominant use of adjoining land is agricultural.
- Several large stands of Spotted Gum - Grey Ironbark Forest are located to the south.
- Area 1 is in close proximity to the escarpment.

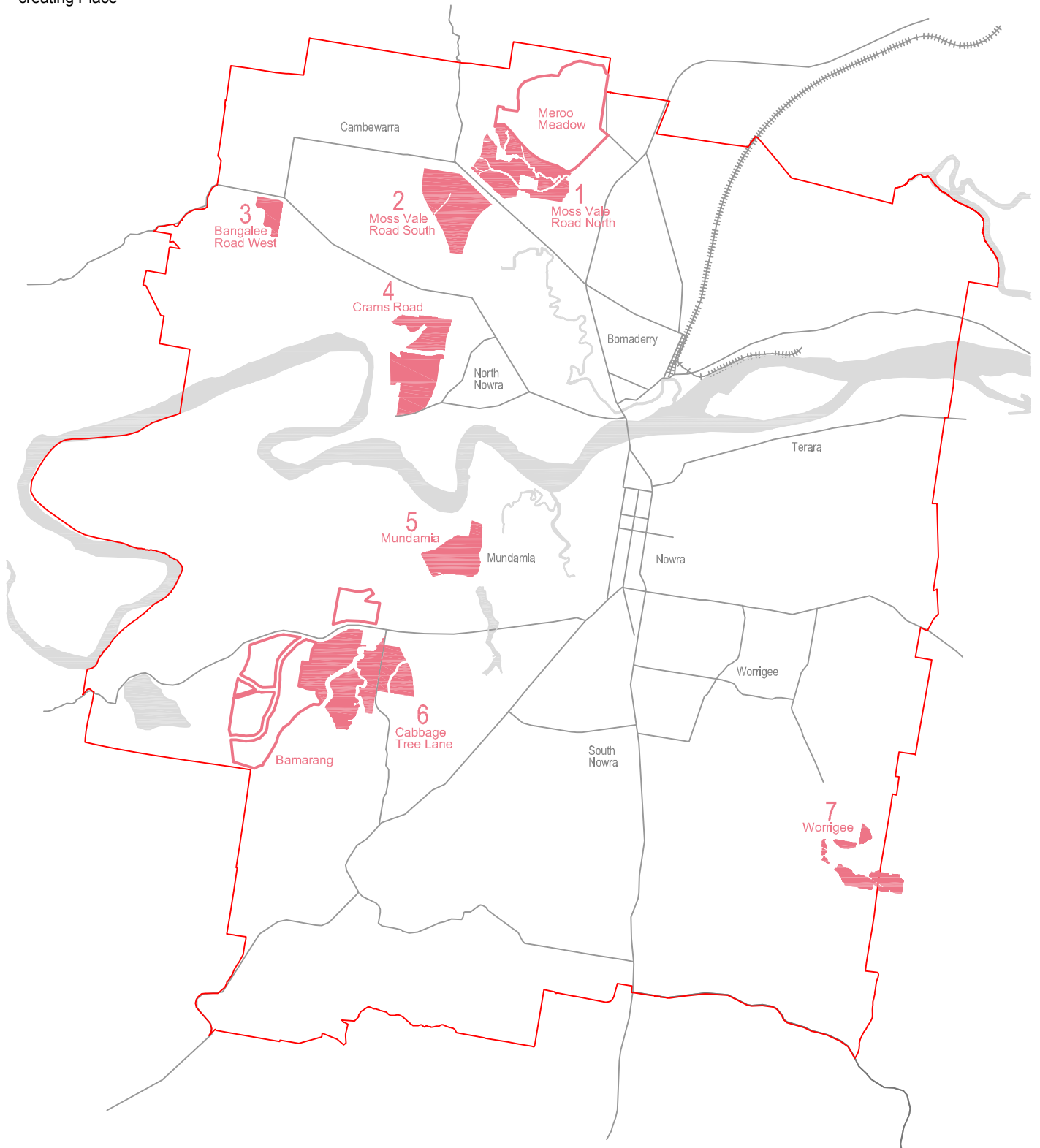
#### Desired Future Character

Proximity to the escarpment and the pastoral landscape provide an impressive setting for the neighbourhood. They will make a strong contribution to the neighbourhood's future identity, shaping view corridors out of the neighbourhood.

Area 1 will consist principally of residential development with conservation areas and open space networks. Housing will consist of a majority of detached houses with a component of medium density housing.




Continuous riparian corridors along Abernethy's Creek and the larger tributary to the south will protect the environmental integrity of the waterways, provide valuable natural features within the neighbourhood, and shape an open space network through the neighbourhood.

Moss Vale Road will provide vehicle access to and from the neighbourhood. Bells Lane will be retained and incorporated into the street network. The open space network associated with the continuous riparian corridors will provide a valuable opportunity for a pedestrian and bicycle network through the neighbourhood. The open space network will maximise connections to nearby areas.



**New Living Areas**

**Legend**

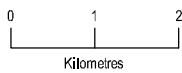
-  Structure Plan Boundary
-  Future Living Areas
-  Future Long Term Living Areas



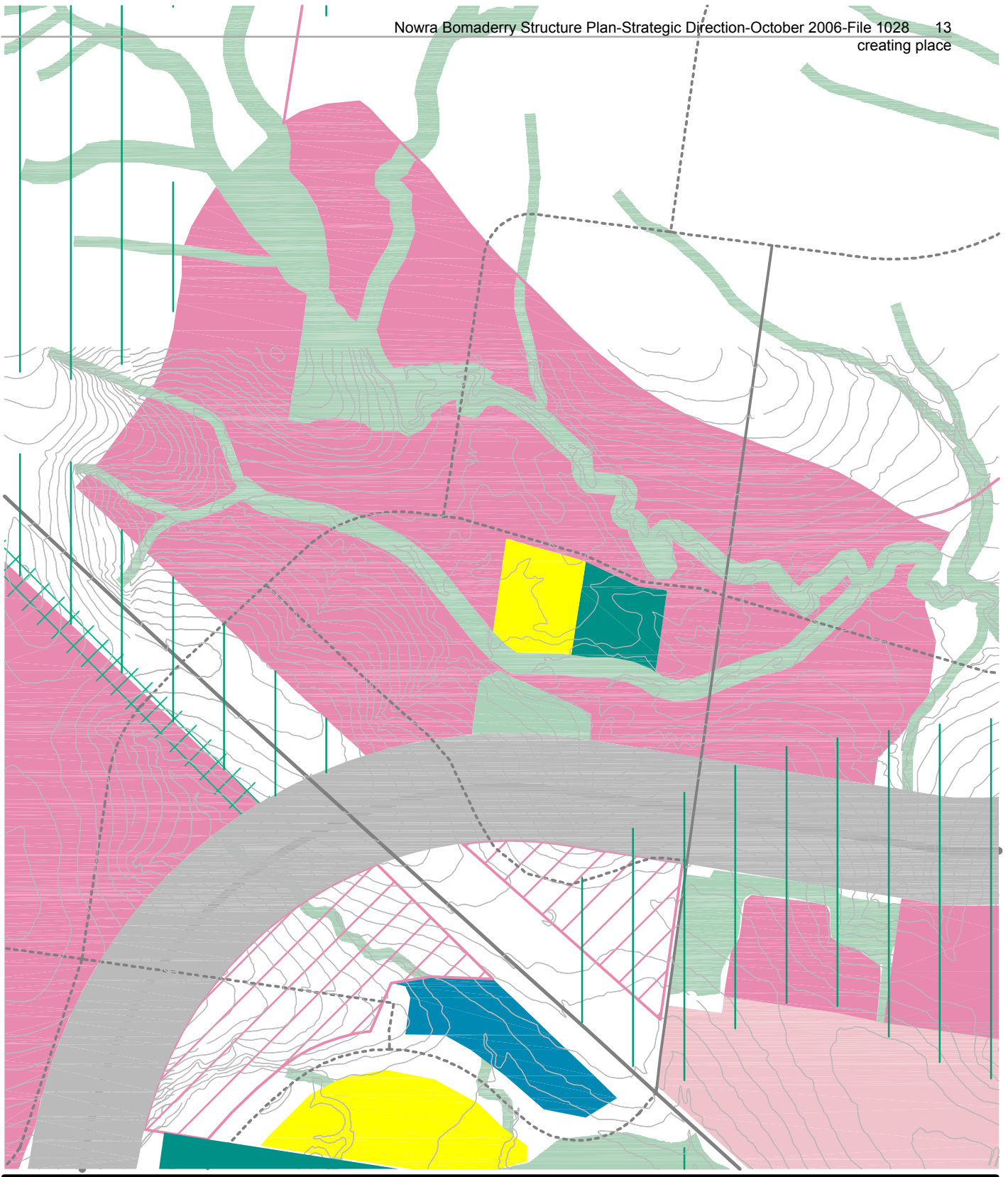
Nowra Bomaderry Structure Plan



October 2006







**New Living Area 1:  
 Moss Vale Road North**



Nowra Bomaderry Structure Plan

**Legend**

- |  |                              |  |                              |
|--|------------------------------|--|------------------------------|
|  | Structure Plan Boundary      |  | Conservation & Riparian Area |
|  | Existing Living Area         |  | Scenic Protection Areas      |
|  | Future Living Area           |  | Future Advanced Screening    |
|  | Future Long Term Living Area |  | Rural Area                   |
|  | Possible Future Living Area  |  | Future Western Bypass        |
|  | Future Neighbourhood Centre  |  | Main Roads                   |
|  | Future School                |  | Local Road Network           |
|  | Future Active Recreation     |  |                              |



October 2006

Scale 1:10 000



**Residential Capacity:** Approximately 1,300 dwellings

Future studies, such as bushfire management and flora and fauna studies, may require amendments to the subdivision area and would alter this figure. Rezoning investigations will also consider the impact on agricultural land.

**Planning and Design Principles**

Establish view corridors out of the neighbourhood to the escarpment and pastoral landscape. View corridors will provide views from Moss Vale Road, through the neighbourhood to the escarpment.

Medium density housing will consist of villas, units, terraces and town houses, with an emphasis on providing street frontage for a maximum number of dwellings. A finer grain street network and smaller block sizes for medium density development will contribute toward achieving this. Medium density housing will be located adjacent to open spaces.

- A high standard of environmental performance will be achieved through:
- Exclusion of urban development from areas identified as habitat for threatened species (further studies required to identify these areas).
- Protection of riparian corridors including enhanced vegetation along Abernethys Creek and associated tributaries.
- A subdivision pattern based on existing topography that maximises the number of north/south facing blocks (promoting energy efficiency).
- Maximising the retention of existing trees, within open space, on road verges or on blocks, where appropriate.
- Plan for and implement current best practice for hazards including bushfire, flood, soil erosion and acid sulphate soil risk.
- Innovative stormwater solutions and reuse of rainwater to minimise detrimental impacts on water flows.

The subdivision layout will maximise connectivity and access. A street hierarchy will provide main street access onto Moss Vale Road. A safe and efficient street network will include Bells Lane within the network.

The network of open space within Area 1 will connect to that planned for Area 2, south of Moss Vale Road. Pedestrian paths and bicycle routes will connect to adjoining areas including Cambewarra, the neighbourhood centre and high school on the southern side of Moss Vale Road, Area 2, and Good Dog and Bomaderry Creeks.

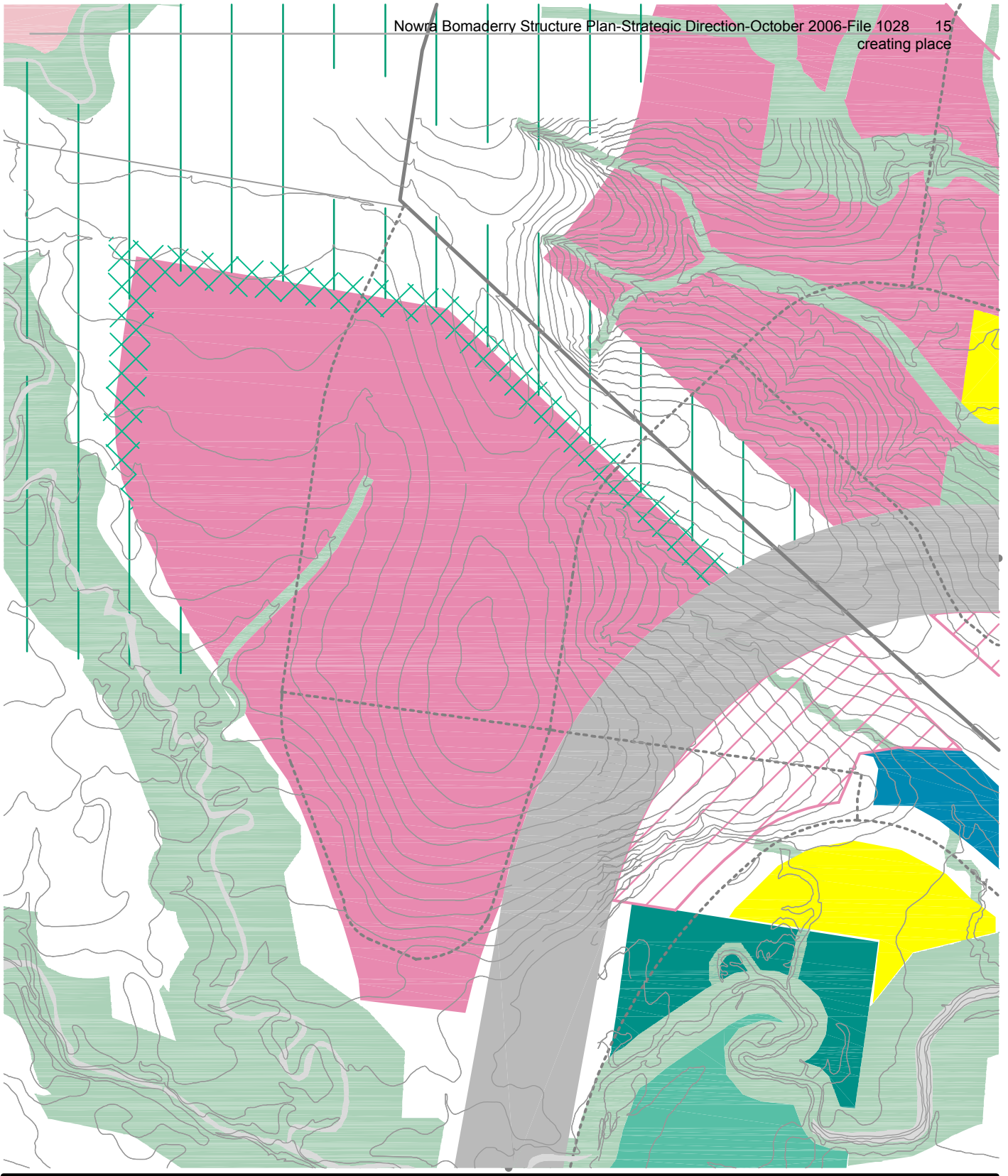
**2.2.2 Area 2: Moss Vale Road South**

**Area:** 99 hectares

**Existing Considerations**

Existing considerations for the future development of Area 2 (Map 2.4) include:

- From a central north/south ridgeline the land slopes down to Good Dog Creek and Bomaderry Creek.
- Two intermittent creeks and several dams are within the area.
- The land is mostly cleared and used for agricultural purposes, with several stands of Spotted Gum-Grey Ironbark Forest.
- Taylor's Lane runs east/west with impressive road side plantings of Spotted Gum-Grey Ironbark.
- Located on the southern foot slopes of the Cambewarra Range, the area is highly visible from the Moss Vale Road tourist drive. The area is part of an impressive pastoral landscape of high scenic value. Impressive in its own right, the pastoral landscape marks a change in land use and topography between the heavily forested Cambewarra Range and the urban settlement of Nowra.
- Adjoining areas include the village of Cambewarra to the west, and agricultural activities. Immediately to the north is Area 1 on the northern side of Moss Vale Road.



**New Living Area 2:  
 Moss Vale Road South**



Nowra Bomaderry Structure Plan

**Legend**

- |  |                             |  |                              |
|--|-----------------------------|--|------------------------------|
|  | Structure Plan Boundary     |  | Conservation & Riparian Area |
|  | Future Living Area          |  | Scenic Protection Areas      |
|  | Possible Future Living Area |  | Future Advanced Screening    |
|  | Future Neighbourhood Centre |  | Rural Area                   |
|  | Future School               |  | Future Western Bypass        |
|  | Existing Active Recreation  |  | Main Roads                   |
|  | Future Active Recreation    |  | Local Road Network           |



## Desired Future Character

Area 2 of the Nowra Bomaderry Structure Plan will be a contained area of urban residential development. The future neighbourhood will offer a variety of housing options, characterised primarily by a mix of detached houses and some terrace/town house type dwellings (medium density housing).

An impressive element of the neighbourhood's future character will be the views out of the area to the escarpment and the pastoral landscape within which the area is located. The neighbourhood's landscape setting will be further enhanced by views to natural features including creeks, treed backdrops and open spaces.

A well-connected movement network will provide a variety of routes for vehicles, pedestrians and cyclists both within the neighbourhood and to surrounding locations. Proximity to Good Dog and Bomaderry Creeks is an asset to be incorporated into future planning. An open space corridor along the creeks will be part of a movement network for pedestrians and cyclists and provide a variety of recreation opportunities. An enhanced riparian corridor will assist in the appropriate environmental management of this creek.

### **Residential Capacity:** Approximately 1250 dwellings

Future studies, such as bushfire management and flora and fauna studies, may require amendments to the subdivision area and would alter this figure. Rezoning investigations will also consider the impact on agricultural land.

## Planning and Design Principles

Topography and view corridors will inform an urban structure based on residential streets, open space networks, and retention of existing vegetation. The subdivision layout will maximise the number of north facing housing lots or north facing rear yards.

The neighbourhood will afford long distance views to the Cambewarra Range and pastoral landscape. Views to Good Dog Creek and treed backdrops will also contribute to the amenity of the neighbourhood. Housing is to contribute towards quality streetscapes through well planted front yards and building address. Medium density housing will consist primarily of terrace and town house development, located in close proximity to open spaces.

A well-connected movement network will provide for vehicles, pedestrians and cyclists. Moss Vale Road and Main Road will provide the vehicle connections to the neighbourhood and Taylor's Lane will be retained within the street hierarchy. Pedestrian and bicycle connections are required to the community facilities (shops and high school), the open space network along Good Dog and Bomaderry Creeks, the northern buffer to Moss Vale Road and Area 1.

A connected open space network within the neighbourhood will incorporate existing vegetation, provide opportunities for recreation and pedestrian and bicycle routes and connect to adjoining areas (eg Good Dog Creek, Area 1 residential areas). A high standard of environmental performance is to include:

- Continuous riparian zones along Bomaderry Creek, Good Dog Creek and unnamed creek.
  - Retention of existing areas of vegetation into the open space network.
  - Retention of a maximum number of established trees through the location of road reserves, open spaces and careful on-site planning, where appropriate.
  - Innovative stormwater solutions and on-site rainwater reuse.
  - Current best practice in planning for potential natural hazards, in particular bushfire and threatened species.
-

### 2.2.3 Area 3: Bangalee Road West

Area: 16 hectares

#### Existing Considerations

Existing considerations for the future development of Area 3 (Map 2.5) include:

- From a central elevated point land slopes gently to the north, west and south.
- Two creeks run from the centre of the site west into Bangalee Creek and the Shoalhaven River.
- Riparian corridor vegetation is in good condition and connects two sections of Tapitallee Nature Reserve with the Shoalhaven River.
- The area has been cleared for agricultural uses.
- Bangalee Road forms the eastern boundary of the site with impressive road side plantings of Spotted Gum–Grey Ironbark. Bangalee Road intersects with Illaroo Road, which is the main local traffic feeder route for North Nowra.
- To the east is the urban area of Tapitallee. West and south is natural bushland including the Tapitallee Nature Reserve.

#### Desired Future Character

Area 3 will be integrated into the existing urban fabric and identity of Tapitallee. The future subdivision layout will be low density development in a natural setting, similar to the adjoining urban area.

An impressive element of the future neighbourhood will be the distant rural and escarpment views towards the Cambewarra Range. These views will be from land with northerly aspects, north of the area's central high point. The remainder of the area will have views to natural features including bushland to the west and south.

A well connected movement network will provide for a variety of routes for pedestrians and cyclists to connect with the adjoining street network in Tapitallee. The road network will provide access to Bangalee Road.

Visual screening and subdivision lot layout will avoid the continuous visual aspects of ribbon development along Illaroo Road. Integrated pockets of native landscaping are required along Illaroo Road.

**Residential Capacity:** Approximately 200 dwellings

#### Planning and Design Principles

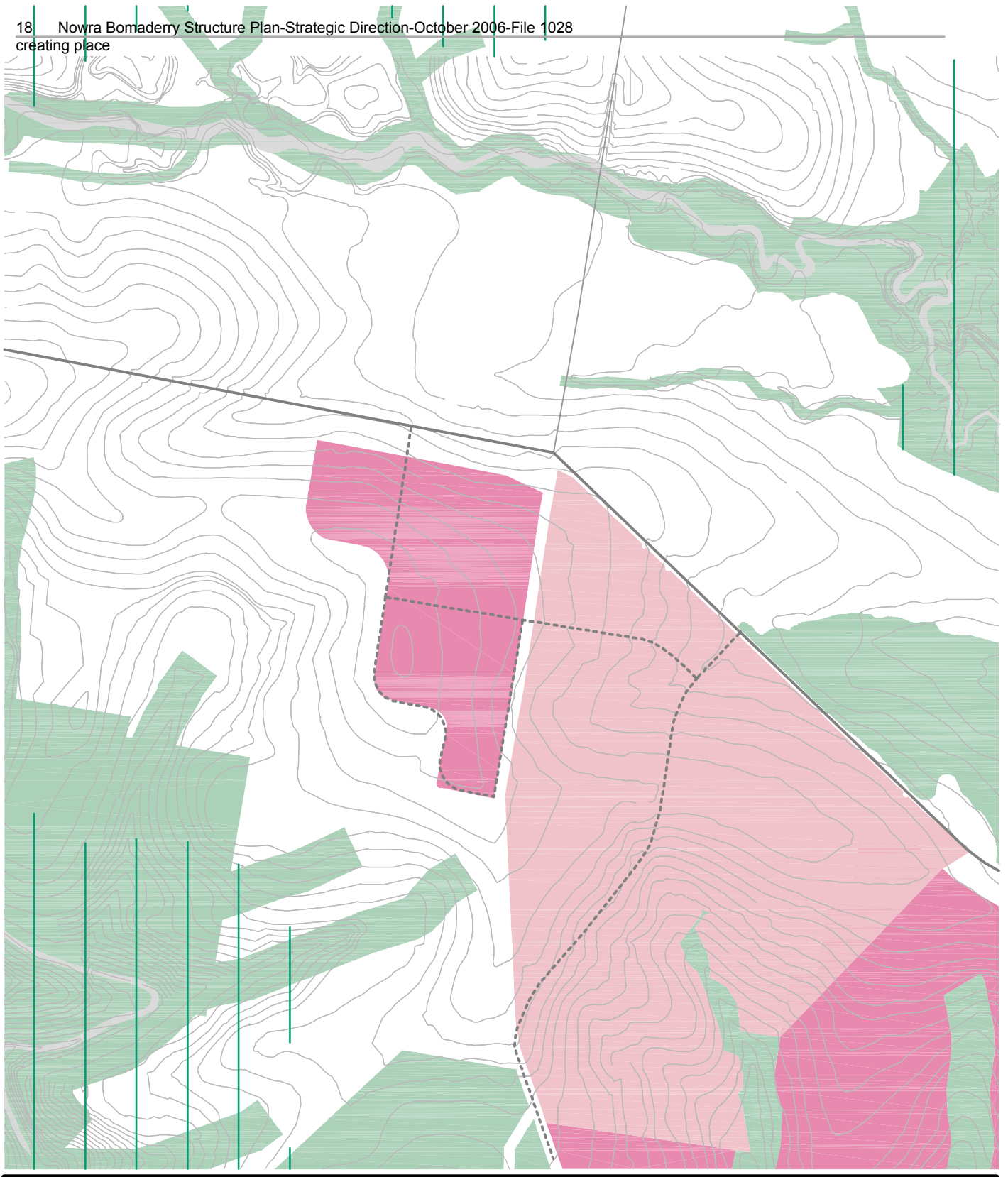
View corridors along streets are to be integrated into the subdivision plan to provide views to the Illawarra Escarpment.

Enhance the biodiversity values of the locality by providing revegetated east-west corridors through the area that provides a linkage into the adjoining natural bushland to the west of the area and Reserve to the south. These corridors should enhance the existing vegetated linkage and identified Category 1 riparian corridor (requires a 100m wide corridor). Waterways within Area 3 will be protected and enhanced in accordance with the study 'Riparian Corridor Objective Setting for Selected Streams in Nowra and Bomaderry' (prepared by DIPNR, November 2004).

Larger allotments may be necessary along the western perimeter of the area to reduce potentially adverse impacts of development on the bushland which connects to the Tapitallee Nature Reserves.

Passive solar design principles are to be incorporated into the design to maximise the number of north facing housing lots or north facing rear yards.

The adoption of best practice stormwater management design principles that minimise the impact of runoff from built-up areas on the hydrology and water quality of the natural streams that feed into Bangalee Creek and the Shoalhaven River.



### New Living Area 3: Bangalee Road West



Nowra Bomaderry Structure Plan

#### Legend

-  Structure Plan Boundary
-  Existing Living Area
-  Future Living Area
-  Conservation & Riparian Area
-  Scenic Protection Areas
-  Rural Area
-  Main Roads
-  Local Road Network



Provide road network and pedestrian/cycleway links to integrate with the adjoining urban area. Close and re-align the access point of Bangalee Road with Illaroo Road to improve road safety whilst still ensuring that all properties have access back to Illaroo Road at a new intersection point to the west. Connections to the existing local road network of the adjoining urban area are required.

A perimeter road around the western side of the area should be provided at the interface of houses and bushland. The perimeter road will also partly address the issue of bushfire hazard from the bushland to the west and south of the site.

Meet current best practice and legislative requirements for coastal land planning for natural hazards, in particular bushfire.

#### 2.2.4 Area 4: Crams Road

Area: 90 hectares (will be reduced due to riparian corridor)

##### Existing Considerations

- Existing considerations for the future development of Area 4 (Map 2.6) include:
- The land slopes towards the river in the west and south of the site.
- The area has 3 creeks that flow directly into the Shoalhaven River.
- Area 4 adjoins the urban area of North Nowra. It is located west of Pitt Street and is intersected by Crams Road and McMahons Road, North Nowra. Both Pitt Street and McMahons Road are major roads connecting to Illaroo Road which is the main traffic feeder route for North Nowra.
- Much of the area is vegetated however the lower storeys of vegetation have been cleared or degraded in many areas. There are some pockets of regrowth where cattle and horses have been excluded from grazing for sometime.
- Some areas of bushland are of high conservation value and the area adjoins an important wildlife corridor along the Shoalhaven River.

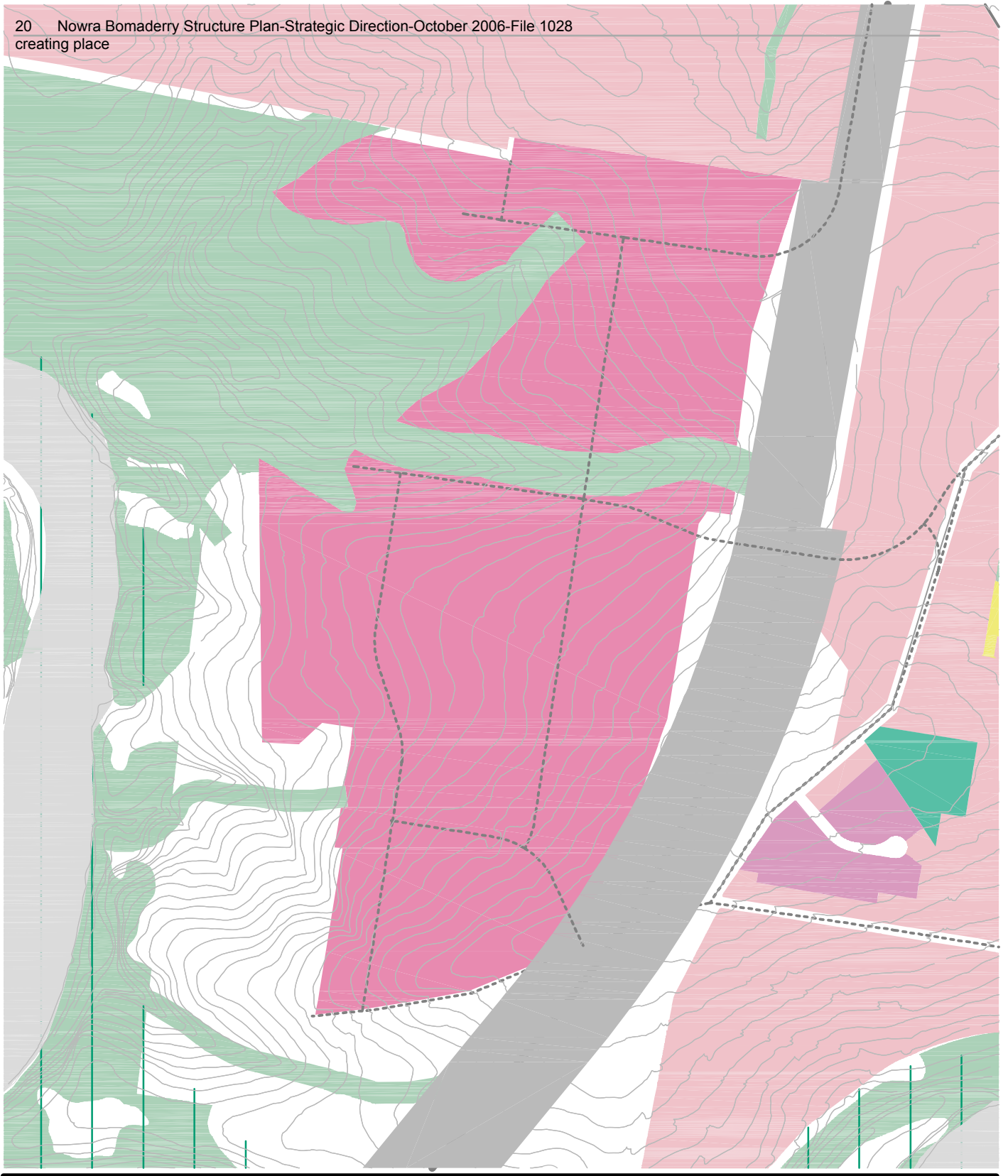
##### Rezoning Investigations

In order to determine the extent of the future residential area further studies are required. The study needs to address (but is not limited to) the following issues:

- Aboriginal cultural and landscape assessment.
- Aboriginal archaeological assessment.
- Visual analysis.
- Threatened species, ROTAP and biodiversity assessment, including *Acacia subtilinervis*, *Genoplesium baueri* and *Rulingia hermanniifolia*.
- Bush fire management.
- Stormwater and drainage management.
- Housing needs and affordability.
- Infrastructure provision and subdivision staging.
- The preparation of a master plan/development control plan in accordance with State Environmental Planning Policy No. 71 – Coastal Protection.

The approximate residential capacity will be determined at the completion of studies into the above issues.





**New Living Area 4:  
 Crams Road**



Nowra Bomaderry Structure Plan

**Legend**

- |  |                            |  |                              |
|--|----------------------------|--|------------------------------|
|  | Structure Plan Boundary    |  | Conservation & Riparian Area |
|  | Existing Living Area       |  | Scenic Protection Areas      |
|  | Future Living Area         |  | Rural Area                   |
|  | Existing Industrial Land   |  | Future Western Bypass        |
|  | Existing School/TAFE       |  | Local Road Network           |
|  | Existing Active Recreation |  |                              |



## Planning and Design Principles

Land available for residential development will be determined through an environmental study addressing the issues outlined above. The area will be a contained neighbourhood and develop its own character rather than becoming urban sprawl.

Waterways within Area 4 will be protected and enhanced in accordance with the study 'Riparian Corridor Objective Setting for Selected Streams in Nowra and Bomaderry' (prepared by DIPNR, November 2004).

Opportunities for east-west habitat corridors to link with the 3 riparian corridors to protect and enhance the environmental values of the site should be considered. An appropriate north-south wildlife link should also be provided to connect the river corridor to the south-east, the site and bush land to the north-west of the site. This vegetated area will help to define the urban expansion area of the site while reflecting the high cultural and natural heritage significance of the Shoalhaven River and the broader biodiversity values of the area.

Any future urban development should not impact on the visual amenity enjoyed from the Shoalhaven River or any section of public reserve system along either side of the river.

Ensure current best practice in land management and planning for natural hazards are implemented, in particular bushfire and threatened species.

Should the area be considered suitable for residential development any subdivision is to achieve a high standard of environmental performance in order to maintain and enhance the condition of environmental systems in the vicinity.

### 2.2.5 Area 5: Mundamia

Area: 53 hectares

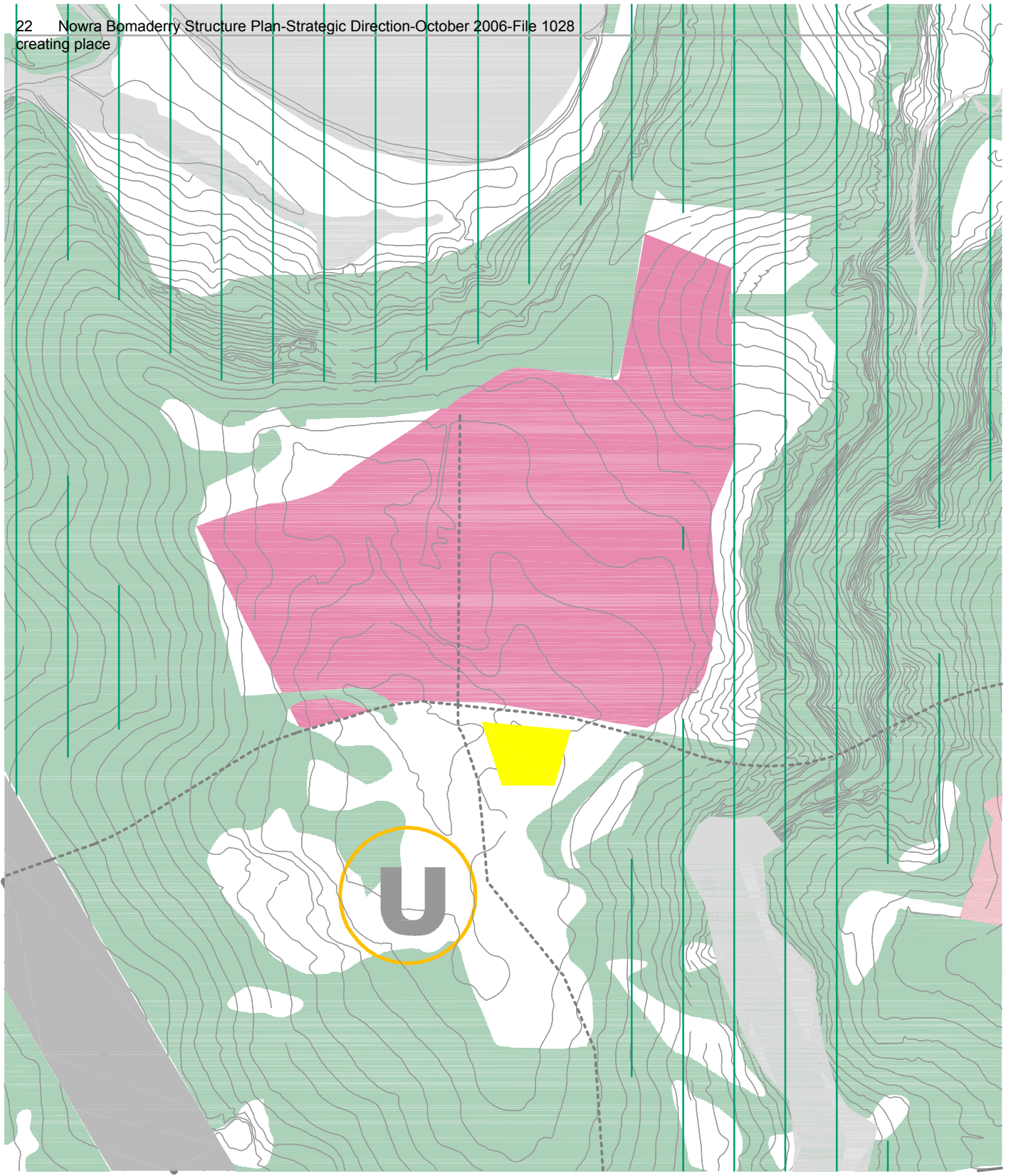
#### Existing Considerations

Existing considerations for the future development of Area 5 (Map 2.7) include:

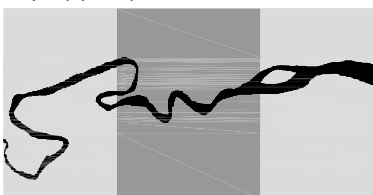
- The land slopes gently down from a high point in the south. Beyond the boundary of the area, the land drops steeply at the cliff embankments of the Shoalhaven River and Flat Rock Creek.
- Clearing for agricultural use and previous gravel mining has occurred over part of the area.
- The area is substantially vegetated including Scribbly Gum-Bloodwood Woodland, Kunzea Shrubland/Heathland, Paperbark Closed Forest, Grey Gum-Blue-leaved Stringybark Forest/Woodland, and an area of regenerating native vegetation.
- Several threatened species (flora and fauna) have been identified within the area.
- A small section of an unnamed creek extends into the north-eastern part of Area 5.
- George Evans Road extends north/south through the area, with a number of other unsealed roads and tracks.
- The adjoining land is predominantly vegetated and includes several threatened species. There are a number of watercourses in close proximity to the neighbourhood, being the Shoalhaven River, Flat Rock Dam, Flat Rock Creek, Cabbage Tree Creek and numerous tributaries into the creeks.
- Area 5 is in close proximity to the Nowra Campus of the University of Wollongong and Thompson's Point rock climbing area.

#### Desired Future Character

The neighbourhood of Mundamia will be a contained area of residential development to the west of Nowra, within an area of abundant native bushland. This is an asset to be preserved and protected as a significant part of the biodiversity and natural processes in the area. The neighbourhood will achieve a high level of environmental performance to ensure the quality of watercourses in close proximity to the neighbourhood, being the Shoalhaven River, Flat Rock Dam, Flat Rock Creek, Cabbage Tree Creek and numerous tributaries into the creeks.













### New Living Area 5: Mundamia



Nowra Bomaderry Structure Plan

#### Legend

- |   |                                   |   |                              |
|---|-----------------------------------|---|------------------------------|
|  | Structure Plan Boundary           |  | Conservation & Riparian Area |
|  | Existing Living Area              |  | Scenic Protection Areas      |
|  | Future Living Area                |  | Rural Area                   |
|  | Future School                     |  | Future Western Bypass        |
|  | Existing University & TAFE Campus |  | Local Road Network           |



The neighbourhood will afford views and vistas to Cambewarra Range and adjoining bushland. The bushland will provide a valuable natural setting for the neighbourhood and determine the local landscape character. An entry point into the neighbourhood will communicate a sense of arrival and contribute to neighbourhood identity. Residential development will consist of a mix of medium density and detached dwellings.

A grid based street layout will provide a connected movement system, and include a wide main street running north/south from the neighbourhood entrance. The neighbourhood is in close proximity to the Nowra campus of Wollongong University and Thompson's Point rock climbing area. Opportunities for linkages between these areas will be developed through convenient movement and access and the provision of services and facilities within the neighbourhood such as small scale commercial activities and short term accommodation for visitors and students.

**Residential Capacity:** Approximately 720 dwellings

### **Planning and Design Principles**

The neighbourhood will achieve a considered balance between urban development and the protection of environmentally significant areas. Threatened species and valuable ecological communities will be retained and protected through appropriate land use zones, continuous riparian corridors, stormwater and drainage management. The natural bushland adjoining the neighbourhood will be conserved. The local landscape character of the neighbourhood will be enhanced by retaining existing vegetation within open spaces, road reserves and on individual lots, where appropriate. Planting local native species in open spaces, streets and private gardens will also contribute to the local landscape character.

View corridors along streets will provide long distance views of the Cambewarra Range and adjoining bushland. Views from along the Shoalhaven River to the steep river embankments and native vegetation will be preserved by providing a treed buffer between the neighbourhood and the river.

An entry point into the neighbourhood will create a sense of arrival and place. A grid based street layout is required that is predictable, easy to navigate (legibility) and move through (permeability), and maximises north/south facing lots (optimising the potential to minimise energy use). George Evans Road (off Yalwal Road) will provide vehicle access to the neighbourhood and connections to the University and Thompson's Point rock climbing area will be maintained.

Access points for pedestrians and cyclists to the adjoining bushland will be formalised to clearly define access routes. In some instances it will be necessary to restrict public access to adjoining areas that are environmentally significant.

Meet current planning requirements for coastal land, threatened species and potential natural hazards.

## **2.2.6 Area 6: Cabbage Tree Lane**

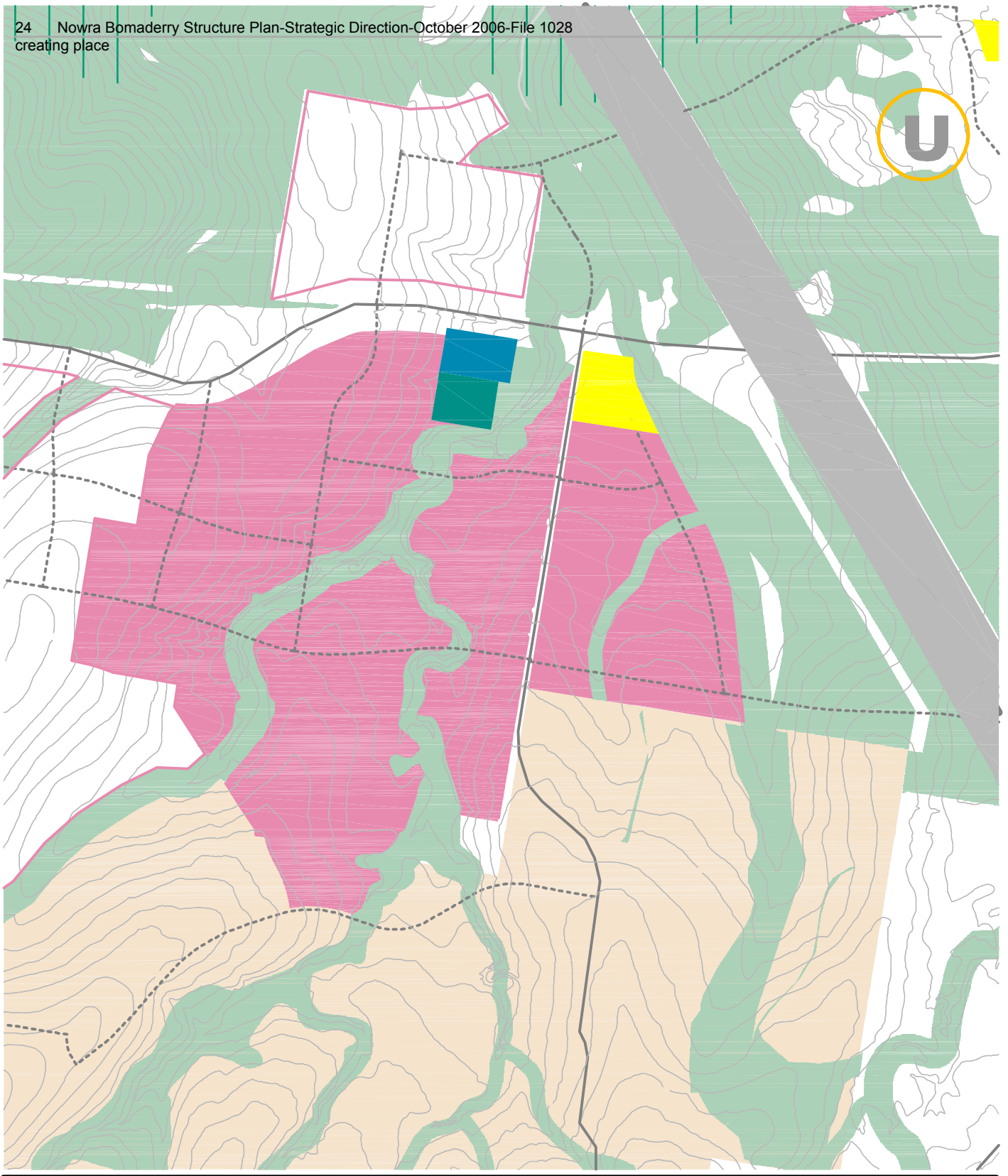
**Area:** 182 hectares

### **Existing Considerations**

Existing considerations for the future development of Area 6 (Map 2.8) include:

- The area slopes gently from the south west, down to the north.
- Area 6 is located south west of Nowra, south of Yalwal Road.
- Cabbage Tree Creek and associated tributaries extend across Area 6, flowing into the Shoalhaven River. Tributaries to the east and west of Cabbage Tree Creek have continuous vegetation corridors along their length.
- Area 6 is located in relatively close proximity to HMAS Albatross so will be subject to military aircraft noise from time to time.





**New Living Area 6:  
 Cabbage Tree Lane**



Nowra Bomaderry Structure Plan

**Legend**

- |  |                                   |  |                              |
|--|-----------------------------------|--|------------------------------|
|  | Structure Plan Boundary           |  | Future Active Recreation     |
|  | Future Living Area                |  | Conservation & Riparian Area |
|  | Future Long Term Living Area      |  | Scenic Protection Areas      |
|  | Existing Rural Residential        |  | Rural Area                   |
|  | Future Neighbourhood Centre       |  | Future Western Bypass        |
|  | Future School                     |  | Main Roads                   |
|  | Existing University & TAFE Campus |  | Local Road Network           |



- Approximately half of Area 6 has been cleared for agricultural use and a limited number of rural residential properties. The remaining area is vegetated with the following:
  - Spotted Gum-Woollybutt Forest.
  - Spotted Gum-Grey Ironbark Forest.
  - Riparian Forest.
  - Scribbly Gum-Bloodwood Woodland/Open Woodland.
- Cabbage Tree Lane extends north/south through Area 6.
- West of Area 6 is Sandy Creek and land identified as a Future Investigation Area. This land may have potential for future residential use, subject to further investigation and staging of development. To the south, land has been subdivided for rural residential development. East of Area 6 is Shoalhaven State Forest, a regional services corridor and Flat Rock Creek. To the north is Yalwal Road, the Nowra campus of Wollongong University, some light industrial uses and large areas of established vegetation.

### Desired Future Character

Area 6 will be characterised by residential development within a natural setting. Commercial facilities, a school and a recreational facility will provide a centre at the main entrance to the neighbourhood at the intersection of Yalwal Road and Cabbage Tree Lane.

Residential development will be predominantly detached housing. Some small areas of medium density development are appropriate, in the form of villas, town houses and terrace houses. Areas of medium density development will adjoin areas of open space.

The natural setting will result from the continuous riparian corridors along Cabbage Tree Creek and associated tributaries. In addition, views from within the neighbourhood to bushland in adjoining areas (Shoalhaven State Forest, north of Yalwal Road) will contribute towards a natural setting.

The riparian corridors provide the basis on which to provide an open space network within the neighbourhood. An important feature of the neighbourhood will be a network of bicycle and pedestrian routes connecting to routes and destinations beyond the neighbourhood. Cabbage Tree Lane will be the main street through the neighbourhood connecting to Yalwal Road.

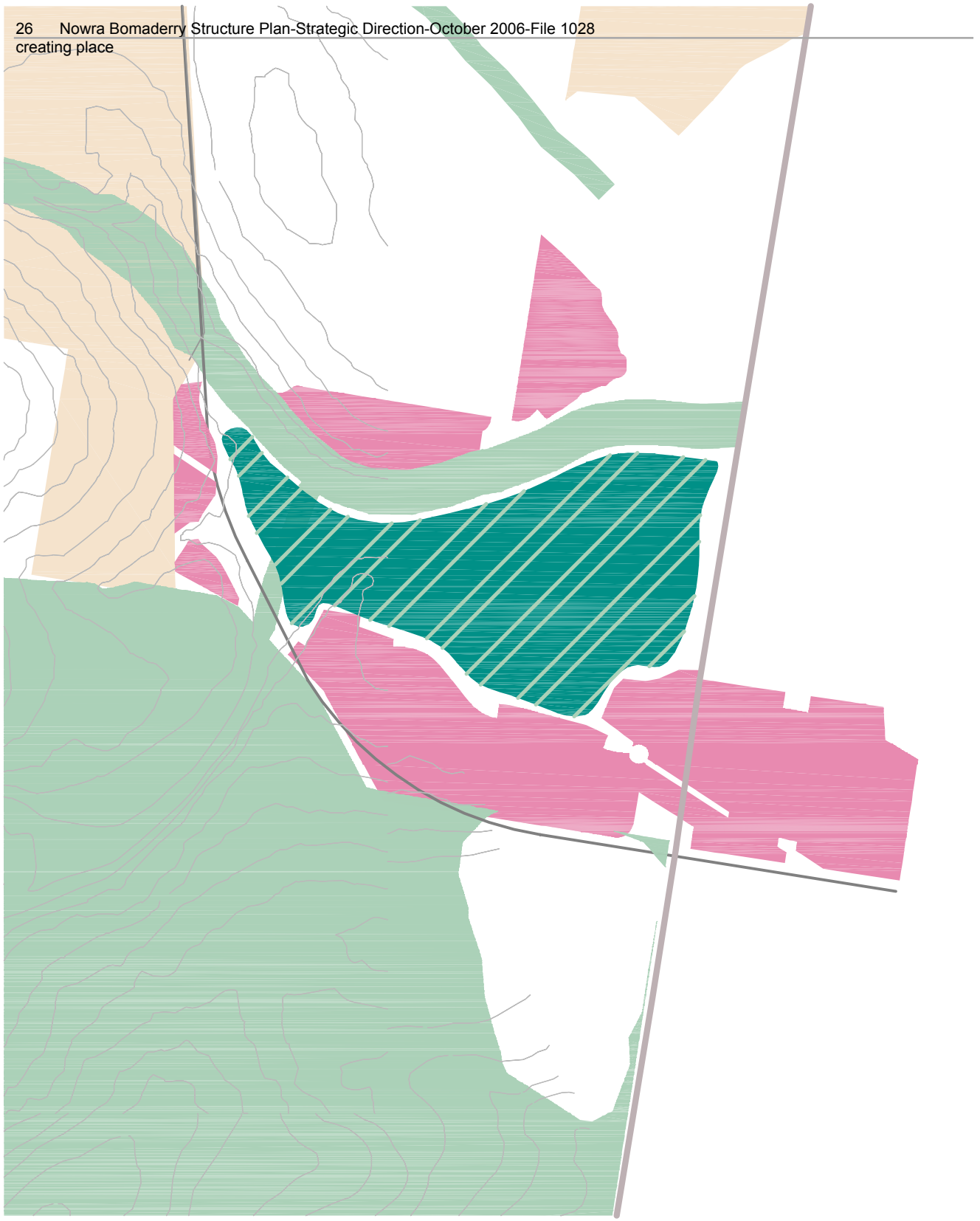
**Residential Capacity:** Approximately 2180 dwellings

### Planning and Design Principles

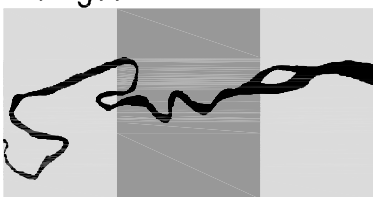
Urban development will be excluded from areas of significant flora and fauna habitat. This is subject to further detailed study. Continuous riparian corridors will be provided along Cabbage Tree Creek with a width of 60m, and along the associated tributaries with a width of 100m. Existing riparian vegetation will be retained and enhanced where necessary. Drainage measures and stormwater management will also ensure the environmental quality of creeks and rivers. A local road is required at the interface between residential dwellings and riparian corridors. Where open space adjoins the riparian corridor, the local road will be at the interface between open space and residential dwellings.

Cabbage Tree Lane will be the main north/south street through Area 6 intersected by secondary residential streets. Cabbage Tree Lane will provide the main vehicle access to Yalwal Road. The intersection of Yalwal Road and Cabbage Tree Lane is the entry point into the neighbourhood and the location of a new neighbourhood centre. Commercial activity is to have a frontage to a main street, being Yalwal Road and/or Cabbage Tree Lane.

Connectivity and access will be maximised within the neighbourhood. Design of the neighbourhood will provide a minimum of two future road connections into the land to the west and south west of the neighbourhood, identified as a Future Investigation Area in this structure plan.



### New Living Area 7: Worrigeer



Nowra Bomaderry Structure Plan

#### Legend

-  Structure Plan Boundary
-  Future Living Area
-  Existing Rural Residential
-  Conservation & Riparian Area
-  Future Active/Passive Open Space or Conservation
-  Rural Area
-  Main Roads



Medium density housing will be located adjacent to open space and/or riparian corridors. Houses are to face onto streets with active uses and habitable rooms at ground level. Car parking is to be a minor component of a building frontage when houses are viewed from the street.

A buffer will be provided between residential development and Yalwal Road. The buffer will be vegetated and include a pedestrian and bicycle path along Yalwal Road. Connections to this path, from within the neighbourhood, are required. The riparian corridor along Cabbage Tree Creek provides the basis for an adjoining open space network with bicycle and pedestrian routes through the neighbourhood. Connections to routes beyond the neighbourhood are required.

The subdivision pattern will employ current best practice in planning for natural hazards and legislative requirements, including (but not limited to) bushfire, threatened species and flooding.

### 2.2.7 Area 7: Worrigea

Area: 33 hectares

#### Existing Considerations

Existing considerations for the future development of Area 7 (Map 2.9) include:

- Area 7 has a gentle sloping topography, between 2 and 10m RL.
- Rotten Creek and an unnamed creek to the north flow from Currumbene State Forest, through Area 7 into Brundee Swamp and the Crookhaven River.
- It is located at the southern end of Worrigea Road, southeast of the residential area of Worrigea.
- The area is currently used for agricultural purposes and a golf course.
- Area 7 is partly vegetated and partly cleared grassland. The following vegetation communities have been identified:
  - Blackbutt-Blackwood Forest
  - Spotted Gum-Grey Ironbark Forest
  - Swamp Mahogany-Paperbark Forest
  - Scribbly Gum-Casuarina Forest
- There are two areas of Swamp Mahogany –Paperbark Forest within the western part of Area 7. This is an Endangered Ecological Community listed on the NSW Threatened Species List.
- A number of threatened flora and fauna have been identified within and in close proximity to Area 7, including Green and Golden Bell Frogs.
- Part of Area 7 is identified as having acid sulphate soil risk.
- All of Area 7 is identified as bushfire prone land.
- Part of Area 7 is below the 1 in 100 year flood line.
- South of Area 7 is the Currumbene State Forest (identified as Yellow-bellied Glider habitat) and a SEPP 14 wetland. To the north is the Shoalhaven Memorial Gardens Lawn Cemetery. West of Area 7 are rural properties, swamps and reserves. To the east is Worrigea Nature Reserve and rural residential properties. Area 7 is in close proximity to Crookhaven Creek, Brundee Swamp and associated Nature Reserve.

#### Planning and Design Principles

Land identified as flood liable will not be rezoned to a residential zone, in accordance with Ministerial Direction 4.3 Flood Liable Land made under Section 117 (2) of the *Environmental Planning and Assessment Act 1979*.

Creeks within Area 7 will be protected and enhanced in accordance with the study 'Riparian Corridor Objective Setting for Selected Streams in Nowra and Bomaderry' (DIPNR, November 2004). The continuous riparian corridor required for the unnamed northern creek is 50m from the top of each bank (i.e. a 90m wide corridor). The Rotten Creek corridor will consist of 30m from the top of each bank, being a 60m wide corridor.



Changes to the SEPP 14 wetland to the south of Area 7 are to be minimised.

### **Rezoning Investigations**

In order to determine whether a residential zone is appropriate for Area 7, an environmental study is required. The study needs to address (but is not limited to) the following issues:

- Flooding.
- Impacts on creeks and adjoining wetlands (including the SEPP 14 wetland and Brundee Swamp) and consideration of appropriately zoned riparian corridors.
- Bushfire management.
- Flora and fauna study including impacts on the National Park Estate (Worrigeer Nature Reserve)
- Potential acid sulphate soils.
- Stormwater and drainage management.
- Infrastructure provision.
- Visual analysis.
- Aboriginal, cultural, landscape and archaeological assessment.
- Housing needs and affordability.

Ensure the requirements for the threatened species, bushfire management and flooding are incorporated into any future subdivision.

Should the area be considered suitable for a residential zone, any subdivision is to achieve a high standard of environmental performance in order to maintain and enhance the condition of environmental systems in the vicinity.

### 3. CONSERVATION AREAS

#### 3.1 OBJECTIVES

The conservation strategy component of the structure plan aims to identify the natural values of the district and the best ways to protect these values in line with principles of ecologically sustainable development. The primary goal of the Nowra Bomaderry Conservation Strategy is:

*The protection and restoration of biodiversity, ecological integrity and natural capital throughout the Nowra Bomaderry district.*

The specific objectives of this goal are to:

- Maintain the health and resilience of natural life support systems such as clean air, water and healthy soil throughout Nowra Bomaderry.
- Protect all vegetation communities and endangered ecological communities.
- Maintain viable populations of all native species in natural patterns of abundance and distribution.
- Maintain viable populations of threatened species throughout their range.

#### 3.2 VEGETATION COMMUNITIES

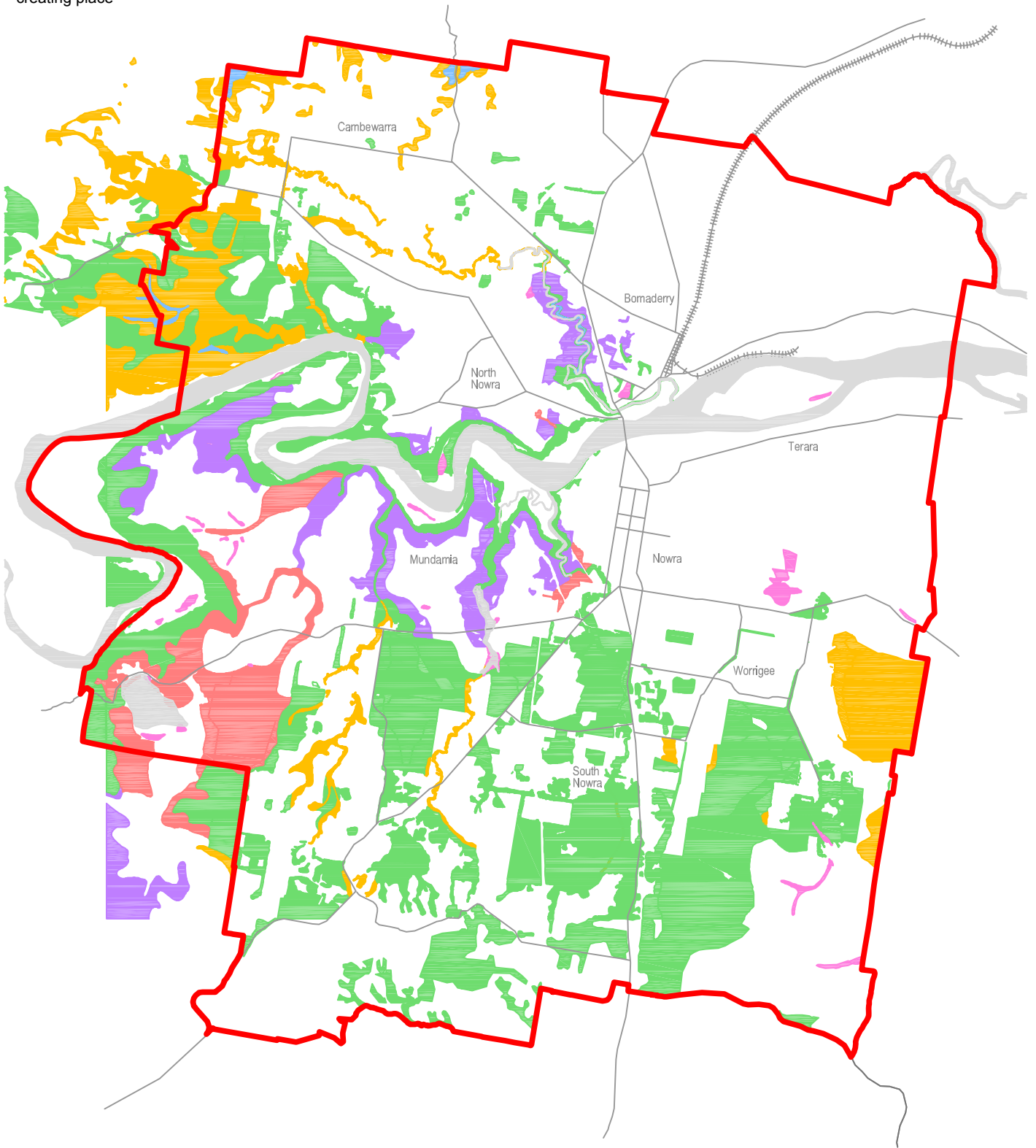
Vegetation communities can be used as a surrogate to biodiversity conservation, the theory being that by conserving the full range of vegetation communities and the ecotones between communities, all aspects of biodiversity will also be protected. The following recommendations aim to protect vegetation communities:

- Examples of all vegetation communities within the structure plan boundary should be protected through environment protection zoning. Further work will need to be done in order to identify those areas that have the most value. Once identified, these areas should be protected with appropriate environment protection zoning.
- Conserve samples of all habitat types and key indicator species occurring within the structure plan area.
- Conserve a number of adjacent vegetation communities to ensure protection of ecotones.
- Already cleared or disturbed and isolated habitat areas should have priority for development over large areas of undisturbed habitat.
- If undisturbed habitat is assessed as necessary for development, opportunities to mitigate impacts should be developed concurrently with future planning of these areas.
- Appropriate zoning should be adopted that will result in maximum protection of significant areas.
- Consider acquisition of important areas if necessary through land exchanges, conservation easements, open space contributions and developer or planning agreements.

#### 3.3 BIODIVERSITY RECOMMENDATIONS

The biodiversity conservation component of the structure plan is based on recommendations following research into the key biodiversity values within the structure plan area. The following recommendations were produced in the report:

- (1) Adopt a holistic approach: concentrate intact examples of representative communities in one or more large landholdings.
- (2) Protect Grey Gum-Stringybark Woodland/Open Woodland and Kunzea Shrubland in rocky gullies (majority of rare plant species).










### Biodiversity Recommendations



Nowra Bomaderry Structure Plan

### Legend

-  Structure Plan Boundary
-  Biodiversity Recommendation 2
-  Biodiversity Recommendation 3
-  Biodiversity Recommendation 4
-  Biodiversity Recommendation 5
-  Biodiversity Recommendation 6 & 8
-  Biodiversity Recommendation 7



October 2006



- (3) Protect stands of the tall Blue Gum and Forest Red Gum forests on the floodplains.
- (4) Reserve stands of Spotted Gum in the Nowra area.
- (5) Protect all areas of rainforest in Nowra Bomaderry.
- (6) Protect small mangrove and salt marsh areas along the Shoalhaven River.
- (7) Give consideration to reserving large areas of Blackbutt Forest-Grey Gum (Yellow-bellied Glider and Glossy Black Cockatoo habitat).
- (8) Fence wetlands to protect their botanical and wildlife habitat values.

A more detailed explanation of these recommendations is contained in Section 3.2.3 of the Background Report. Where appropriate, the spatial extent of these biodiversity recommendations is indicated on Map 3.1.

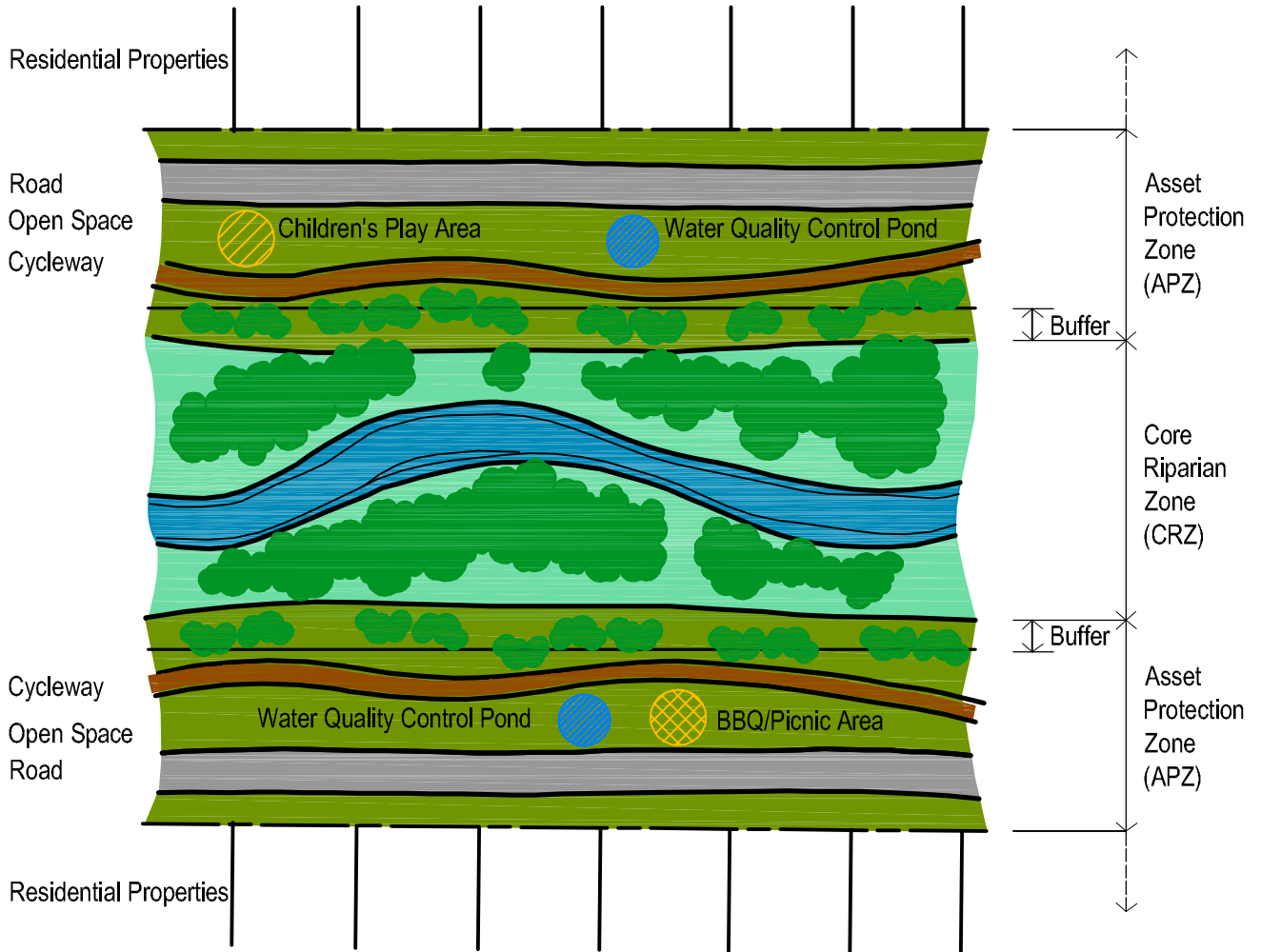
### 3.4 THREATENED SPECIES

There are a large number of threatened species within the Nowra Bomaderry area, some of which occur nowhere else in the world. Threatened species tend to have specific habitat requirements and therefore it is crucial to include goals to protect viable populations of each species so that all threatened species that are currently found in Nowra Bomaderry continue to survive in the long-term. The following recommendations aim to protect threatened species:

- Populations of all threatened species that currently occur in Nowra Bomaderry should be maintained within the structure plan area.
- Viable populations of threatened species that have high conservation value should be protected in areas zoned environment protection and/or brought into public ownership.
- Sites that support more than one threatened species or their habitat should be protected in preference to areas with single species only.
- Buffers should be provided between urban development and threatened species habitat to assist in reducing potential impacts.
- Key habitat elements such as large hollow bearing trees, feed trees, and fallen logs should be retained wherever possible.
- Urban areas adjacent to threatened species habitat should be landscaped with native species that will provide habitat value for threatened species.
- There should be no incremental loss within conservation areas. This means that these areas should not be rezoned in the future and no extra lots created within these areas.

### 3.5 RIPARIAN CORRIDORS

Riparian corridors are important for the maintenance of stream water quality and for providing opportunities for biodiversity connectivity. Thus a key component of the structure plan is the establishment of a network of primary (100 metres wide) connectivity zones based on riparian habitat (Category 1: Environmental Corridors) to act as the ESD backbone to the Nowra Bomaderry structure plan area (Table 3.1). The relationship between a typical riparian corridor, a bushfire protection zone and other facets of urban infrastructure is illustrated in Figure 3.1. Riparian corridor objectives setting (RCOS) will be implemented through the Nowra Bomaderry LEP.



**Note 1:**  
 Based on a Category 2:  
 Terrestrial and Aquatic Habitat Corridor

**Note 2:**  
 APZ may extend into residential properties  
 up to minimum building setback line.

Riparian Corridor & Bushfire  
 Asset Protection Zone



Nowra Bomaderry Structure Plan



### 3.6 CORE CONSERVATION AREAS

Because of the extent of native vegetation that is still present within the structure plan area, large tracts of land, or ‘patches’ have been identified as having conservation value. In order to protect these values, a strategy is required that will address how these areas will be protected in the future. The first part of this strategy will be the identification of core conservation areas. Core conservation areas will be those areas that have conservation values that warrant the highest protection. In deciding where core conservation areas are within the structure plan boundary, further investigation will be required, however, the following principles will define what comprises a core conservation area:

- Intact vegetation communities that support viable populations of threatened species should always be core conservation areas.
- Larger areas have greater value than smaller areas.
- Patches that are linked to other patches have greater value.
- Communities that have minimal disturbance have greater value than disturbed areas.
- Remnants of those communities that have extensively been cleared or modified have greater value than those that are adequately conserved in the reserve system.
- Biodiversity ‘hotspots’ should be considered core conservation areas.
- Communities that are adequately represented in the current reserve system have lower priority than poorly represented communities.

Table 3.1: Riparian Corridors: Categories & Functions

<p><b>Role of Riparian Corridors</b> Riparian corridors provide the ESD backbone to the Nowra Bomaderry structure plan, maintaining stream water quality and biodiversity connectivity.</p>	<p><b>Category 1: Environmental Corridor</b> Functions as a key biodiversity link maintaining connectivity for the movement of aquatic and terrestrial species between significant ecological nodes:</p> <ul style="list-style-type: none"> <li>• Minimum CRZ width: 40m from top of bank + 10m buffer.</li> <li>• Locate utility services outside CRZ where possible.</li> <li>• Locate active recreation outside CRZ.</li> <li>• Treat stormwater run off before discharge into CRZ and buffer</li> </ul>
	<p><b>Category 2: Terrestrial &amp; Aquatic Habitat</b> Functions as a more localised riparian link providing terrestrial and aquatic habitat:</p> <ul style="list-style-type: none"> <li>• Minimum CRZ width: 20m from top of bank + 10m buffer</li> <li>• Locate utility services outside CRZ where possible</li> <li>• Locate active recreation outside CRZ</li> <li>• Treat stormwater run off before discharge into CRZ and buffer</li> </ul>
	<p><b>Category 3: Bank Stability &amp; Water Quality</b> Serves to limit accelerated soil erosion and enhance water quality locally:</p> <ul style="list-style-type: none"> <li>• Minimum CRZ width: 10m from top of bank (no buffer)</li> <li>• May locate utility services inside CRZ (merit consideration)</li> <li>• May locate active recreation inside CRZ (merit consideration)</li> <li>• Treat stormwater run off before discharge into CRZ</li> </ul>

Note: CRZ: Core Riparian Zone



place

## 4. EMPLOYMENT AREAS

### 4.1 COMMERCIAL AREAS

#### 4.1.1 Objectives

The structure plan has the following objectives for commercial areas:

- Maintain and enhance the commercial primacy of the Nowra CBD as a major Sub-Regional Centre.
- Maintain and enhance the economic viability of the existing neighbourhood centres.
- Provide for the development of new viable neighbourhood centres.

#### 4.1.2 Retail Expansion

The demand for traditional retail floorspace in Nowra Bomaderry is projected to increase from 60,440m<sup>2</sup> in 2006 to over 102,000m<sup>2</sup> by 2021. In making this projection allowance has been made for the development of an anchoring Discount Department Store (DDS) and associated shops in Nowra CBD. Expenditure is expected to increase by some \$148 million in the same period.

These figures include allowances for early development of a supermarket based centre at Vincentia and could involve an additional 10% variation based on an allowance being made for floorspace vacancies or redundancies.

Commercial viability will be a key factor in determining when new development would occur during this period.

#### 4.1.3 Nowra CBD

The objectives for the further development of Nowra CBD are to:

- Provide the main focus for Shoalhaven's residents and visitors for shopping, community, cultural, entertainment and recreation facilities.
- Provide opportunities for business investment and employment.
- Encourage a mix of land uses, including residential uses, which contribute to an active and diverse character.
- Provide an urban structure which is simple, legible and flexible.
- Maintain and enhance environmental amenity and encourage a standard of urban design consistent with the function of the centre.
- Encourage activities particularly at street level which contribute to pedestrian activity and social interaction.

#### *Future Retail Floorspace*

On the basis of retail floorspace projections, it would be reasonable to assume that the demand for additional retail floorspace in the Nowra CBD by 2021 can be provided for within the existing zoned area. This takes into account approximately 10,000m<sup>2</sup> of retail floorspace to be allocated to two new neighbourhood centres, which would expect to be developed at later stages in the development of the new urban areas.



#### 4.1.4 Existing Neighbourhood Centres

Neighbourhood centres in Nowra Bomaderry are intended to provide a wide range of retail, business, community and recreation services. Primarily, the dominant role is focussed on the provision of major food retailing serving the nearby suburbs. Some centres such as Bomaderry may also include specialty shops, hospitality, entertainment or other facilities to cater to a wider market. It is envisaged that neighbourhood centres retain a relatively relaxed, low-key character with mainly low-rise developments, offer convenient access by car and public transport and are closely linked to adjacent residential areas by pedestrian and cycle paths.

Within this framework there is scope for a flexible approach to development which will enable neighbourhood centres to promote competition, investment, support improved facilities for customers and the wider community. Centres will be encouraged to build in their distinctive qualities and commercial potential. At the same time, maintenance of a sustainable network of commercial centres across the Nowra Bomaderry urban area will remain an important objective.

##### ***Bomaderry***

Develop Bomaderry as a heritage themed retail precinct with a focus on specialty shops, restaurants, cafés and bakeries. Its objective is to provide a range of retail and commercial services to meet the needs of the residents and workers of Bomaderry as well as visitors to the area.

##### ***East Nowra***

Maintain and enhance East Nowra as an attractive neighbourhood retail centre focusing on convenience retail and services.

##### ***North Nowra***

Maintain and enhance North Nowra as an attractive neighbourhood retail centre focusing on convenience retail, serving the resident population of Nowra's north shore.

##### ***Lyndhurst***

Maintain and enhance Lyndhurst as an attractive local retail centre focusing on convenience retail, serving the resident population of Bomaderry.

#### 4.1.5 New Neighbourhood Centres

The proposed dispersed pattern of urban areas will not provide the critical mass of residents sufficient to support an additional Discount Department Store outside the Nowra CBD. However proposed development to the north-west and the south-west of Nowra should be significant enough to support a large neighbourhood/district centre anchored by a full-line supermarket of 2,500-3,000 m<sup>2</sup> in each locality (Leyshon Consulting 2005).

##### **Success Factors:**

The new centres would be predicated on the following success factors:

- A location offering a high degree of visibility to passing traffic, easy access from a distributor road and located on the 'drive home' or left hand side of the access roads to particular suburbs.
- A centre size of 5,000m<sup>2</sup> of actual retail floor space (full-line supermarket and specialty shops).
- Parking that is adequate in scale and visible from adjacent roads with easy ingress and exit.
- A total site area of 1.5 hectares for the basic retail function.

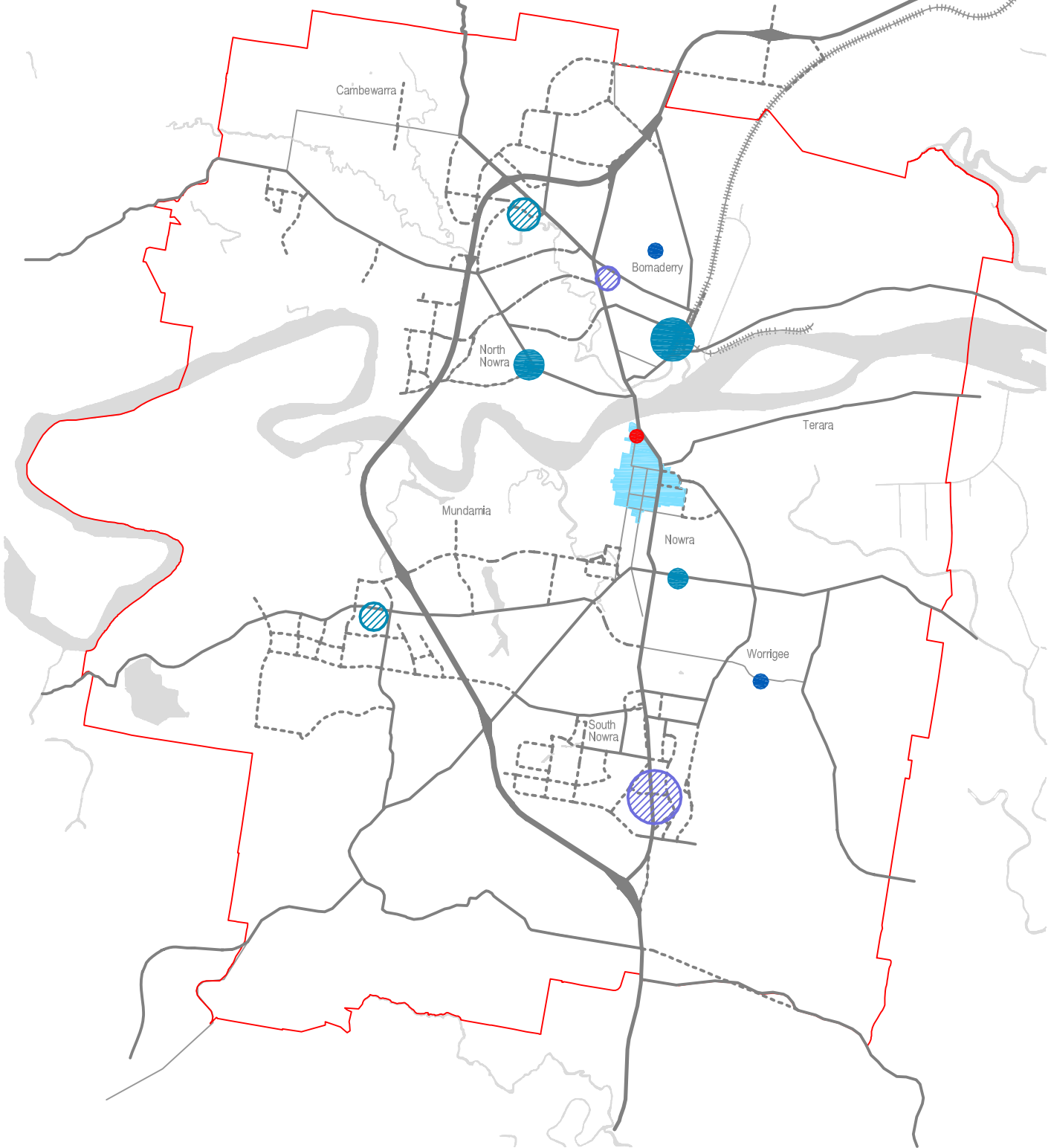
Viability of the two new centres will depend upon sufficient residential expansion and may be catered for by additional floorspace in the CBD until the market is created later in the planning period.

#### **4.1.6 Bulky Goods Centres**

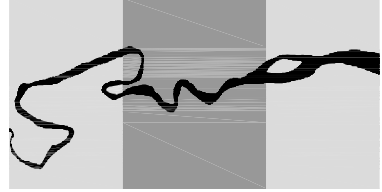
The South Nowra bulky goods precinct will be further developed as the premier facility of its kind in the southern Illawarra/South Coast region. Projections by Leyshon Consulting indicate an increased demand for bulky goods floorspace would be realised in Nowra Bomaderry. Much of this would be located in South Nowra.

Floorspace increase is anticipated to move from 35,500m<sup>2</sup> in 2006 to 50,800m<sup>2</sup> in 2021 with available bulky goods spending moving from \$221 million to \$319 million over the same period.

Nowra Bomaderry's proposed retail/commercial structure is illustrated in Map 4.1.



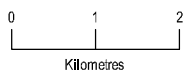
**Proposed Commercial Areas**



Nowra Bomaderry Structure Plan

**Legend**

- Structure Plan Boundary
- Nowra CBD
- Neighbourhood Centre
- Proposed Neighbourhood Centre
- Local Centre
- Proposed Bulky Goods Centre
- Proposed Convention Centre



## 4.2 INDUSTRIAL AREAS

### 4.2.1 Objectives

The structure plan has the following objectives for industrial and bulky goods areas:

- Provide sufficient industrial land to meet future demands.
- Encourage economic diversification and long term growth of Nowra Bomaderry's industrial base to expand employment opportunities.
- Make provision for a range of non-industrial uses to serve the needs of the locality's workforce.
- Provide Nowra Bomaderry residents with convenient access to jobs, goods and services provided in industrial areas.
- Ensure that the unacceptable impacts of industrial development on the environment are minimised and do not exceed prescribed standards.

### 4.2.2 Supply and Demand for Industrial Land

On the basis that a certain amount of community and commercial/wholesale activities will utilise industrially zoned land, the current supply of zoned land will be exhausted by 2031 (Table 4.1). By 2016 currently zoned industrial land (including Albatross Aviation Technology Park) will be in deficit. To meet projected demand an additional 91.8 hectares of land at South Nowra has been identified in the structure plan for industrial use.

Table 4.1: Projected Industrial Land Supply & Demand – Additional Non-Industrial Uses: 2006-2036

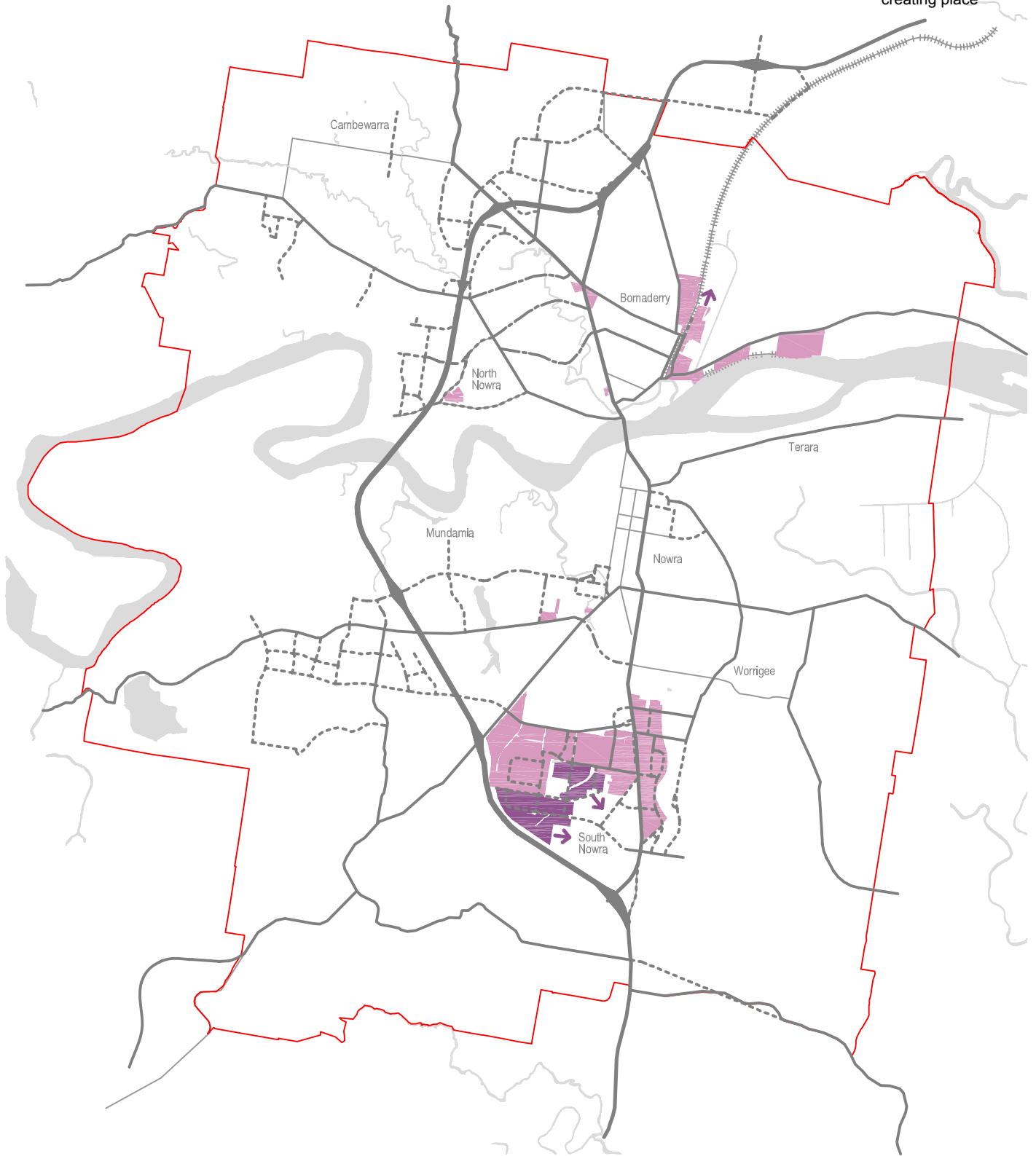
Indicator	2006	2011	2016	2021	2026	2031	2036
Zoned Land Supply (ha)	426.4	426.4	426.4	426.4	426.4	426.4	426.4
Zoned Land Demand (ha)	372.9	414.2	446.0	473.4	524.6	597.5	676.2
Available Zoned Land (ha)	53.5	12.2	-19.6	-47.0	-98.2	-171.1	-249.8

Note: Additional uses include accommodating 5% of community & 10% of retail/wholesale employment.

The role and function of Nowra-Bomaderry's industrial areas is summarised in Table 4.2 and their locations indicated on Map 4.2

Table 4.2: Industrial Areas: Future Role & Function

Locality	Area (ha)	Role & Function
Bomaderry: Waterfront	67.0	Major industries requiring large lots, absolute water frontage & rail spur.
Bomaderry: Industrial Estate	27.8	Light industry & storage
North Nowra	4.9	Light industry & storage
West Nowra	6.0	Light industry & storage
South Nowra: Flinders & Highway	372.5	Mix of industries, including storage & large footprint commercial
Albatross Aviation Technology Park	40.0	Aviation-related high technology industries & services






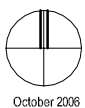
### Proposed Industrial Areas



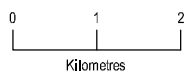
Nowra Bomaderry Structure Plan

### Legend

-  Structure Plan Boundary
-  Existing Industrial
-  Future Industrial



October 2006





place

## 5. COMMUNITY FACILITIES

### 5.1 OBJECTIVES

The structure plan has the following objectives for community facilities and services:

- Make adequate landuse provision for a range of community services and facilities which are equitably distributed and have physical and locational characteristics appropriate to the changing needs of the community.
- Enable government and non-government agencies to acquire sufficient and appropriate sites for the timely and appropriate provision of community facilities.
- Enable the multi-use and co-location of facilities for the efficient use of sites.
- Provide sites for emergency services which are within response times for their service areas.
- Provide ready access for the public by locating community facility sites close to public transport routes and other facilities.
- Ensure that the amenity of adjacent living areas is not unacceptably affected by the operation of community facilities, particularly in terms of noise, traffic, parking and privacy.

There are two community facilities that are fundamental to structure planning, since they provide a focus for neighbourhood design. These are: schools and open space/recreation facilities.

### 5.2 SCHOOLS

To cater for anticipated demand a system of primary schools and high schools (State and independent) is proposed to the north and south of the Shoalhaven River (Table 5.1). The following school sites are provided for in the structure plan:

New Primary Schools: 3 (1 north and 2 south of Shoalhaven River)

New High Schools: 2 (1 north and 1 south of Shoalhaven River)

Nowra Bomaderry's proposed education facilities structure is illustrated in Map 5.1.

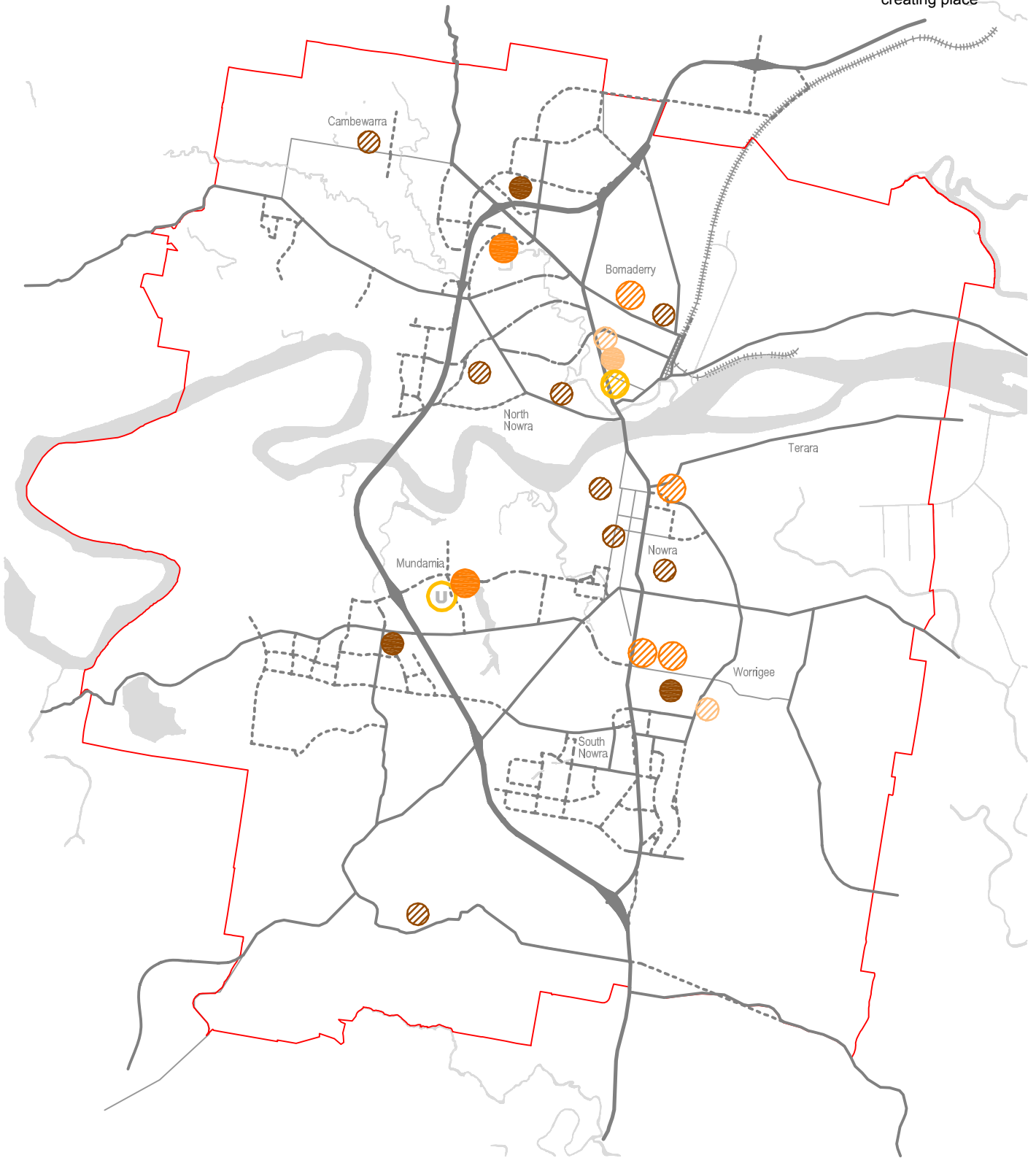
Table 5.1: Future School Provision

Type of School	North of Shoalhaven River		South of Shoalhaven River	
	Existing	Proposed	Existing	Proposed
Primary Schools	5	6	5	7
High Schools	2	3	5	6

Note: Both primary & high schools include the primary & secondary components of the Nowra Anglican College & the Nowra Christian School.

### 5.3 RECREATION AREAS

Public open space, both green and paved, provides the base-line facility for most forms of recreation. Open space in urban areas serves a number of important functions: recreational, social, ecological, climatic, hydrological, conservation and as land for urban services. Open space is also an important component of the overall 'amenity' of an area. It caters for many different cultural needs and a range of open space types is required to provide sufficient choice and diversity of experience to the residents of Nowra Bomaderry. Community needs include formal and informal recreation, celebration, performance, peace, tranquillity and communing with nature.












### Proposed Education Facilities



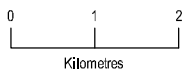
Nowra Bomaderry Structure Plan

### Legend

-  Structure Plan Boundary
-  Existing Primary School
-  Future Primary School
-  Existing High School
-  Future High School
-  Existing Combined Primary and High School
-  Future Combined Primary and High School
-  Existing TAFE
-  Existing University and TAFE Campus



October 2006





## Passive Recreation

The structure plan has the following objectives for recreation and urban open space:

- Provide appropriate quality and quantity of open space to contribute towards meeting the recreational and social needs of the Nowra Bomaderry community and wider Shoalhaven community.
- Provide for a range of outdoor passive and recreation activities in a variety of settings which serve the needs of the community, are accessible to the public and located convenient to potential users.
- Enhance the quality of life in, and appearance of, urban areas.
- Provide an integrated open space system that protects the environmental qualities of the urban landscape and promotes a continuum of natural and park-like settings for Nowra Bomaderry.
- Incorporate significant natural and cultural features into open space, where appropriate, to ensure their protection, appropriate use and interpretation, or to provide a landscape theme or focus.

An open space system is proposed for Nowra Bomaderry that comprises a hierarchy of icon, district and local parks and reserves, linked by a network of cycleway/footpaths. The off-road cycle/pedestrian network will also provide links to neighbourhood centres, schools and other community focal points.

**Icon and District Parks:** The concept of icon parks has been developed in recognition of the importance of certain high profile locations to the economic and social fabric of the City. It is envisaged that icon and district parks will become the 'flagship parks of the Shoalhaven. Their designation is based on the following criteria: current high levels of visitation; impact on visitor perceptions of the Shoalhaven; likelihood of flow-on commercial benefits; proximity to supporting attractions; and significance to tourism. The current icon and district parks are listed in Table 5.2. It is anticipated that, in addition to 'pocket' and 'local parks', a number of new 'district' parks would be provided in the new living areas.

Table 5.2: **Passive Open Space: Icon & District Parks**

Park Status	Name of Park	Type	Area
Icon Park	Greys Beach, North Nowra	River Foreshore	7.96 ha
District Park	Riverview Road/Scenic Drive Reserve, Nowra	River Foreshore	6.48 ha
	Marriott Park, Nowra	Urban Park	3.03 ha
	Harry Sawkins Park, Nowra	Urban Park	4.57 ha

## Active Recreation

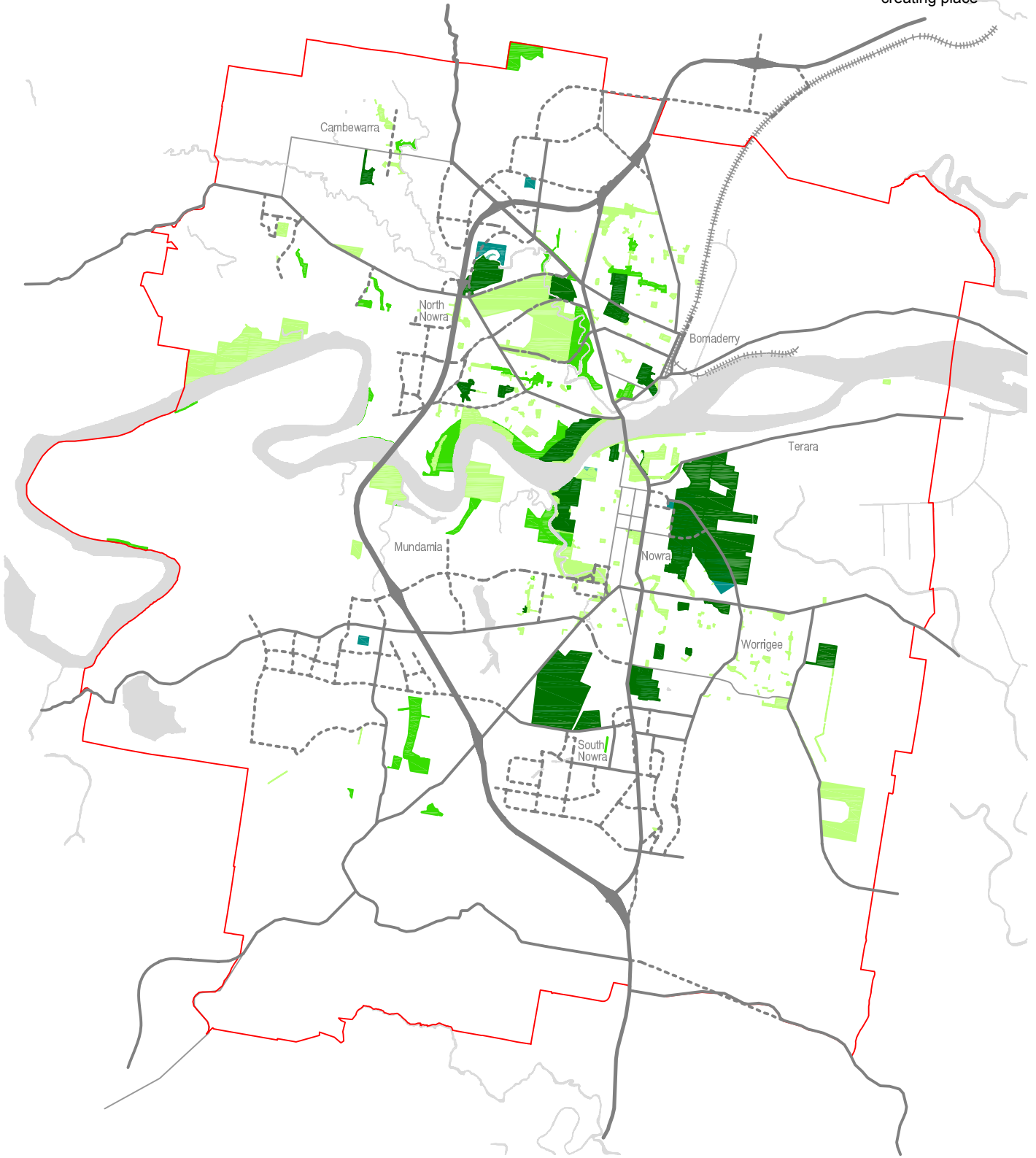
The structure plan has the following objectives for active recreation areas:

- Make provision for a range of sport and recreation facilities and activities whether in public or private ownership.
- Ensure the amenity of adjoining development is not unacceptably affected by the operation of sport and recreation facilities, particularly in terms of noise, traffic, parking, privacy and outside lighting at night.
- Ensure that the bulk, scale, size, design and landscaping of development is compatible with the surrounding landscape.

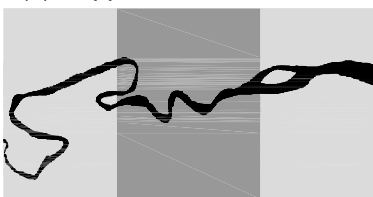
## Future Recreation Facility Provision

Active Recreation needs in Planning Area 1 and on a city-wide basis have been identified in Council's Sporting Facilities Plan 2016. These needs are currently being addressed via a major review of the active recreation component of the Shoalhaven Section 94 Contribution Plan. In providing for future needs Council has a preference for the centralisation of active recreation facilities, to facilitate effective management and to assist competition structuring for sporting and event organisers.

The major future active recreation projects to be located in Planning Area 1 within the life of the Sporting Facilities Plan require approximately 7.0 hectares of land, much of which is available at 'Wondalga', Nowra. The major hub for active recreation facilities will be 'Wondalga', which is located on the eastern edge of the Nowra CBD. Planning for this site is currently underway. The active recreation projects to be provided in the short to medium term (included in the Section 94 Contribution Plan) are listed in the Table 5.3 and the proposed recreational open space structure is shown on Map 5.2.



### Proposed Recreation Facilities



Nowra Bomaderry Structure Plan

### Legend

- Structure Plan Boundary
- Existing Natural Bushland/Foreshore Areas
- Existing Passive Recreation
- Existing Active Recreation
- Future Active Recreation



October 2006

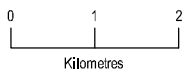


Table 5.3: Future Recreation Facility Provision

Sport	Facility	Location
Hockey (City-Wide)	1 x synthetic field	Bernie Regan Reserve, North Nowra
Football/ Cricket (Area 1)	8 x football fields (minimum) 4 x cricket pitches (minimum)	'Wondalga', Nowra
Football/ Cricket (City-Wide)	Upgrade Facility (Lighting & Seating)	Rugby Park, South Nowra
Netball (Areas 1 & 2)	Court Upgrade (6 courts)	Park Road, Nowra
Indoor Sporting Facility (City-Wide)	Investigations underway	Unknown at this stage
Tennis	4 x tennis courts	Nerang Road, Bomaderry

Note: Bernie Regan Reserve is under investigation for a multipurpose field able to accommodate AFL, cricket & hockey spill-over)

### Other Major Recreational Facilities

As the population of Nowra Bomaderry expands to the 50,000 level it will cross a threshold where a higher order of recreation and sporting facilities would be required.

## 5.4 COMMUNITY FACILITIES

As provided for in a recent amendment to Section 94 Contribution Plan – Community Facilities, several community facility projects are planned for Nowra Bomaderry. The Integrated Youth Services Centre has recently been completed and community centres/meeting rooms are planned for Nowra, Worrigee and West Nowra, to be constructed within the next five years.

It is premature at this stage to specifically identify other community facilities for the expanded Nowra Bomaderry urban areas, rather, indicative locations are identified. Uncertainties regarding future socio-economic trends and shifts in policy directions make the identification of specific future community facilities problematic. This issue is expanded further in Section 8.4.



## 6. TRANSPORT

### 6.1 OBJECTIVES AND PRINCIPLES

The structure plan has the following objectives for transport facilities:

- Make provision for a transport system that maximises accessibility to activity areas which is equitable and affordable.
- Provide for a system of roads which can provide for the efficient, safe and convenient movement of people and goods.
- Implement a network that offers and encourages safe and efficient alternatives for mode choice other than the private passenger car.
- Facilitate the development and operation of public transport.
- Allow road network planning to provide for a system of practical staging with adequate capacity.
- Provide network planning for a hierarchy of roads with provision of safe, efficient and logical public transport (bus) routes with good connectivity to the local and main road network.
- Ensure road network planning provides for safe, efficient and logical pedestrian and cyclist routes with good connectivity to the local and main road network.

#### *ESD Principles*

Provide efficient movement of people and goods.

- Minimise total private passenger vehicle travel (offer attractive, safe and efficient mode choice alternatives other than the private passenger car and encourage/promote alternatives to private passenger vehicle travel).
- Minimise total vehicle travel (time/kilometres/costs).
- Determine optimum staging of residential expansion and infrastructure.
- Determine implication of greater public transport usage and urban consolidation on the need for additional transport infrastructure (rail, roads, paths, and parking).

### 6.2 ROAD NETWORK

The 'Achilles heel' of the Nowra Bomaderry road network is the Princes Highway (SH1) and its many intersections with classified and designated regional roads, collector roads, and the local access road network. The Princes Highway serves as the single north-south spine road to and through Nowra Bomaderry 's system of urban areas. There are no practical alternatives to this route (Map 6.1). Being the single north-south route through Shoalhaven City - the Princes Highway has multiple functions as an important link in the state road network, as a local collector and distributor road, and as a local access road. Accordingly – it is not surprising that sustained increases in traffic growth has resulted in safety and capacity issues along the entire length of the Princes Highway through Shoalhaven City. Without significant capital investment, the Princes Highway and its key intersections will continue to suffer from major capacity deficiencies and resultant safety issues.








### Proposed Road Network



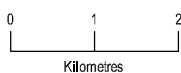
Nowra Bomaderry Structure Plan

### Legend

-  Structure Plan Boundary
-  Future Western Bypass
-  Main Roads
-  Local Road Network
-  North Nowra Link Road Options



October 2006



Kilometres

## Strategic Traffic Patterns

Although once a myth that 90% of traffic on the Shoalhaven River bridges was local to Nowra Bomaderry, origin-destination studies undertaken in December 1994 and again in September 2003 have confirmed a number of significant facts relating to the patterns of travel in Nowra Bomaderry. In summary these are:

- Approximately 10-15 % of daily trips across the Shoalhaven River bridge represent total daily through traffic (no time breakdown i.e. some of these trips would have stopped within the Nowra Bomaderry area).
- Approximately 5 % of daily trips across the Shoalhaven River Bridge represent total daily through traffic (direct through traffic – i.e. trips that did not stop anywhere within the Nowra Bomaderry area).
- Approximately 50 % of daily trips across the Shoalhaven River Bridge was local traffic generated within the Nowra Bomaderry area.
- Approximately 35-40 % of daily trips across the Shoalhaven River Bridge comprised traffic that entered the Nowra Bomaderry area and left within the course of a normal day (or vice versa). This is a significant % and includes traffic from within Shoalhaven City that requires access to the Regional Centre for school, business, recreation, or community services.

These findings indicate:

- That a bypass of Nowra Bomaderry will not resolve all of the issues on the existing Princes Highway (given that a bypass without any adjacent commercial zoning or any intermediate access points would attract approximately 5% of traffic only from the Shoalhaven River Bridges)
- That a bypass of Nowra Bomaderry will need to include a reasonable number of access points to significant (existing) and urban expansion areas to allow both staging opportunity of the bypass construction and to maximise the use of the ultimate corridor (maximise diversion from the existing Princes Highway) in order to obtain a reasonable return for constructing the bypass.

However, the RTA has indicated that any bypass of Nowra Bomaderry would be a restricted access route. Shoalhaven Council will continue to liaise with the RTA to determine where, if any, limited access would be feasible.

### 6.2.1 Major Infrastructure – Required in the Short to Medium Term

There are four key road projects that should assist capacity issues in the short to medium term.

- **North Nowra to Bomaderry Link Road:** This will provide a much needed alternative route from North Nowra to the Princes Highway, thus taking pressure off the Princes Highway/Illaroo Road and Princes Highway/Bolong Road intersections. This will have the important additional benefit of improving traffic capacity, road safety, and environmental capacity (importantly noise, pedestrian and access concerns) along the length of Illaroo Road south of the link road connection. Preliminary analysis has determined that the link is required in the short term regardless of new development, however it is also considered to be an essential additional link to facilitate any new development of new living areas to the north of the Shoalhaven River. The construction of this link is expected to substantially defer the need for major infrastructure upgrade (another river crossing - inner western) of the Shoalhaven River. The link road is being undertaken as a separate project and will be assessed as a major project under Part 3A of the Environmental Planning and Assessment Act 1979.
- **Shoalhaven River bridge intersections:** Prior to an additional Shoalhaven River bridge crossing - the significant upgrades of the two intersections to the north of the bridge (Highway/Bolong Road and Highway/Illaroo Road) and the Highway/Bridge Road intersection to the south of the bridge would significantly increase the capacity of the existing river crossing and substantially put back the need for another (inner western) Shoalhaven River bridge crossing. The intersection of Bolong Road/Princes Highway requires additional lane capacity on the approach to the Princes Highway. The intersection of Illaroo Road/Princes Highway requires a left slip lane to be constructed to compliment the traffic benefits of a North Nowra–Bomaderry Link Road. The intersection of Bridge Road/Princes Highway requires a new signalised junction between Moss Street and Bridge Road to enable phasing improvements to be carried out at the existing Bridge Road intersection. One possible concept involves relocation of existing movements into/out of Pleasant Way to a more southern intersection via extension of Hawthorn Avenue.
- **East Nowra Sub-Arterial (ENSA):** The construction of a new road link connecting Greenwell Point Road (in the vicinity of Old Southern Road) to the Princes Highway (at North and at Junction Streets). This would provide a much needed alternative connection to the Highway from the East Nowra, Worrigea, and coastal village areas. This link will relieve pressure along the Kalandar Street/Princes Highway route to the Nowra CBD and would substantially reduce the extent of works required in the short-medium term at Kalandar Street/Highway intersection and along the Highway between Kalandar Street and the Nowra CBD. It is likely that the need for the ENSA work will be significantly brought forward by commercial development in Nowra CBD (East) on the eastern side of the Highway.

- **South Nowra Road Strategy:** With respect of capacity issues along the Princes Highway through Nowra Bomaderry - the gradual deterioration of levels of service and safety on the Princes Highway through South Nowra is of particular concern. Preliminary modelling has shown that the RTA's 'Interim' road safety strategy for the Princes Highway (South Nowra) has limited spare capacity beyond 2016. Council is currently working with RTA to review necessary elements of the Strategy to address accessibility and capacity issues however the further development of that strategy is integral to the Structure Plan process.

Other major new network links identified for further investigation throughout the Nowra Bomaderry Structure Plan process include:

- Those relating specifically to urban expansion areas (refer to Nowra Bomaderry Structure Plan proposed future road network).
- New East-West Road in the south west sector (from Flatrock Road in the west, extending east connecting with a proposed extension of Cabbage Tree Lane, the West Bypass, George Evans Road near the University site, and on to Nowra CBD south with possible connection into Osborne Street or Berry Street) to improve network capacity and reduce impacts of traffic congestion on Yalwal Road and Illaroo Road.
- New East-West Road connecting Hillcrest Avenue at Princes Highway to Yalwal Road at Albatross Road to improve network capacity and resolve readability and accessibility issues.
- Extension of Flinders Road to Cabbage Tree Lane and further west to the proposed new north-south road (extending south of Yalwal Road at Long Reach Road) as a primary collector road to provide necessary capacity and alternative access for the expansion areas of Mundamia and Bamarang to Albatross Road and the Princes Highway via Flinders Road).
- Warra-Warra Road to Flinders Industrial Estate: to provide necessary capacity and accessibility for the future expansion of Flinders Industrial Estate.

Major upgrades to existing networks to cater for the development of the new living areas include:

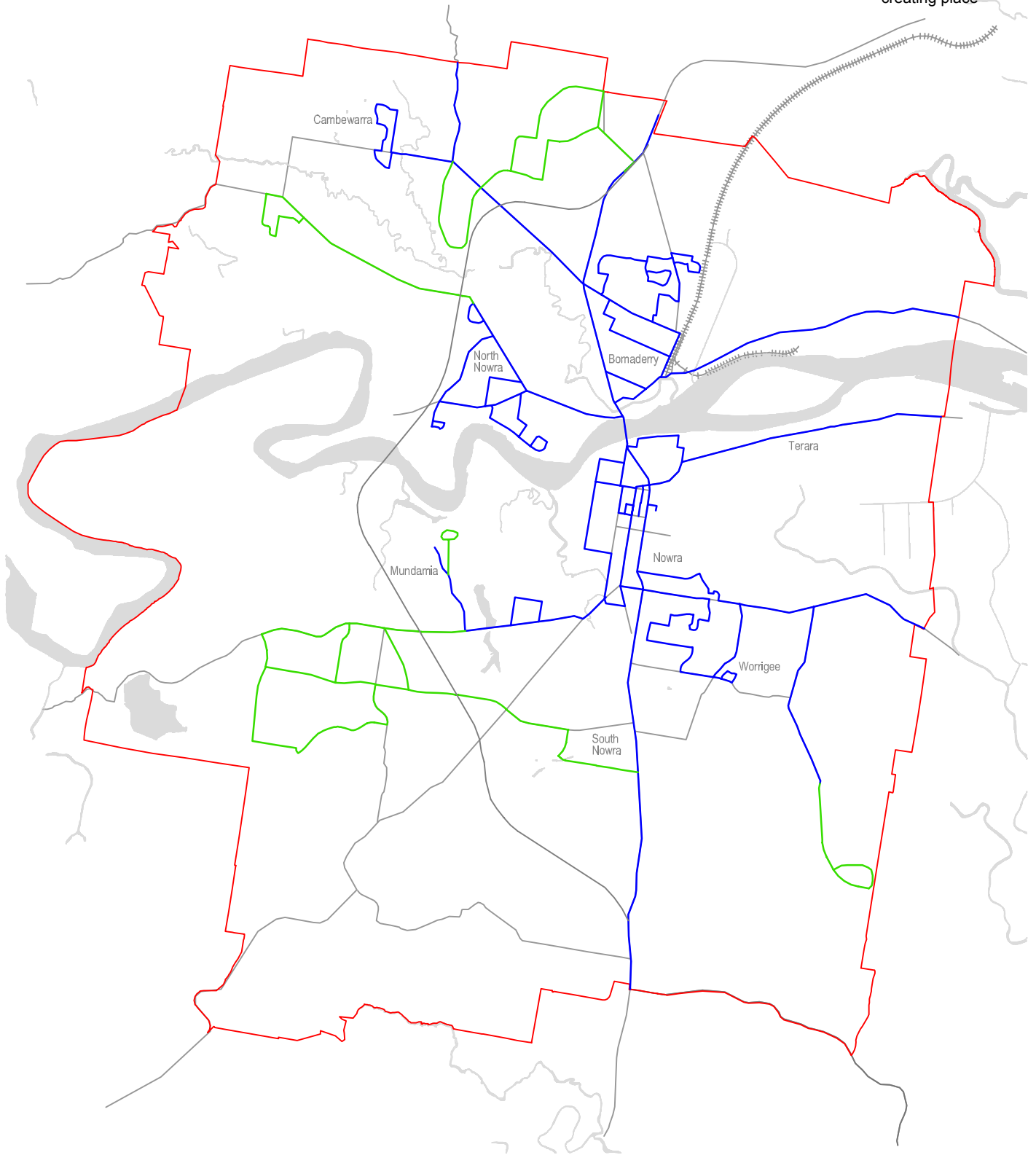
- Yalwal Road: Details subject to modelling analysis however likely minimum upgrade to a four lane road (in particular the section from Flat Rock Road to Albatross Road)
- Moss Vale Road: Details subject to modelling analysis however likely minimum upgrade to a four lane road (in particular the section from Main Road to the Princes Highway)

It is noted that the modelling analysis for the Nowra Bomaderry structure plan will identify a complete deficiency analysis of the existing road network when considering likely background traffic growth and future traffic generation from urban expansion areas and urban consolidation.

### 6.2.2 Major Infrastructure - Longer Term

In the longer term the critical Princes Highway spine road would need to be supplemented at minimum by a western bypass road. Since only a minority of Princes Highway trips are bypass-able, the new western bypass road would need to perform a much needed major collector road role, with several grade separated intersections providing access to the greater urban road network and linking back to the Princes Highway (if to be successful in diverting a maximum number of trips from the existing Highway). This function could greatly assist the staged construction of the bypass (subject to detailed traffic modelling analysis and concept design review by RTA). Depending on significant 'other' factors affecting the ability of the western bypass to provide a longer term solution to growing traffic congestion along the Princes Highway, additional river capacity at, and to, the east of the existing bridges may also be required. It is likely that additional river crossing capacity at the existing bridges will be required well prior to a western bypass being constructed.








### Public Transport Opportunities



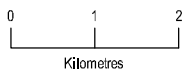
Nowra Bomaderry Structure Plan

### Legend

-  Structure Plan Boundary
-  Existing Bus Route
-  Future Bus Route



October 2006



## 6.3 PUBLIC TRANSPORT

The high dependence on the private motor vehicle is assumed to continue at least until the short to medium term. This will have a profound impact on parking demand, accessibility to and circulation in the Nowra CBD. To remedy this situation, alternative approaches will be investigated to ascertain the potential for mode shift to alternative travel opportunities including 'healthy modes' and various forms of public transport. Options for possible investigation include requirement for larger developments to provide showers and bike racks as mandatory conditions of consent. This would need to be supplemented by greater funding (one possible funding option being Council's Section 94 Contribution Plan) for increased expenditure to improve cycling safety on our roads, including higher speed regional arterial roads linking village areas in the northern Shoalhaven to Nowra Bomaderry.

One other alternative approach recommended by RTA would be to investigate suitable areas for establishing park and ride type systems with major parking facilities being established:

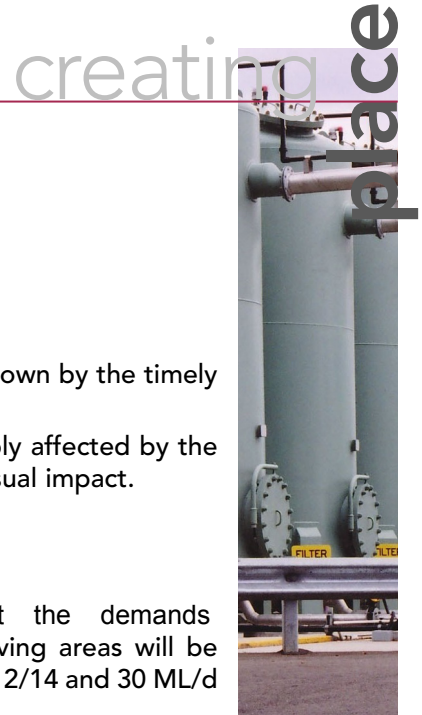
- North of Bomaderry.
- South of Nowra.

A shuttle bus or public bus service utilising bus priority lanes would transport car occupants from these parking nodes to the Nowra CBD. This is entirely dependent on capacity being available within the road system to allow such lane infrastructure to be dedicated to bus travel in the peak periods and as such it is envisaged that timing for such a facility could follow construction of the western bypass (which dependent on adopted design and accordingly impact of the bypass, would be assumed to result in spare capacity being provided in the existing road network). Given preliminary discussions - It is likely that RTA would support any system likely to encourage/attract higher levels of public transport usage and resultant lower traffic volumes in the longer term.

Potential bus routes to service the new living areas are shown on Map 6.2.

## 6.4 PATHWAY NETWORKS

A system of pathways (cycleways and footpaths) is being developed for Nowra Bomaderry. This will be further enhanced to provide an integrated system of on and off-road routes that will provide the community with choices for transport and recreation. An off-road pathway system will provide connectivity within and between suburbs as well as to recreation attractions outside the urban areas, such as the Shoalhaven River, its tributaries and the Cambewarra escarpment.



## 7. URBAN INFRASTRUCTURE

### 7.1 OBJECTIVES

The structure plan has the following objectives for urban infrastructure:

- Manage urban growth and change to ensure an efficient and healthy town by the timely and cost-effective provision of infrastructure and urban services.
- Ensure that the amenity of surrounding living areas is not unacceptably affected by the operation of urban infrastructure, particularly in terms of noise and visual impact.

### 7.2 WATER SUPPLY

Nowra Bomaderry's water supply network will be augmented to meet the demands anticipated in the structure plan, as indicated on Map 7.1. The new living areas will be supplied by an upgraded Bamarang water treatment plant (30 ML/d in 2012/14 and 30 ML/d in 2024/26). Reservoirs will be required to meet peak day demand at:

- Moss Vale Road North (5.5 ML 2015/17).
- Cambewarra (1.0 ML 2024/26).
- Nowra (20 ML 2024/26).

Trunk mains are also required from the Pitt Street Reservoir to the new Moss Vale Road North Reservoir, Bangalee, Bangalee West and Crams Road areas (2014/18). Trunk mains are also required to service the new Moss Vale Road living areas.

South of the Shoalhaven river trunk mains are required to feed investigation areas of Mundamia (2018), Cabbage Tree Lane (2017) and an expanded South Nowra Flinders Industrial Estate.

### 7.3 WASTE WATER

The new living areas north of the river (Crams Road, Bangalee, Bangalee West and Moss Vale Road) will be served by a trunk sewer to the Bomaderry treatment plant. Wastewater from these areas will be transferred by several pumping stations and rising/gravity mains to a major pump station to be located near Bomaderry Creek. This pump station will transfer wastewater by a rising/gravity main along west Cambewarra Road to the treatment plant. Infrastructure will be implemented from 2014 to 2024.

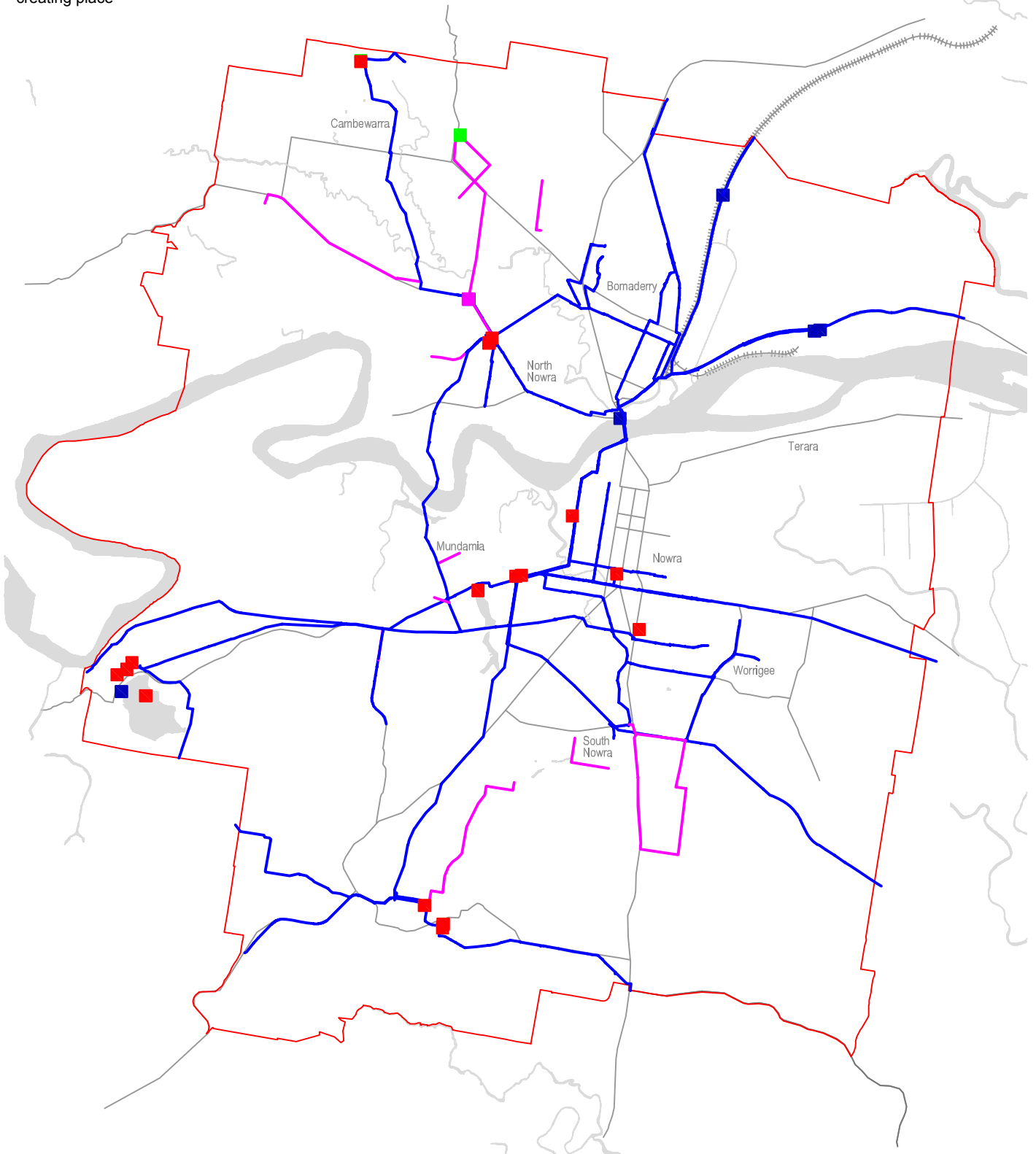
The new living area at Worrigeer will be served by pumping to an existing facility at Worrigeer Road. The new living areas at Cabbage Tree Lane and Mundamia will be served by pump stations, gravity and rising main discharging into a proposed trunk gravity main that flows to the existing St Anne's Street pumping station (programmed for 2015/17).

The extension of the South Nowra industrial estate will be served by a pumping station and rising main into an existing gravity sewer, scheduled for 2024/25. The proposed expanded waste water system is shown on Map 7.2.

### 7.4 SOLID WASTE

All Nowra Bomaderry's domestic and commercial solid waste is disposed of at the West Nowra Recycling and Waste Disposal Depot, which occupies a 39 hectare site. The depot processes approximately 55,500 tonnes per annum. Total waste to landfill has increased in recent years, which is of concern to the community.

On current levels of demand, the facility is estimated to have a life of approximately 20 years. However, with greater emphasis on the reduction of household waste generation and the recycling of household and garden materials, the per capita demand for landfill is anticipated to fall.



Proposed Water Supply



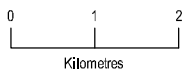
Nowra Bomaderry Structure Plan

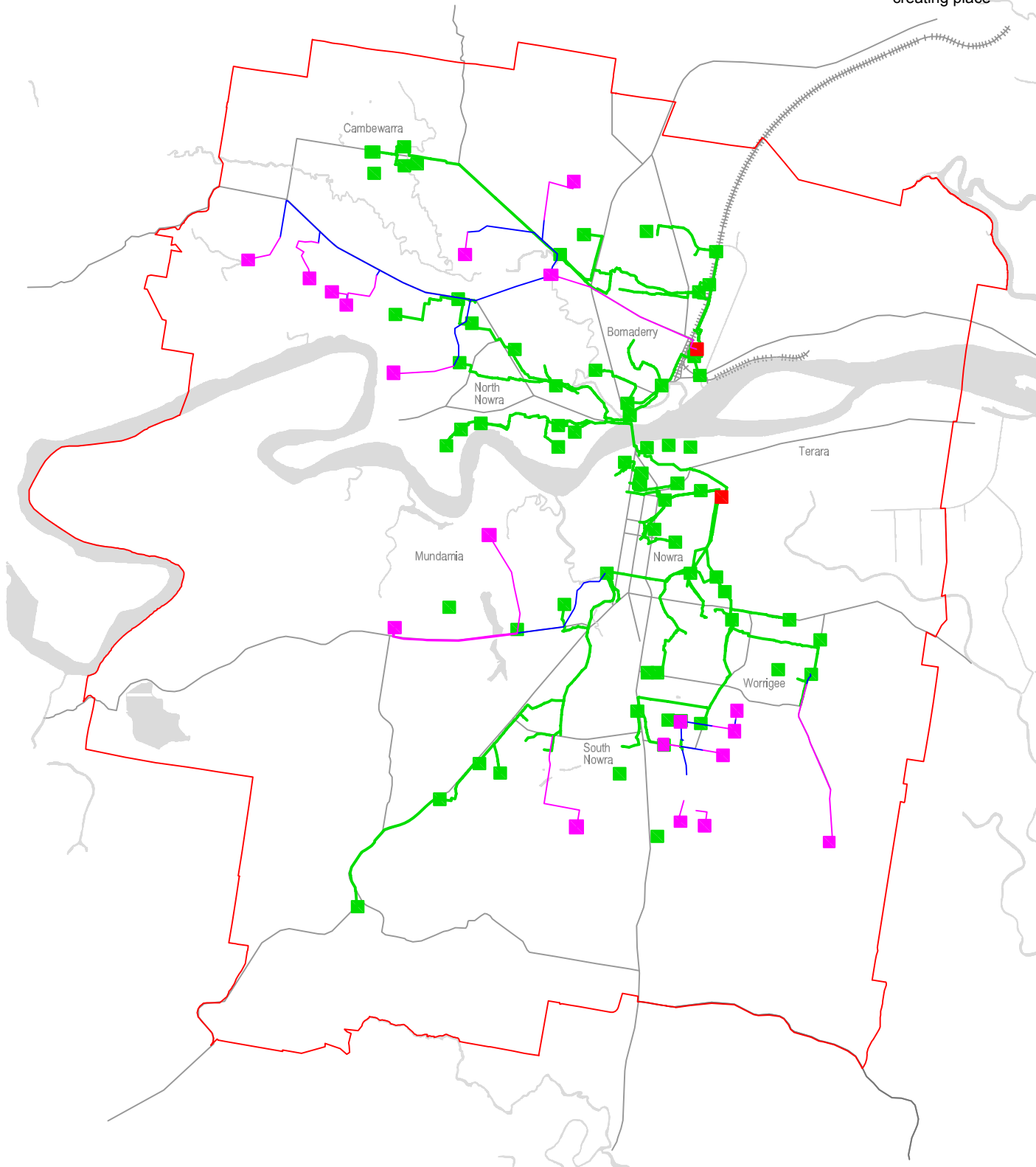
Legend

- Structure Plan Boundary
- Water Trunk Mains
- Water Reservoirs
- Water Pumping Stations
- Future Water Trunk Mains
- Future Water Reservoirs
- Future Water Pumping Stations



October 2006












### Proposed Waste Water



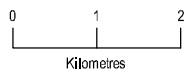
Nowra Bomaderry Structure Plan

### Legend

-  Structure Plan Boundary
-  Waste Water Trunk Mains
-  Waste Water Pumping Stations
-  Sewage Treatment Works
-  Future Waste Water Gravity Mains
-  Future Waste Water Rising Mains
-  Future Waste Water Pumping Stations



October 2006



## 7.5 OTHER INFRASTRUCTURE

### Energy

Nowra Bomaderry is supplied with electricity and reticulated natural gas. Issues for the structure plan include pipeline and transmission corridors. In the case of overhead powerlines, visual amenity is a significant issue.

### Communications

The demand for telecommunications is anticipated to grow, since it has become an intrinsic feature of the way people work and relax. With the growth in Nowra Bomaderry's population there will be a need to increase the mobile base station capacities, which will have implications for visual impact. However, it is anticipated that policies of co-location on existing mobile phone towers together with technological innovation will reduce future visual impacts of network capacity expansion.

### South Coast Correctional Centre, Nowra

The NSW Minister for Justice, Tony Kelly MP announced on the 13th December 2006 that a site situated on the western side of the Princes Highway, approximately 5.5 kilometres south of Nowra, and owned by the Department of Lands, is the preferred location for the proposed Correctional Centre for the South Coast. Council will continue to work with the Department of Correctional Services in regards to the development of the site (which is likely to occur via the Part 3A process outlined in the Environmental Planning & Assessment Act 1979), and to determine appropriate zonings for the site and surrounding lands. The development of the identified site may also have implications for Council's proposed road network for South Nowra.



## 8. IMPLEMENTATION

### 8.1 PATTERN OF DEVELOPMENT

The future development of Nowra Bomaderry will be phased to meet the needs of the community in a manner that is economically and environmentally efficient and sustainable. The development of new living areas will be staged in order to capitalise on the pattern and form of the existing urban fabric and to avoid prematurely crossing infrastructure cost thresholds. It will take account of the significant travel impediment inherent in the Shoalhaven River crossing by localising, as far as possible, the connectivity between home and workplace. The regeneration of existing living areas will be founded on the significant capital investment in existing community and physical infrastructure, whilst minimising adverse environmental and socio-cultural impacts.

### 8.2 DEVELOPMENT OF NEW LIVING AREAS

A number of factors influence the development phasing of the new living areas. These include:

- Construction of an additional Shoalhaven River bridge.
- Development of the North Nowra Bomaderry Link Road.
- The provision of hydraulic infrastructure.
- The need to provide residential location choice and recognise possible withholding constraints.

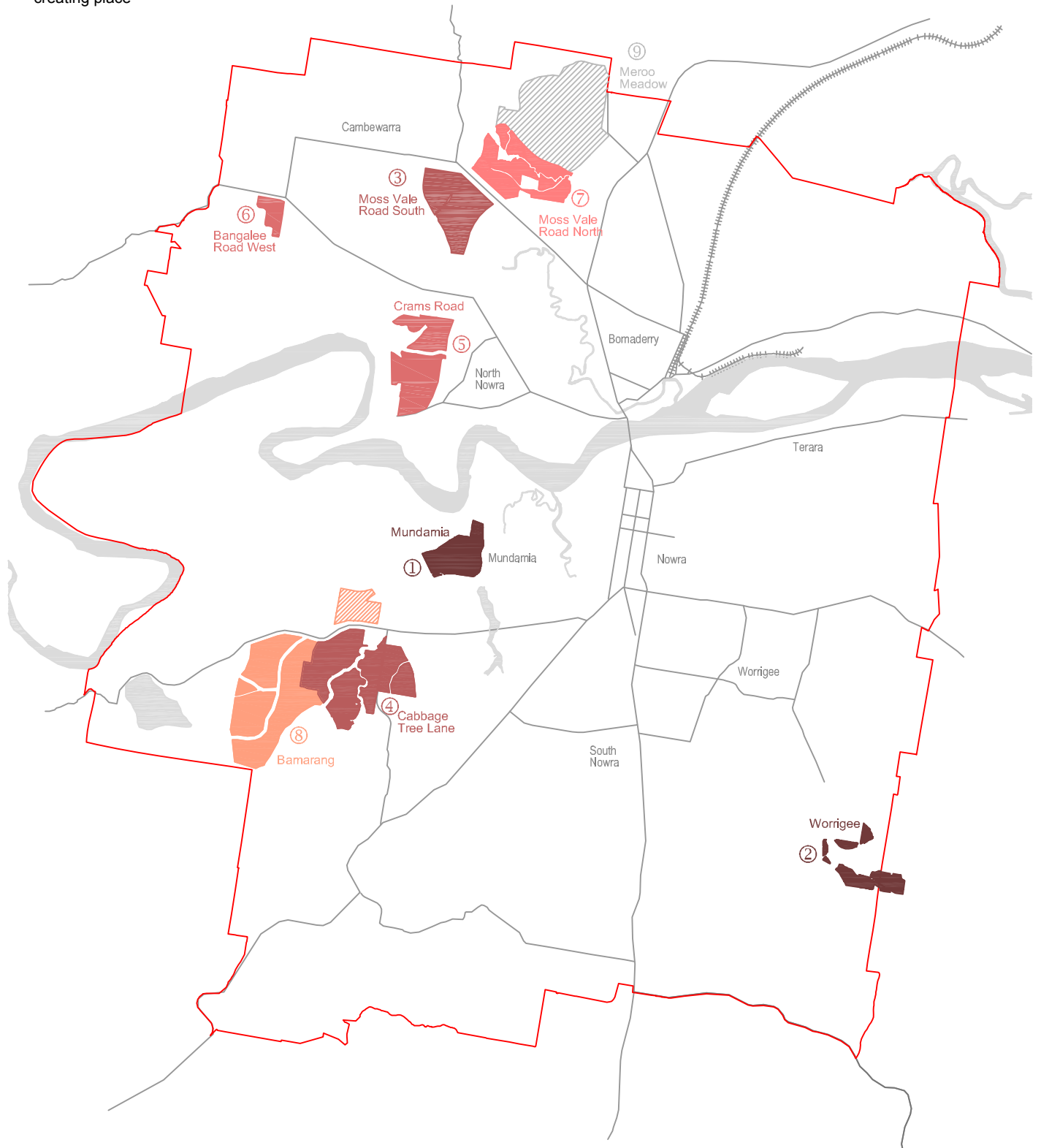
The river crossing is a key constraint on the development of new living areas to the north of the Shoalhaven River. This is particularly the case with development requiring access from Illaroo Road. The construction of the North Nowra Bomaderry Link Road would, however, add another 10 years to the life of the bridge, since it serves to relieve the bottleneck on the Princes Highway between Bolong Road and Illaroo Road. Removing this capacity constraint on the northern approach to the bridge effectively enhances the capacity of the river crossing. Thus before either of these events take place, it would be prudent to develop new living areas south of the river in the early stages. This rationale is supported by hydraulic infrastructure supply issues, which favour development to the south of the river at least in the short to medium term.

On this basis, the development of the new living areas at Mundamia and Worrigea is the favoured sequence in the short term. The Mundamia location is close to Nowra and would provide much needed residential accommodation associated with the university campus (staff and students). The southern location of Worrigea is favoured since it is able to be developed in the short term, subject to the completion of environmental studies. It is assumed that by Phase 2, the river crossing issue may still be unresolved. Despite this it is considered important to meet community needs by providing residential opportunities in a 'north of the river' location. In this regard, the Moss Vale Road South location would be the first preference, since it could be accessed from Moss Vale Road and avoids the problematic Illaroo Road access. In Phase 3 the southern location of Cabbage Tree Lane is favoured. By Phase 4 it is assumed that the river crossing issue would be resolved, enabling the 'north of the river' locations of Bangalee Road West, Crams Road to proceed in Phase 4, followed by Moss Vale Road North in Phase 5. The possible sequence of these and subsequent phases (Table 8.1 and Map 8.1) are very much dependent upon land owner activity. The flexibility and overlapping practicality of the program is very much emphasised. Owner input during the structure plan exhibition period will be crucial to the phasing program finally implemented.

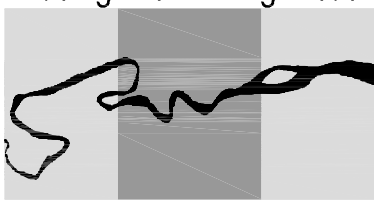
### 8.3 DEVELOPMENT OF EXISTING LIVING AREAS

It is intended that the strategies and criteria discussed in section 2.1.7 will be in place prior to the gazettal of the Nowra Bomaderry Local Environmental Plan to ensure that timely and appropriate urban consolidation is achieved in the identified areas in line with the Settlement Planning Guidelines being developed by the Department of Planning.












Possible Development Phasing: New Living Areas



Nowra Bomaderry Structure Plan

Legend

-  Structure Plan Boundary
-  Phase 1 and 2
-  Phase 3 and 4
-  Phase 5 and 6
-  Phase 7
-  Phase 8
-  Phase 9



October 2006

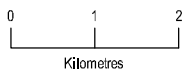


Table 8.1: New Living Areas: Suggested Indicative Development Phasing

New Living Area	Development Phases: Dwellings						
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7
Area 1: Moss Vale Road North					1300		
Area 2: Moss Vale Road South		1250					
Area 3: Bangalee Road West				200			
Area 4: Crams Road				1080			
Area 5: Mundamia	720						
Area 6: Cabbage Tree Lane			2180				
Area 7: Worrigee	390						
Area 8: Bamarang						2230	
Area 9: Meroo Meadow							2220
<b>Total</b>	<b>1110</b>	<b>1250</b>	<b>2180</b>	<b>1280</b>	<b>1300</b>	<b>2230</b>	<b>2220</b>

## 8.4 DEVELOPMENT OF COMMUNITY FACILITIES

The structure plan identifies indicative location-sites suitable for future community facilities that may be required in Nowra Bomaderry. The structure plan is based on trends and policies prevailing several years before the commencement of actual development. However, in the intervening period, many of these trends and policies may change and other factors may emerge. It is thus crucial to differentiate between location-site identification and the actual provision of facilities. On the basis of these considerations the planning emphasis will be on:

- Retaining flexibility to respond to emerging needs and changing conditions.
- Determining the needs and priorities of the local population as the areas are settled.
- Monitoring and refining population/household projections as growth takes place.
- Fostering cooperation and commitment among service providers to ensure the timely and efficient provision of facilities and services.
- Adapting solutions to local constraints and opportunities.

## 8.5 DEVELOPMENT OF COMMERCIAL AND INDUSTRIAL FACILITIES

In broad terms the phasing of commercial and industrial development is largely the province of the private sector. However, Council considers it has a locus in the phasing of the two proposed neighbourhood centres, since they represent important community foci for the new living areas to the south and north of the river. The phasing of these two centres will be closely linked with the development of the Mundamia, Cabbage Tree Lane and Bamarang living areas in the south, and the development of the Moss Vale Road living areas to the north.

## 8.6 LOCAL ENVIRONMENTAL PLAN (LEP) PROVISIONS

The structure plan will provide the strategic direction upon which a new LEP, or LEP amendment will be based. This will involve the translation of the structure plan into a statutory instrument, in this case a local environmental plan. By this means, each parcel of land will have defined planning controls through zoning and other related provisions applied to that parcel.

Once the structure plan has been finalised and endorsed by State Government, Council will be able to move into the LEP review phase of the project. The LEP review will need to be consistent with the planning reforms currently being undertaken by State Government. This will include a new LEP that conforms to the Standard Instrument (LEP Plans) Order 2006, under the Environmental Planning & Assessment Act, 1979.

