

infrastructure and services

chapter 5

5.1

An important issue for the Central Coast is how to build strong, sustainable communities through the provision of physical infrastructure and services.

5.2 Community Infrastructure and Service Provision

A key challenge for the Central Coast is to unite the providers of community infrastructure, networks, services and facilities into a peak body similar to those of the region's economic and environmental interests. This peak body is a necessary prerequisite to ensure congruence between the policies and programs aimed at countering social exclusion and promoting sustainable communities through equality of opportunity. This idea is further explored in chapter 8 under Communities and Social Capital. 9.48.234

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The ability to achieve strong and sustainable communities depends on the integrated provision of services to meet the needs of both the existing and the future population.

5.4 Physical Infrastructure

While the standard of the region's infrastructure has improved dramatically over the last three decades, the impact of continuing population growth requires ongoing expansion and refurbishment to be undertaken.

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Much of the region's infrastructure (water supply, wastewater treatment, stormwater systems, refuse disposal and transport) is reaching design capacity and will need upgrading to meet higher environmental standards as well as increasing demand. Any future growth will have significant implications for expenditure and priorities.

5.6 Assessment of the Region's Physical Infrastructure

To provide a useful planning platform for the region, PlanningNSW together with Gosford City and Wyong Shire Councils (with the cooperation of the Premier's Department Infrastructure Coordination Unit) funded the preparation of an Infrastructure Assessment Report for the Central Coast as part of the development of the Action Plan.

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The consultants engaged to prepare the Infrastructure Assessment were Gutteridge Haskins & Davey Pty. Ltd. (GHD). GHD prepared national report cards on infrastructure capacity in 2000 and 2001. The 2001 Australian Infrastructure Report Card included roads, railways, airports, ports, potable water, wastewater, stormwater, irrigation, electricity, gas, and telecommunications.

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The consultants were requested to analyse the same infrastructure categories for the Central Coast with the exception of ports and irrigation and with the addition of the physical infrastructure components associated with solid waste disposal, education, health, recreation facilities and community facilities.

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GHD were specifically asked to address the following questions:

- i. What is the existing level of infrastructure?
- ii. What is its condition?
- iii. What is the adequacy of the infrastructure to service the existing population and its capacity to service future population?
- iv. What are the benchmarks and criteria for when new infrastructure is required?

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The preparation of the Central Coast Infrastructure Assessment Report involved interviews with key stakeholders and a review of more than 150 documents made available from respective government agencies.

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The Central Coast has already benefited from the preparation of the Infrastructure Assessment, evidenced by the willingness of government agencies to be involved in the project and the exchange of ideas for improving service delivery. This sets a solid platform for government agencies to work collaboratively to tackle any deficiencies identified in the Infrastructure Assessment Report.

5.12 Assessment Report Findings

The Infrastructure Assessment Report identified that several government agencies have already committed to substantial capital investments on the Central Coast, particularly in terms of roads and transport, health and education.

5.13 Inadequate Levels of Renewal and Maintenance Funding

The Assessment identified concerns with existing infrastructure due to inadequate levels of renewal and maintenance funding to maintain service level standards or achieve the best lifecycle cost outcomes. The assessment also highlighted the need to improve asset management plans for ageing infrastructure over the coming decades. 7.26.145

5.14 Higher Costs of Maintaining Infrastructure

Other concerns relate to the higher costs of maintaining infrastructure due to changes in public liability exposures and today's higher environmental performance standards. This was of particular concern for local councils given their restricted revenue raising capacity. 7.26.144 / 7.26.143

5.15 Integration and Co-ordination Across Agencies

The assessment concluded that integration and coordination across agencies for future infrastructure delivery could be improved. Although plans are available for most infrastructure sectors they are generally incomplete (do not cover the full range of needs), do not necessarily have the same basis (population forecasts, planning horizon) and are often not regularly updated to account for changes. A key supporting action incorporated in the Action Plan is for government agencies to develop a more integrated approach to infrastructure planning, including regular reviews to accommodate changes in circumstances. 7.26.146 / 9.47.233

5.16 Major Infrastructure Concerns

The major infrastructure concerns identified in the Assessment Report were:

- The need for major upgrading of the water supply scheme to cater for population growth combined with the need to increase renewal funding to replace ageing infrastructure.
- Upgrade ageing drainage infrastructure to modern day standards and address a backlog of required infrastructure.
- The need to develop alternative solid waste management facilities for the Gosford City local government area as its current landfill sites are reaching capacity.
- Required upgrading of health facilities and services in the medium to long term to cater for future population growth.

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The following table extracted from the Infrastructure Assessment Report across Infrastructure Sectors provides a summary of the findings. Many of the infrastructure sectors are discussed in more detail throughout the Action Plan and where appropriate form the basis of the actions relating to Infrastructure contained in chapter 12.

SECTOR	ASSESSMENT
ROADS	<p>FEDERAL Work is currently underway to provide a third lane for some of the existing two lane sections on the F3 freeway, which at peak times are severely congested. However funds to upgrade all two-lane sections have not been committed. This work is urgently required.</p> <p>STATE State roads are expected to significantly improve over the next few years as the projects identified in Connecting the Central Coast Transport Action Plan are implemented. Currently, a significant number of State roads require major changes to satisfy existing needs.</p> <p>LOCAL The local roads generally satisfy current requirements but are lacking appropriate levels of funding for refurbishment and maintenance. A key issue is the need to change travel behaviour and moderate demand for car travel.</p>
RAIL	<p>The rail system requires upgrading to improve service and cater for future growth. Some of the upgrading (stations and new carriages) is provided for in the Connecting the Central Coast Transport Action Plan. Major longer-term needs such as a new high speed tunnelled section from Hawkesbury River to Mt Kuring-Gai and improvements to facilitate freight are still being investigated.</p>
WATER	<p>Existing infrastructure is good however further effort is required to reduce water demand thus improving sustainability. Major future issues relate to the potential to provide for major headworks infrastructure for security of supply at a considerable cost and the need to increase renewal funding due to ageing infrastructure.</p>
SEWERAGE	<p>The existing infrastructure is good however there is only minimal effluent reuse. Major future issues relate to potentially increasing environmental standards and community expectations which could mean upgrades to pumping stations and treatment plants and the need to increase renewal funding due to ageing infrastructure.</p>
DRAINAGE	<p>Drainage Infrastructure in the Gosford City area requires effective asset management and major upgrades. Wyong Shire Council's drainage infrastructure also requires significant upgrading, but it has an asset management strategy and upgrading programme in place. The major issues relate to aged infrastructure and the need to upgrade the existing system to modern day standards requiring a substantial increase in funding.</p>
SOLID WASTE	<p>Need to establish greater recycling and reuse facilities with the wider waste industry to reduce the volume of waste going to landfill. Solution/s must be found to the lack of landfill disposal options in the Gosford Local Government Area. Major changes are required in planning and decision making and improved industry-wide integration of planning and management to enable solid waste infrastructure to be fit for its current and anticipated purpose. Longer-term predictions and planning cycles are required to adequately manage end of life of facilities and the development of new disposal options.</p>
EDUCATION	<p>An injection of \$57.4 million into education facilities over the past three financial years has resulted in the upgrading of a number of primary and secondary facilities. Investment of about \$46million will be required to meet development demands in Warnervale/Wadalba over the next 20 years. Growth combined with increased retention rates will put increasing pressure on existing secondary school facilities.</p>
HEALTH	<p>Central Coast Area Health Service facilities have been characterised by ageing infrastructure and inflexible design and fitout for current and changing methods of healthcare delivery. Significant funds (\$206 million) have been committed for the redevelopment of Gosford and Wyong Hospitals, and for the development of community health centres within the region. A further \$10 million funding is estimated to be required to support population needs through to 2006. Improved planning and analysis at the state level through implementation of the proposed state-wide Asset Maintenance and Management System is necessary to ensure sustainable levels of funding – capital and recurrent expenditure. Health infrastructure is expected to be adequate on completion of planned redevelopment and upgrade projects.</p>
COMMUNITY FACILITIES	<p>Changes are required to the management of facilities to ensure ongoing compliance with disability access regulations, to mitigate against insurance claims, ensure ongoing provision of quality facilities. Many older facilities in Gosford do not meet disability access standards, and some have design problems that reduce their ability to be used effectively. There is also a need to address public transport issues to improve access to existing facilities, particularly within the Wyong Shire local government area.</p>
RECREATIONAL FACILITIES	<p>The development of the Central Coast Regional Sport and Recreation Facility Strategy by the Regional Coordination Management Group provides an essential basis for future planning, however, significant further work is required to prioritise and fund upgrades and development of new facilities There is currently a lack of facilities and a growing demand for key sports including soccer, cricket, australian rules football, rugby union, hockey and touch football. There is a need for improved infrastructure including carparking, or transportation solutions around the lakes and along the beaches to support water based recreation.</p>
ELECTRICITY	<p>The existing infrastructure is good however ongoing effort is required to instigate renewable energy options and the promotion of energy savings through the use of energy efficient equipment & practices.</p>
GAS	<p>The existing gas supply network is relatively new and AGL has a complete register of assets. Maintenance and renewal is ongoing with annual reviews. Security of supply is a serious issue to be addressed, since Central Coast depends on one supply line.</p>
Tele Communications	<p>The existing infrastructure is good with generally continuous upgrading occurring to meet technological advancement, however there are concerns with delays in providing adequate access to ADSL systems. There are some areas of poor mobile telecommunication reception, which are being progressively addressed.</p>

5.18 Growth Areas

Population growth on the Central Coast is expected to grow from 297,592 at June 2001 to 380,000 by 2021. Areas that have been identified to accommodate the majority of this growth are Warnervale/Wadalba Urban Release Area (40,000 additional people) and The Entrance (6,000) in Wyong Shire and urban consolidation planned for the Peninsula (10,000) and Gosford city centre (5,000) in the Gosford local government area.

5.19 Warnervale/Wadalba

The draft Warnervale District Planning Strategy outlines the key planning principles related to the location of the new land release areas that will house the additional 40,000 population over the next twenty years. An Implementation Plan that outlines the required specific infrastructure works is to be prepared to support the planning strategy. Infrastructure development costs totalling \$64.94m (which does not include the new railway station and rail realignment) have been staged to synchronise with the rate of residential land release. 6.1.4 / 7.23.136

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The proposed new rail and bus interchange north of Sparks Road will provide public transport support for the surrounding area and be the catalyst for development of a new town centre. The Connecting the Central Coast Transport Action Plan proposes to invest \$26m towards the new interchange by 2006 and \$10m towards the staged upgrading of Sparks Road as development occurs. The town centre will adopt a district role with respect to provision of community facilities and health, education facilities, an indoor recreation centre and a cultural centre. The town centre will also provide a sub-district level of retail and commercial development to support the surrounding residents. 6.15.95

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The Infrastructure Assessment Report noted that the Warnervale District Planning Strategy (2002) provides a firm basis for the future planning and development of the district. The Strategy is a good example of integrated urban area planning, having been developed collaboratively by Wyong Shire Council, PlanningNSW, Transport NSW and Landcom. 6.1.4

5.22 The Entrance

The Entrance Strategy (April 2000) is another example of good infrastructure planning, setting out the requirements to accommodate the additional 6,000 people projected for the area. 8.42.209

5.23

The Strategy identifies the need for major road improvements, streetscape improvements and additional car parking facilities. Works are also required to alleviate local flooding due to previous filling and augment water and sewer services. A local multi-purpose community centre incorporating childcare, neighbourhood centre, youth centre, and senior citizen facilities is also planned. A district level recreation facility is planned for Jubilee/Baden Powell Parks at Long Jetty.

5.24 The Peninsula

PlanningNSW and Gosford City Council are proposing to prepare an Integrated Urban Area Strategy for the Peninsula, similar to the Warnervale / Wadalba District Planning Strategy. The investigations will seek to provide a more sustainable urban form incorporating integrated transport, land use, community services, and physical infrastructure and employment opportunities. The strategy will identify the actions required to meet the area's urban planning and infrastructure requirements. 6.4.16 / 8.42.211

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The Infrastructure Assessment Report identified that the introduction of an additional 10,000 people through medium density development on the Peninsula has some significant implications for existing infrastructure, specifically drainage, traffic and foreshore and watercourse management:

- Some properties in Woy Woy (with a flooding notation on their titles) experience flooding several times a year. New development is required to raise ground floor levels, which in turn creates issues for pedestrian access and the waterproofing of basement parking.

- Drainage facilities in the Woy Woy/Umina Beach/Ettalong Beach peninsula are inadequate by today's standards and do not meet community expectations. The estimated costs associated with upgrading and new construction is \$72m (excluding land acquisition costs). 7.21.131
- The Woy Woy sewerage pump station requires augmentation works to provide for growth through to 2020. Water services will also require upgrading over the short to medium term. 7.24.140
- Traffic congestion and road safety will need to be addressed by upgrading the main road system and constructing a railway underpass to replace the Rawson Road level crossing. 6.15.91 / 6.15.97
- The proposed fast ferry service from Ettalong Beach to Sydney requires development of a wharf, associated facilities and feeder bus services. An allocation of \$4.3m has been made available by the State government for these works. 6.14.83

5.26 Gosford City Centre

The Gosford City Centre Strategic Plan 1997 aims to increase local job opportunities in the central business district (CBD) and provide higher density housing in the immediate surrounds, within easy walking distance to the rail/bus interchange and retail core. It identified the need for major road upgrades, additional car parking, improved pedestrian linkages and a local mini bus service. 8.42.208

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The Strategic Plan has been put on hold pending the development of a Living City Strategy for the Gosford CBD, which commenced in 2002. The Strategy will be a collaborative effort between Federal and State Government, Gosford City Council, Gosford Chamber of Commerce, private enterprise and the community. As an initial step a report is currently being prepared to recommend what needs to occur in order to revitalise the city centre. 8.42.208

5.28 Overall Structure Plan / Settlement Strategy

In order to progress the region's planning a detailed Structure Plan / Settlement Strategy will need to be prepared for the Central Coast. Such a strategy would need to ensure that both physical infrastructure and community services are integrated and delivered in a timely manner to cater for the existing population and future development of the region. More details about this strategy are outlined in Urban and Rural Areas in chapter 8. 8.41.204

5.29 Conclusion





The Infrastructure Assessment Report has provided a credible independent report (based on the information made available by the relevant agencies) on the condition and capacity of the region's existing infrastructure and proposed strategies for future infrastructure delivery. Recommendations from the Assessment Report have been carefully considered by the Technical Advisory Group and used as the basis for 42 of the total 234 supporting actions in the Action Plan. (Largely those relating to the provision and maintenance of physical infrastructure).

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The process of preparing the Infrastructure Assessment Report has been an invaluable exercise in coordinating agencies to focus on existing and future needs with consistent regional long-term planning assumptions (population growth, locations and time horizons). The preparation of the Infrastructure Assessment Report is the first step in an ongoing and dynamic approach to infrastructure planning for the region. It is important that the opportunities for an integrated approach to funding, prioritisation, resource-sharing and project development, identified in the Infrastructure Assessment, are pursued at a regional level and that the report retains its relevance by regular, collaborative reviews. 9.47.233

5.31 Supporting Actions

The 42 supporting actions derived from the Central Coast Infrastructure Assessment Report are included in Chapters 6 through to 9 and have also been summarised at the end of this chapter. The details of the supporting actions are included in chapter 12.

	Chapter 6	Competitive and Adaptable Economy
6.10.46		<ul style="list-style-type: none"> Upgrade school facilities at five schools and two TAFES in the region.
6.13.62		<ul style="list-style-type: none"> Complete, expand and improve the local cycleway network.
6.13.63		<ul style="list-style-type: none"> Install over 60 bicycle lockers at railway stations on the Central Coast.
6.13.66		<ul style="list-style-type: none"> Enhance extent of footpath networks across the region accessible to public transport, pedestrians, wheelchairs, motorised scooters and cyclists.
6.13.70		<ul style="list-style-type: none"> Construct bicycle/pedestrian feeder link to service the Central Coast Campus at Ourimbah.
6.14.75		<ul style="list-style-type: none"> Upgrade Woy Woy railway station.
6.14.76		<ul style="list-style-type: none"> Upgrade Tuggerah railway station car park (by 200 spaces) and bus interchange.
6.14.77		<ul style="list-style-type: none"> Investigate ways to improve access to Gosford Railway Station.
6.14.78		<ul style="list-style-type: none"> Upgrade access to Wyong railway station.
6.14.81		<ul style="list-style-type: none"> Investigate feasibility to construct a road as a bus/cycleway only connection between Kanangra Drive (Gwandalan) and Chain Valley Bay Road.
6.14.83		<ul style="list-style-type: none"> Construct a new ferry wharf and terminal at Ettalong conditional on a due diligence assessment.
6.15.84		<ul style="list-style-type: none"> Improve Pacific Highway - Wyoming, Lisarow, Tuggerah & Wyong.
6.15.85		<ul style="list-style-type: none"> Improve Pacific Highway – Wyong Town Centre.
6.15.86		<ul style="list-style-type: none"> Improve the Entrance Road - Dane Drive, Avoca Drive, Terrigal Drive & Ocean View Drive.
6.15.87		<ul style="list-style-type: none"> Improve the Entrance Road - Carlton Road, Tumbi Road & Wyong Road.
6.15.88		<ul style="list-style-type: none"> Improve Terrigal Drive.
6.15.89		<ul style="list-style-type: none"> Improve Avoca Drive.
6.15.91		<ul style="list-style-type: none"> Improve Ocean Beach Road, Umina Beach.
6.15.92		<ul style="list-style-type: none"> Improve Wyong Road intersections.
6.15.93		<ul style="list-style-type: none"> Upgrade F3 Freeway to six lanes - Hawkesbury River to Calga.
6.15.94		<ul style="list-style-type: none"> Upgrade F3 Freeway to six lanes - Wahroonga to Hawkesbury River subject to the findings of the F3 to Sydney Orbital Study.
6.15.95		<ul style="list-style-type: none"> Upgrade links to the F3 Freeway - Kariong Interchange & Sparks Road.
6.15.96		<ul style="list-style-type: none"> Upgrade capacity and safety levels of the Kariong F3 Interchange to cater for future traffic and public transport requirements.
6.15.97		<ul style="list-style-type: none"> Upgrade links to the F3 Freeway - Ourimbah, Woy Woy & Gosford.
	Chapter 7	Healthy and Sustainable Environment
7.22.132		<ul style="list-style-type: none"> Develop a regional position on waste and resource management covering avoidance, recycling and re-use, collection and disposal.
7.23.134		<ul style="list-style-type: none"> Complete Investigation of Options for further development of the Gosford-Wyong joint water supply scheme.
7.23.135		<ul style="list-style-type: none"> Identify and develop a strategy for the provision of water infrastructure enhancements to cater for population growth on The Peninsula.
7.23.136		<ul style="list-style-type: none"> Identify and develop a strategy for the provision of water reservoirs and trunk mains infrastructure to service the Warnervale town centre.
7.24.137		<ul style="list-style-type: none"> Identify and develop a strategy for the provision of required sewerage and infrastructure to service the Warnervale town centre.
7.24.138		<ul style="list-style-type: none"> Provide additional capacity at the Wyong South Treatment Plant to cater for residential and industrial growth.
7.24.139		<ul style="list-style-type: none"> Develop a strategy for sewerage the Mooney Mooney, Cheero Point & Little Wobby communities.
7.24.140		<ul style="list-style-type: none"> Update the 1997 Woy Woy Peninsula sewerage capacity study and upgrade infrastructure to cater for population growth.
7.26.143		<ul style="list-style-type: none"> Prepare a schedule of works and cost estimates for all planned and existing infrastructure across the region over the next twenty years.
7.26.144		<ul style="list-style-type: none"> Assess Councils' capacity to fund ongoing maintenance and renewals of its portfolio of assets.
7.26.145		<ul style="list-style-type: none"> Revise current asset management practices.
7.26.146		<ul style="list-style-type: none"> Review the Central Coast Infrastructure Assessment Report every two years.
	Chapter 8	Vibrant and Liveable Communities
8.33.177		<ul style="list-style-type: none"> Redevelop and expand Central Coast Health facilities.
8.33.178		<ul style="list-style-type: none"> Assess and plan for health infrastructure beyond 2006.
8.38.194		<ul style="list-style-type: none"> Upgrade and develop sport and recreation facilities to meet for current and projected demands identified in the Central Coast Regional Sport and Recreation Facility Strategy.
8.39.199		<ul style="list-style-type: none"> Improve infrastructure around the lakes to cater for passive recreation & water based sports.
8.40.202		<ul style="list-style-type: none"> Cost and prioritise the projects identified in the Central Coast Regional Sport and Recreation Facility Strategy in order to develop an implementation program.
	Chapter 9	Regional Governance
9.47.233		<ul style="list-style-type: none"> Investigate opportunities to establish an integrated regional approach to infrastructure management

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- **GHD Central Coast Infrastructure Assessment Report 2002**
 - **GHD Australian Infrastructure Report Card 2001**