

## Chapter 2 Desired Environmental Outcomes

### 2.1 Overview

The Desired Environmental Outcomes (DEOs) are the foundation of the CairnsPlan. The DEOs are the link between the purpose of the *Integrated Planning Act* of seeking to achieve ecological sustainability and the measures of the CairnsPlan.

The DEOs:

- Represent what is sought to be achieved through the CairnsPlan;
- Relate to the environment that is defined broadly in the *Integrated Planning Act* to cover matters and conditions relating to the natural, built and human environments; and
- Are expressions of the end states rather than means to ends.

The DEOs relate to the whole of the City.

Each DEO is sought to be achieved to the extent practicable having regard to each of the other DEOs.

The DEOs are grouped under the topics reflecting the three strands of ecological sustainability identified by the *Integrated Planning Act*:

- Ecological processes and natural systems;
- Economic development; and
- Cultural, economic, physical and social wellbeing of people and communities.

However, there are close interrelationships between the DEOs.

In a number of cases, elements of the subject of a DEO are mapped to illustrate the overarching planning strategies associated with the DEO. In these cases, the identified elements of the mapping are part of the DEO. Important issues associated with the DEOs are identified in the short discussion which follows each DEO.

## 2.2. Ecological Processes and Natural Systems

### 2.2.1 Ecological Processes and Biodiversity

The biodiversity and nature conservation values of the marine, terrestrial and freshwater ecosystems within the City are conserved and enhanced.

#### Discussion

The Cairns area contains a wide diversity of vegetation communities. The biodiversity of these communities and the interrelationships between them are recognised nationally and internationally through the listing of the wet tropical rainforest and offshore reef as World Heritage Areas. Some of the communities and the plants within them are considered endangered, vulnerable, rare or restricted in their occurrence.

Outside of the Wet Tropics World Heritage Areas many of our vegetation communities occur as small remnant patches that have been isolated by clearing for urban development and agriculture. Fragmentation, isolation and associated impacts affect the viability of many of these communities and the plants and animals that depend on them.

Several animals found in the Cairns area are listed as endangered or vulnerable. Other species, although common, are restricted to certain habitat types. Habitat loss and the effects of impacts are contributing factors to the declining populations of many native animals.

Protecting and re-establishing a connection between vegetation communities is of prime importance to ensure those endangered flora and fauna species survive. The reversal of current trends in habitat loss will prevent those currently 'of concern' species moving onto the endangered list.

Management and planning in the City need to be coordinated with the Wet Tropics Management Authority and several State Agencies to ensure that land use takes account of interconnectivity between natural communities within and outside Cairns.

Vegetation Conservation Values comprise one of the Overlays of CairnsPlan and are depicted on the Overlay Maps for the Districts, where applicable.

The Declared Fish Habitat Areas within the City are identified on Map 1 for information purposes. These areas have vegetation conservation values and contribute to biodiversity.

#### Performance Indicator

Where development has occurred, has it adversely affected the biodiversity or nature conservation values of the marine, terrestrial or freshwater ecosystems within the City?

### 2.2.2 Catchments and Waterways

Water quality, in-stream and riparian values and nature based recreation values of natural and modified waterways and wetlands and their catchments within the City are conserved and enhanced.

#### Discussion

Catchments and the waterways that drain them incorporate estuarine and freshwater wetlands that are vitally important in maintaining the interactions between our marine and terrestrial environments. The systems found in the Cairns area are recognised locally, regionally, nationally and internationally for their ecological and landscape values.

Catchment areas contained within the Wet Tropics provide a living record of the ecological and evolutionary processes that shaped the flora and fauna of Australia, and the world, over the past 400 million years. The Wet Tropics protects more than 395 rare or threatened plants species. It is also home to about a third of Australia's 315 mammal species, of which 13 are found no where else other than in the Wet Tropics.

Our streams and wetlands provide:

- Habitat and nursery grounds for aquatic and terrestrial organisms, particularly fisheries resources;
- Water for domestic, agricultural and industrial use;
- Ecological linkages between terrestrial systems, wetlands and marine environments;
- Recreational and scenic amenity;
- Conservation of biodiversity; and
- Resources for extractive industries.

There are few examples of intact catchments in Cairns. Most streams have some disturbance within their catchment. In many instances, the lower sections of catchments are highly disturbed (by urban and agricultural development, and extractive industries) whilst the headwaters, which in most instances lie in protected areas, remain in almost pristine condition. Elsewhere, particularly on the coastal plain, the riparian verge along rivers and streams has been greatly disrupted. Extraction of water for urban water supplies and, to a lesser extent, for agricultural use places additional pressure on some of these systems, particularly in extended periods of low rainfall.

Freshwater and estuarine wetlands have been impacted by infilling, drainage, bunding and levée bank construction, sedimentation, nutrient runoff, and altered hydrological regimes. The ingress of tidal waters into waterways and drains in the Inner City suburbs, through dredging to improve drainage, has resulted in a loss of freshwater environments.

Maintenance of healthy streams and wetlands involves management of all of these issues. Management needs to be addressed on an integrated, catchment-wide basis in association with local government organisations and community groups along with State Agencies.

Waterway Significance, based on ecological values and values for nature based recreation, comprises one of the Overlays of CairnsPlan and is depicted on the Overlay Maps for the Districts, where applicable.

#### Performance Indicator

Where development has occurred, has it adversely affected the water quality, in-stream or riparian values or nature based recreation values of natural or modified waterways and wetlands or their catchments within the City?

#### 2.2.3 The Tropical Coastline

The values of all the coastal systems of the City for coastal stability, ecological processes and nature based recreation are conserved and enhanced.

#### Discussion

The conjunction of the Wet Tropics and Great Barrier Reef World Heritage Areas makes the Far North Queensland coast one of the few regions in the world where adjacent land and sea environments have been independently and internationally recognised for their outstanding conservation value. Sections of our coastline between these areas are similarly significant, for instance the intertidal communities of Trinity Inlet with over 30 mangrove species are regarded as amongst the richest in the world.

Three distinctive systems occur along our coast:

- Areas of highly diverse and productive wetlands, including seagrass beds, which are habitats for numerous protected species, including rare and threatened plants, estuarine crocodile, dugong and several marine turtle species.
- Beaches and beach ridge and foredune systems which are critical for coastal protection because they act as a buffer zone, reduce the impact of fluctuations of the shoreline, and reduce erosion by the sea. Coastal beaches backed by vegetated and stable buffer zones contribute to the ecological integrity of the City and offer a spectacular visual attraction for the region.

- Headlands are striking visual features of the coastline and support remnants of once extensive areas of coastal vegetation communities (open woodlands and lowland rainforests).

Wetland areas include the estuarine (mangrove) and freshwater systems that interface with our freshwater streams. They have high biodiversity values and are critical to maintenance of riverine and marine systems.

The waters and wetlands along the coast are used extensively for commercial, recreational and indigenous fishing, all of which make a substantial contribution to the regional economy. Coastal land use has reduced the extent of wetlands and modified the ecological processes that take place within them, such as the movement of nutrients from freshwater to marine systems and migration of fish between fresh and marine elements.

Along the Cairns coast, land use has encroached upon frontal dune areas, destroying habitat and disturbing the natural balance between erosion and replenishment, the consequence being the destabilisation and loss of beach areas in some localities. Past activities such as sand extraction, coupled with trapping of sand upstream of major barriers such as weirs, contributes to this process by reducing sand nourishment at the mouth of rivers leading to foreshore erosion.

CairnsPlan is intended to assist in the implementation of the State Coastal Plan and the Wet Tropical Coast Regional Coastal Management Plan.

#### Performance Indicator

Where development has occurred, has it adversely affected the values of the coastal systems of the City for coastal stability, ecological processes or nature based recreation?

#### 2.2.4 Risk Management

The location and design of development minimises the potential risk to the safety and health of the community as a result of:

1. Flooding or Storm Surge
2. Slope Instability
3. Bushfire
4. Contaminated Land
5. Reduction in Air Quality
6. Increase in Noise Levels.

## Discussion

There is some potential for communities, particularly urban communities, to be affected by geohazards or by aspects of urban development. Geohazards can be broadly defined to include all earth surface processes, such as flooding or land slip, with the potential to cause loss or harm to the community or the environment. Aspects of urban development include a reduction in air quality or an increase in noise levels.

Major elements of risk are identified as:

### Flooding or Storm Surge

Tropical cyclones are a feature of the region's climate. Cairns also occasionally experiences storm surges and flooding. Most of the coastal plain is low-lying and prone to flooding or subject to encroachment by tidal waters. Global warming, and impacts related to this such as rising sea levels, could potentially exacerbate the effects of storm surge and tidal inundation in the foreseeable future.

### Slope Instability

The stability of hillslopes is dependent on several factors including slope, surface and subsurface conditions and drainage. Ranges immediately to the west of the City are derived from slates, phyllites and schists that are frequently prone to mass movement. Heavy rains may also contribute to hillslope instability. The potential for instability can be increased by human-induced changes. In cases of slope failures in the Cairns area, the cause is often related to clearing of natural vegetation, interference to natural paths, drainage, or changes to the natural slope by cut and fill earthwork operations.

### Bushfire

The hillslopes that form the backdrop to the City bear the scars of uncontrolled fires that have occurred over many decades. The modified vegetation communities that exist in these areas include introduced, fire-prone grasses that can provide a considerable fuel load. With the reduction of cane burning and its replacement with green trash blanketing, controlled burning practices, and strategic fire-break planting, the incidence of fire has reduced in recent years and fire damaged rainforest is recovering in many areas.

Our hillslopes also support large areas of fire-prone eucalypt woodland and other vegetation types that are dependent on periodic fire for their continued existence.

### Contaminated Land

Discrete sites in the City have been contaminated by historical land uses. Contaminants include hydrocarbons (from fuel storage and distribution sites), heavy metals (from tanneries, workshops, timber mills *etc*) and agricultural chemicals. Permissible uses of contaminated land are limited and are contingent on the type of activity planned and some level of validated remediation.

## Air Quality

Cairns enjoys excellent air quality with most problems generally related to point source situations. In the dry season, dust and smoke associated with fires on surrounding hillsides are sometimes significant. In the longer term, local conditions (the geography of the surrounding ranges and seasonal temperature inversions) could lead to decreased air quality in urban areas of the City.

## Noise

Noise issues in the City are associated with transport corridors, industrial areas and an international airport within the City. The requirement to plan to control impacts of noise will continue to increase with growth and changing community expectations.

## Performance Indicator

Where development has occurred, have the threats to the safety and health of the community which may result from flooding, slope instability, bushfire, contaminated land, reduction in air quality, or increase in noise levels been minimised?

### 2.2.5 The Scenic Landscape

The scenic landscape of the City is valued and enjoyed by residents and visitors, and the essential elements of this landscape, the forested hills and foothills, beaches and headlands, streams and rivers, wetlands, open spaces and rural land are conserved and enhanced.

## Discussion

The Cairns area is internationally renowned for its high scenic value. The forested hillslopes rising above the coastal plains and river valleys are the signature landscape feature of the region. These hillslopes are also important habitats and form a link between coastal lowlands and mountain ranges. Even though parts of the original forest vegetation have been damaged or altered by fires and cyclones, it retains high scenic value arising from the dramatic topography and rich green vegetation.

The coastline of the area presents key aesthetic features including visually prominent landforms (rocky headlands, cliffs), undeveloped panoramas viewed from the coast (beaches, islands, inlets, bays, coastal ranges, hills), and a variety of visually striking vegetation communities (littoral rainforest, mangroves, coastal heath). The coastal landscape in the City is also important for distinguishing and separating urban areas and agricultural areas from the natural environment, thereby contributing to the amenity of coastal settlements.

The rural landscape is an important part of the scenic landscape of the City. Significant qualities of the rural landscape include cane farming and its contribution to the continually changing landscape; views of traditional farm houses and outbuildings; riverine forests; and stands of large forest trees in agricultural or pastoral lands and along roadsides.

## Performance Indicator

Where development has occurred, has it adversely affected the scenic landscape of the City or any of the essential elements of the scenic landscape?

## 2.3 Economic Development

### 2.3.1 Primary Production

Primary industries, particularly sugar cane production, continue to contribute to the economy of the City and to employment within the City.

The effects of urban development on the resource of good quality agricultural land and on the operation of primary industries are minimised.

The preferred pattern of development shown on the Structure Plan Map 4 limits the encroachment of urban development on to good quality agricultural land.

## Discussion

Sugar cane growing and tropical fruit horticulture are the dominant uses of good quality agricultural land on the coastal plain in the City, although in recent years the local agricultural industry has diversified to include aquaculture, farm forestry and horticulture. These activities contribute significantly to employment and to the regional economy. Agriculture also provides a scenic rural landscape to townships within the area, giving each a unique character.

In the past, clearing for agricultural use has sometimes led to loss or degradation of significant ecological communities and systems. Future management of agricultural land needs to take into account the need to protect remnant vegetation systems from clearing or degradation by weed invasion, and to prevent soil erosion, soil degradation and waterway contamination.

Pressure for the conversion of agricultural land to residential use is occurring in areas close to the urban area of the City. When converting an area of agricultural land to other uses, it is necessary to consider this in terms of the viability of the particular agricultural industry (i.e. the minimum area of land required to ensure a viable agricultural base remains). The regional planning process provides a framework for identification of future urban areas and areas for continuing agricultural use.

## Performance Indicator

Have primary industries contributed to the economy of the City and to employment within the City?

### 2.3.2 Economic Activity and Employment Centres

Business, retail and industrial activities are located in a hierarchy of centres and in designated areas throughout Cairns to encourage continued investment and an increase in the diversity and number of employment opportunities. Sub-regional, District and Local Centres are developed that contribute to a sense of community life and belonging for the people they serve..

The Sub-Regional and District centres and the major industrial and employment areas identified on the Structure Plan Map 4, are established and consolidated.

#### Discussion

Cairns is the major commercial, business and service centre for the Far North Queensland Region. The Regional Plan promotes:-

- The continued support of economic development and employment opportunities within Cairns urban areas, particularly in economic activity nodes.
- The facilitation of the role of Cairns as the primary regional economic centre.
- The development of Cairns as a national and international economic centre.

A hierarchy of centres has been developed to ensure the orderly provision of retail, commercial, administrative, community, entertainment and leisure services to all communities having regard to their size, their location and their needs.

The hierarchy of centres within the City consists of:

- CBD;
- Sub-Regional Centres;
- District Centres;
- Local Centres; and
- Specialised Centres.

Major industrial areas are located at Smithfield, Portsmith – Woree and Edmonton in order to provide employment opportunities in the northern, central and southern sectors of the urban area of the City. Smaller industrial areas, primarily intended to service local communities, are located throughout the urban areas of the City, particularly the inner City area.

The roles of the Cairns International Airport and the Seaport as major generators of economic activity and employment are recognised and maintained.

Cityport is also a major economic driver for the City. Cityport builds upon the status of Cairns as a major tourist destination and, in time, will consolidate with the CBD. Cityport contains major attractions such as the Convention Centre, the Cruise Liner Terminal, Reef Fleet Terminal and associated operators. These features, coupled with the existing and future range of tourist accommodation and associated entertainment and commerce, will ensure that Cityport continues to be an important employment centre and economic activity area.

#### Performance Indicator

Where significant new business, community and industrial development has occurred, has it been located within the Sub-Regional and District Centres and the major industrial and employment areas?

#### 2.3.3 Tourism Industry

The tourism industry continues to play a major role in the economic growth of the City and the Region. The sustainable use of the resources of the natural environment contributes to the strength of the industry.

Development of major tourist accommodation is concentrated in the areas identified on Map 2. The major tourist attractions depicted on Map 2 are maintained and consolidated.

The potential conflicts between tourist accommodation, attractions and facilities and local communities are minimised.

#### Discussion

Cairns has established a role as a tourist destination over many years. Traditionally, the majority of visitors were from the domestic market. The development of the Cairns International Airport in the early 1980s and the subsequent significant growth in visitors from international markets provided a major impetus for growth in the tourism industry in both the City and the Far North Queensland Region.

The growth in domestic and international visitors has promoted expansion of accommodation, facilities and attractions. The range of facilities and the natural attractions of the Region, principally the Great Barrier Reef and Wet Tropics World Heritage Areas, in combination, have enabled the Region to become a world-class visitor destination.

Tourism has emerged as a major economic force for both the City and the Region and contributes more to the regional economy than any other industry.

The Cairns International Airport, the Seaport and the terminals for long distance rail and bus transport are located within the City and, in many respects, the City is the gateway to the attractions of the Region. This role is reinforced by the concentration of tourist accommodation, facilities and services within the City and by the opportunities for day trips from the City to scenic and other attractions.

Cityport contains major tourist accommodation in the form of international hotels, with a variety of new tourist accommodation also proposed. These facilities are proposed to cater for the range of requirements of visitors to the waterfront area and represent an important component of Cityport.

Apart from the tourist accommodation, Cityport contains major tourism attractions such as the Convention Centre, the Cruise Liner Terminal, Reef Fleet Terminal and associated operators linked to tourist ventures. Cityport represents not only an important berthing point but also a significant access point to the reef and the hinterland attractions.

Notwithstanding the role of the City as a gateway, the City contains a range of attractions and facilities for tourists. These include the Cairns beaches, particularly Trinity Beach and Palm Cove, the natural areas in the southern part of the City, retail and entertainment facilities in the CBD, the Convention Centre, the Casino and the major attractions of the Skyrail Rainforest Cableway and the Tjapukai Aboriginal Cultural Park.

It is important that the unique characteristics of the natural, rural and built environments, which together contribute to the attractiveness of the City and the Region as a tourist destination, are retained and that these resources are managed wisely to sustain the role of the tourism industry in the continued economic development of the City and the Region.

There is the potential for conflicts to occur between tourist accommodation, attractions and facilities and local communities resulting from differences in the nature and scale of buildings; the nature of activities; hours of operation; and the nature and extent of traffic movements. It is important that this potential for conflict is minimised.

#### Performance Indicator

Has the tourism industry contributed to the economic growth of the City and, where development of major tourist accommodation has occurred, has it been concentrated in the identified areas?

#### 2.3.4 Preservation of Resources

Natural resources, such as extractive resources, good quality agricultural land, water and forestry resources within the City, are protected from encroachment by, and the adverse effects of, urban development and are utilised in a sustainable manner.

The extractive resource sites identified on Map 3 remain available for the extraction of materials. The extractive industry haul routes identified on Map 3 are, to the extent possible taking account of the established pattern of land use, protected from incompatible development.

The preferred pattern of development shown on the Structure Plan, Map 4 limits the encroachment of urban development into areas containing natural resources.

## Discussion

The economy of the City has traditionally been based on the utilisation of the natural resources of the City. The primary industries of agriculture, horticulture, fishing and forestry have contributed, and will continue to contribute, to strong local and regional economies. The tourism industry is now a major economic force and relies heavily on the natural qualities of the City and the Region.

Considerable areas of good quality agricultural land have been under threat from the expansion of urban development. The continued loss or degradation of good quality agricultural land will have a direct impact on the City's agricultural industries and their economic output.

Waterways and wetlands are important as habitat and nursery grounds for aquatic and terrestrial organisms, particularly fisheries resources. The protection and management of waterways and wetlands are important to the continued viability of the fishing industry.

The role of the forestry industry has declined, primarily as a result of the world heritage listing of the wet tropics rainforest and the reduction in the logging of native timbers. There is the potential for the growth of the industry through the establishment of private and plantation forestry, particularly in the southern parts of the City.

Quarry and extractive products such as sand, gravel and hard rock are of considerable importance to many regional industries. Continued urban development represents a constraint to the extraction of materials, while creating a demand for those materials. Valuable resources should be identified and protected to ensure that they remain available to industry. For the most part, extractive resources are located in rural areas of the City. The expansion of urban development into these areas is not envisaged and is not consistent with the Structure Plan.

The haulage of extractive resources has the potential to affect land uses sensitive to noise or vibration such as residential uses, tourist and short term accommodation uses, child care centres, hospitals and medical centres, educational establishments and passive open space. Such uses should not be located adjacent to extractive industry haul routes or, where this is not possible because of the pattern of land use in the established areas of the City, should be buffered or protected from noise and vibration.

The natural areas, particularly in the southern part of the City, provide the opportunity for nature based recreation for both residents and tourists. These areas need to be used and managed on a sustainable basis to ensure that the natural values of these areas are protected and that future opportunities for the use of the resources within these areas are not lost.

The preferred pattern of development limits the encroachment of urban development into areas of good quality agricultural land and areas containing other natural resources.

## Performance Indicator

Where development has occurred, has it reduced the availability of natural resources?

### 2.3.5 Pattern of Urban Development

The pattern of urban development recognises the importance of the natural environment, natural resources and quality of life to the viability of Cairns and the wellbeing of its residents.

The pattern of urban development provides opportunities for growth and consolidation within the framework established by the Regional Plan and achieves the efficient use of existing and planned infrastructure.

The preferred pattern of development shown on the Structure Plan, Map 4 is achieved.

#### Discussion

A pattern of urban development has been established by historical settlement and by previous planning schemes. Cairns is emerging as a linear city, with the urban area extending from Buchan Point in the north to Edmonton in the south and broken only by the canefields of the Barron Delta and the hillslopes of the Mount Whitfield Range.

Urban development options to accommodate the projected growth in the Cairns urban areas have been considered in detail in the preparation of the Regional Plan. Objectives for the Cairns urban area for the short term (0 – 10 years) are to consolidate existing development activities and set the framework for the medium and long term development pattern. Depending on the demand for new residential development, it is unlikely that development will occur outside the urban areas identified by the previous Strategic Plans before 2010.

Demographic analysis and population projections undertaken during the preparation of CairnsPlan confirm that the existing areas identified for urban development have the capacity to accommodate the population growth anticipated within, and beyond, the life of CairnsPlan.

The pattern of urban development promoted by CairnsPlan is consistent with and reinforces the preferred settlement pattern identified by the Regional Plan.

The linear nature of the City will become apparent in the medium to longer terms with development of the Southern Corridor between Edmonton and Gordonvale to the west of the Bruce Highway. While there are potential negatives of a linear form, positive outcomes can be achieved with the promotion of economic development and employment opportunities in sub-regional centres; the clustering of social infrastructure; and the integration of transport facilities.

The Road Hierarchy, including transport and haul routes, and the planned Public Transport Networks, are important elements of the pattern of urban development. The implementation of the Road Hierarchy and of the Public Transport Networks is essential to achieving the desired pattern of urban development.

The pattern of urban development is intended to set the foundation so that the positive outcomes of a linear form will be realised.

## Performance Indicator

Where urban development has occurred, has the location of the urban development been consistent with the preferred pattern of urban development?

### 2.3.6 Physical Infrastructure

The pattern of urban development facilitates the efficient use of existing and committed infrastructure.

Physical infrastructure is provided in an efficient and equitable manner and to a level necessary to achieve contemporary environmental standards.

## Discussion

The efficient, economical and timely delivery of physical infrastructure is an important part of land use planning. The community expects to have access to a range of services including transport, water supply, sewerage services, waste management, stormwater management and open spaces as well as energy, particularly electricity and telecommunications services.

Physical infrastructure is an essential foundation for achieving healthy and safe communities and sustainable economic growth and development.

The periods of rapid growth which have occurred in the City in recent times have, in some instances, placed considerable pressure on existing infrastructure and on the ability of agencies to deliver infrastructure to meet community standards and community expectations.

The pattern of urban development promoted by CairnsPlan, consistent with the preferred settlement pattern identified by the Regional Plan, is intended to assist in the delivery of infrastructure by clearly identifying the nature and extent of urban development. This pattern of urban development includes limited areas for rural residential development which were identified in the previous Strategic Plans and are acknowledged by the Regional Plan.

There are two aspects of the pattern of urban development which are important to the provision of physical infrastructure.

The first is that infill, redevelopment and consolidation of existing urban areas are promoted. While this will achieve optimum use of existing physical infrastructure, it will also necessitate augmentation of existing infrastructure.

The second is that there are significant greenfield sites, primarily in the southern part of the identified urban area, yet to be developed. Infrastructure planning for these areas has been carried out but it is important to ensure that the mechanisms are in place to achieve the delivery of physical infrastructure when development of these sites proceeds.

The infrastructure planning and charging mechanisms set out in the Planning Scheme Policy, Trunk Infrastructure Contributions, supporting this Planning Scheme identify the desired standards of service for the respective components of infrastructure and establish the arrangements for the funding and provision of physical infrastructure.

#### Performance Indicator

Has physical infrastructure been provided to urban development in an efficient and equitable manner and to a level which achieves contemporary environmental standards?

#### 2.3.7 Transportation

Air, sea and rail transport systems, public transport, road transport and facilities for cyclists and pedestrians are integrated with urban development to facilitate the safe, efficient and effective movement of people and goods locally, nationally and internationally.

The establishment and maintenance of the major transport infrastructure of the Cairns International Airport, Cairns Seaport, highways/ arterial roads and railways required to provide for this movement of people and goods, as identified on the Structure Plan, Map 4, is facilitated.

The implementation of the Medium and Long Term Public Transport Networks, shown on Map 5, is facilitated.

#### Discussion

Transport is critical to the functioning of the City and of the Region and is a key factor in the economies of both the City and the Region. Transport infrastructure is an important component of the Key Result Area of the Corporate Plan relating to Services and Infrastructure. Council has prepared a Transport Strategy to establish the strategic direction of Council on the elements of its transport system and to ensure that these elements are integrated with the principles set by the Regional Plan and the objectives of the Department of Main Roads and Queensland Transport.

The positioning of Cairns as a Pacific Rim City requires air links and, to a lesser extent, sea links to major centres within the Asia-Pacific Region. The Cairns International Airport and the Seaport are vital to the viability of the tourist industry and of primary industries.

The remoteness of Cairns from the State Capital and other major population and manufacturing centres increases the importance of air, sea, rail and road links.

A safe, effective and efficient transport network, incorporating public transport and facilities for pedestrians and cyclists, is essential so that all residents and visitors can move about the City.

Integrated transport and land use studies have been undertaken for the Kuranda Range and for the Cairns Southern Corridor. It is essential that the outcomes and initiatives from these studies are recognised so that future development of transport infrastructure is not compromised by land use and so that the allocation of land use supports the efficient functioning of the transport network.

The Cairns Integrated Public Transport Study has been prepared by Queensland Transport, the Department of Main Roads and Council to develop strategies for the enhancement of the public transport system in the City and surrounds. The strategies are aimed at providing a better public transport system, now and into the future, and, amongst other things, achieving the integration of planning for public transport with land use planning and with planning for other transport modes.

A Road Hierarchy has been jointly developed by Council, the Department of Main Roads and Queensland Transport in order to better co-ordinate transport planning.

The Road Hierarchy, as well as the Pedestrian and Cycle Movement Network, and Possible Public Transport Corridors, comprise Overlays of CairnsPlan and are depicted on the Overlay Maps for the Districts, where applicable.

#### Performance Indicator

Has the establishment and maintenance of the major transport infrastructure been facilitated where development has occurred?

## 2.4 Cultural, Economic, Physical and Social Wellbeing

### 2.4.1 Liveable, Sustainable, Tropical City

The combination of natural features, built environment, and development patterns result in a liveable, sustainable, and tropical city promoting a distinct Cairns style. The essential elements of outdoor living, access to natural areas, good air quality, efficient housing and tropical design are promoted to ensure the Cairns lifestyle is maintained and enhanced.

#### Discussion

Fundamental to the liveability of any city is the need to encourage visitors and residents to use and contribute to the cities' urban and natural landscapes. Ensuring access to open spaces that promote an active, outdoor, tropical lifestyle is essential to the realisation of Cairns as a liveable city. Cairns is currently in a position to maximise planning for these important spaces as land is taken up for development.

Air quality is currently of low concern to residents in Cairns who enjoy a very good quality of air. Ensuring the future levels of pollution do not exceed comfortable levels is very important. There is scope to co-ordinate development with key public transport corridors and nodes which will assist in keeping pollution levels from increased vehicle use at acceptable levels.

The advent of ecologically sustainable housing has been felt around the nation and globally. The housing industry has formally recognised the need to introduce minimum requirements for sustainability through the introduction of energy efficiency into the Building Code of Australia for some types of dwellings, and more will come into effect in the near future.

The climatic conditions within the tropical climate zone presents some challenges for Cairns housing industry in terms of mitigating the effects of extreme heat, humidity and the seasonal wets. Technology has come to meet and overcome these challenges and we now have the opportunity to build homes that are operationally extremely efficient and built from materials which are themselves produced efficiently. Although some designs may cost higher to build, over the lifespan of the majority of buildings, the reduction in running costs can far outweigh the initial investment, and in many cases this is return period is only a few of years. However, many cost-effective moderations can be made to existing designs that achieve sound results.

Integrating the use of tropical design, materials and detailing into the built form will perpetuate the outdoor lifestyle that residents and visitors to Cairns currently enjoy. There is considerable scope to further incorporate these design principles into the current range of housing being offered throughout Cairns. Retaining examples of the historical and current exemplary tropical styles is also of importance to demonstrate the evolution of the built environment throughout Cairns.

#### Performance Indicator

Have development patterns promoted a distinctly tropical form of efficient, comfortable housing with access to natural areas.

#### 2.4.2 Housing

The provision of a diverse choice of housing that is responsive to the climate, landscape and the changing demographic structure of the Cairns population while being affordable and efficient.

#### Discussion

Housing needs are as diverse and dynamic as the community itself, influenced by household composition, lifestyle, culture and stages of life. Key determinants in housing choice are household type, lifestyle aspirations and housing affordability.

There is considerable scope to further diversify housing choice and to achieve more integrated outcomes in relation to the location of housing, services and facilities, employment and educational opportunities and transport and communications networks.

Residents will benefit from a greater choice of housing and housing tenure, particularly for the low to middle income market, responding to changing housing needs and also from greater flexibility in the product so that it can be modified to suit the needs of successive purchasers or the lifestyle changes of long term owners.

The style and variety of tourist accommodation within Cairns caters for all levels of accommodation standards from the backpacker and budget variety and to four and five star hotels and premier resorts. Recent trends have included a significant growth in bed and breakfast accommodation, self-contained holiday apartments and purpose built accommodation of a high standard for backpackers and independent travellers.

A flexible approach is necessary so that new forms of tourist accommodation can be provided in response to market innovations and demands.

Care is required to ensure that accommodation for tourists does not affect the affordability or amenity of housing for permanent residents.

#### Performance Indicator

Has a diverse choice of affordable and efficient housing that is responsive to climate, landscape and changing demographics of Cairns been provided?

#### 2.4.3 Cultural Heritage

Places of cultural heritage significance are conserved to retain their significance for the benefit of present and future generations.

#### Discussion

Cultural heritage places and landscapes have significance to the community because of social, historical, spiritual, aesthetic, architectural or archaeological values. Such places can include the built form and elements of the urban environment as well as natural places, features and landscapes.

Cultural heritage places are important to communities and their sense of identity for present and future generations. They need to be conserved and managed according to their cultural significance.

Indigenous cultural heritage places and landscapes are an important component of local indigenous culture and lifestyle. Indigenous peoples' strong sense of heritage includes tangible and intangible aspects such as language, song, stories and art. Protecting knowledge and information associated with a heritage place is as important as the physical protection of a place.

The *Aboriginal Cultural Heritage Act* and the *Torres Strait Islander Cultural Heritage Act* were adopted in 2004. The two Acts seek to provide protection over Aboriginal and Torres Strait Islander cultural heritage through establishing a duty of care in regards to Aboriginal and Torres Strait Islander heritage. The duty, which extends to all levels of Governments and developers, is to take all reasonable and practicable measures to ensure activity does not harm cultural heritage.

Aspects of cultural heritage significance comprise one of the Overlays of CairnsPlan and are depicted on the Overlay Maps for the Districts, where applicable.

#### Performance Indicator

Have places of cultural heritage significance been conserved, particularly in areas where development has occurred?

#### 2.4.4 Sense of Community

Communities are created with a recognisable character and sense of place and which have a high level of amenity, safety, connectivity and integration between existing and new areas.

#### Discussion

The identity and character of our villages, towns and suburbs are formed by many aspects of the environment of the locality. These include the setting, the people, housing, vegetation, streetscapes, architectural styles, community services and facilities, open spaces, places to meet, security and local features.

The growth of a strong sense of community involves more than the recognition of identity and character and requires the development of community cohesion, community identity and community networks and values.

New development in established areas should respect and be compatible with the identity and character of the locality as well as contributing to the strengthening of the sense of community. Opportunities should be taken to consolidate Local and District Centres and to integrate community and social facilities with these centres.

Careful design of new residential areas should seek to create residential neighbourhoods to foster the growth of a strong sense of community.

Residential neighbourhoods should have clearly defined boundaries. Neighbourhoods should have access to a full range of local facilities. Local, natural and cultural heritage features should be recognised and respected.

#### Performance Indicator

Have communities with a recognisable character, sense of place, high level of amenity, safety, and connectivity been created?

Have these communities been integrated with new and existing communities?

#### 2.4.5 Community and Social Facilities

Access to a range of community and social facilities for both established and new residential communities is facilitated, with community and social facilities being located so as to be convenient and highly accessible to the individuals, families and communities they serve.

## Discussion

Community and social facilities must be accessible to all members of the community. It is particularly important that the characteristics and needs of specific population groups are taken into account when community and social facilities are provided.

It is also important that the provision of community and social facilities is achieved in a cost effective manner.

Cost effective and co-ordinated provision of facilities is complicated by the fact that the responsibility for the provision of facilities is split across a wide number of organisations including Federal, State and Local governments, community organisations and the private sector.

There are potential advantages in shared use and, if possible, shared provision of facilities and services. There are also potential advantages, in terms of accessibility, in locating facilities and services in places which can be reached easily by public transport. The role of the Sub-Regional, District and, to a lesser extent, Local Centres promoted by CairnsPlan is just as important in this respect as the roles in providing retail, business and entertainment facilities.

In new residential areas, it is important that population growth does not outpace the provision of community and social facilities. Planning for these facilities should occur well in advance so that the facilities can be provided in a timely manner.

In established areas, services and facilities have often failed to keep pace with changes to the structure of the resident population. Given the costs and difficulties associated with developing new facilities in established urban areas, the opportunities for reorganisation and re-use of existing facilities and services should be fully considered.

## Performance Indicator

Where urban development has occurred, has access to a range of community and social facilities been facilitated and improved?

### 2.4.6 Accessibility and Mobility

Accessibility and mobility, for all members of the community, are enhanced through the location of services and facilities in a network of centres; the location of employment nodes in proximity to residential communities; and through integration of the transport systems with residential areas and commercial centres.

The implementation of the Medium and Long Term Public Transport Networks, shown on Map 5, is facilitated.

## Discussion

The City is served by an established road network, although access to the inner City suburbs from the southern urban areas is currently congested in peak periods. The implementation of recommendations from the integrated transport and land use study for the Cairns Southern Corridor and the implementation of the road hierarchy developed by Council, the Department of Main Roads and Queensland Transport will assist in maintaining and improving the efficiency of the road networks.

However, there is significant potential for the public transport system, particularly the bus system, to provide a valuable service to the community as a whole and, in particular, to the people in the community who do not have access to a private vehicle or to transport by a private vehicle. The provision of effective public transport together with the provision of pedestrian and bicycle paths will contribute towards improved accessibility and mobility, as well as reducing traffic volumes on the road network thereby resulting in less traffic congestion, shorter travel times and reduced need for parking facilities.

The implementation of the Cairns Integrated Public Transport Study, prepared by Queensland Transport, the Department of Main Roads and Council, has the potential to improve accessibility throughout the City by developing a public transport system that provides an attractive alternative to travel by private vehicle and that is equitable, affordable and accessible.

Accessibility and mobility can also be improved through the development of a hierarchy of centres and of designated employment and industrial nodes.

The development of strong centres providing Sub-Regional, District and Local retail, business, entertainment and community facilities in proximity to residential communities will ensure that a full range of facilities is accessible to all members of the community.

Similarly, the identification and development of employment and industrial nodes will provide employment opportunities in strategic locations reasonably close to residential communities.

## Performance Indicator

Has urban development facilitated improved accessibility and mobility for all members of the community?