

**MANGO HILL INFRASTRUCTURE  
DEVELOPMENT CONTROL PLAN**

**Precinct Plan No. 002**

**for**

**Town Centre Core Precinct**

**North Lakes Development**

**Approved by Council 21st September 2001**

<b>CONTENTS</b>		<b>PAGE</b>
<b>1.0</b>	<b>Introduction</b>	<b>4</b>
<b>2.0</b>	<b>Structure Plan Context</b>	<b>4</b>
<b>3.0</b>	<b>Desired Environmental Outcomes</b>	<b>4</b>
3.1	General	5
3.2	Specific	5
<b>4.0</b>	<b>Planning Intent</b>	<b>6</b>
<b>5.0</b>	<b>Development Intent</b>	<b>7</b>
5.1	Development Context	7
5.2	Development Character	7
5.3	Concept Overview	15
5.4	Regrading Concept	16
<b>6.0</b>	<b>Precinct Plan</b>	<b>17</b>
6.1	Land Use Pattern	17
6.2	Transport and Circulation System	22
6.3	Open Space and Landscape Concept	24
6.4	Building Form and Architectural Design	26
6.5	Engineering Services	27
6.6	Stormwater Management	28
<b>7.0</b>	<b>Design Intents and Performance Criteria – Town Centre Core Area Land Use Element</b>	<b>28</b>
7.1	Introduction	28
7.2	Building Setbacks	28
7.3	Site Coverage	30
7.4	Building Design	30
7.5	Landscaping/Townscaping	33
7.6	Car Parking, Service Areas and Loading Docks	34
7.7	Signage, Colours and Materials	36
7.8	Environmental Management	37
7.9	Transit Centre Pedestrian and Cyclist Access	38
7.10	Mixed Use Development	38
<b>8.0</b>	<b>Environmental Management Objectives</b>	<b>39</b>
8.1	Construction Phase	40
8.2	Post-Operational Phase	42

## CONTENTS

## PAGE

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<b>9.0</b>	<b>Infrastructure Obligations of the Principal Developer</b>	<b>45</b>
9.1	Overview of Infrastructure Obligations	45
9.2	State Government Infrastructure Requirements	48
9.3	Infrastructure Affected by Precinct Development	48
9.4	How the Required Infrastructure Relates to the Infrastructure Agreements	49
9.5	Preliminary Program for Infrastructure Provision	49
9.6	Estimated Water and Sewerage Demands	49

### List of Figures

1. Location Plan
2. Structure Plan Context
3. Development Context and Concept Principles
4. Precinct Plan Map
5. Landscape Concept Plan
6. Road Layout
7. Water Supply Headworks
8. Sewerage Headworks

### Appendices

- A. Urban Design Character Images and Sketch

## **1.0 Introduction**

- 1.1 The Mango Hill Infrastructure Development Control Plan (DCP) provides for the creation of a precinct within any part of the DCP area chosen by the principal developer. The principal developer may then prepare a precinct plan and lodge it with Council for approval in accordance with the relevant provisions of the DCP.
- 1.2 The purpose of a precinct plan is set out by section 2.3 and elsewhere in the DCP. The precinct plan is created to allow for a more detailed interpretation of the DCP Structure Plan.
- 1.3 The principal developer has created a precinct to be known for planning purposes as the Town Centre Core Precinct. This document constitutes the precinct plan for the Town Centre Core Precinct.
- 1.4 The location of the precinct within the DCP area is shown on Figure 1, the area and boundaries of which are only notional.
- 1.5 Where a discrepancy arises between the performance criteria of this precinct plan and the requirements of the DCP or Mango Hill Infrastructure Agreement (MHIA), the requirements of the DCP or Infrastructure Agreement will prevail.

## **2.0 Structure Plan Context**

The precinct comprises the Town Centre Core Area land use element, and is located in the southern corner of the DCP area. It is bounded on its southwestern side by the Bruce Highway, on its southeastern side by Anzac Avenue, and on its northern side by the planned extension of North Lakes Drive. The general location of the precinct within the DCP Structure Plan is shown on Figure 2.

The character of the Town Centre Core is to be established principally in this precinct plan – See Section 4.3.1 of the DCP.

## **3.0 Desired Environmental Outcomes**

The DCP includes a number of over-arching desired environmental outcomes (DEO) as well as numerous DEO for each element identified by the DCP. However, a number of the DEO overlap a number of elements. Therefore, DEO within all relevant elements of the DCP must be read collectively in order to gain the overall meaning within the context of the DCP.

In relation to the land use element of Town Centre Core, the DCP states the following general and specific desired environmental outcomes:

### 3.1 General

- “(a) to provide a commercial and social centre for the new town and its surrounding area, containing major retailing, administrative, commercial, entertainment, community and leisure facilities and a mix of medium and high density housing.*
- (b) to encourage the development of employment opportunities within the town centre core as a focus of the Shire’s northern Major Employment Centre.”*

### 3.2 Specific

- “(a) to encourage vitality, viability and efficiency of the town centre core through a combination of a single major shopping centre of approximately 60,000m<sup>2</sup> gross lettable area (GLA), bulky goods retailing, other major commercial and community land uses and possibly high density residential development.*
- (b) to provide opportunities for a wide range of employment for the local and wider community in the broad categories of commerce, retailing, entertainment and leisure, and community services.*
- (c) to promote the establishment of the town centre core as a key component of a major employment centre which is integrated functionally and physically with other employment areas in the Kallangur/Mango Hill area, with the transit centre and regional transport system, and with the local and regional infrastructure system.*
- (d) to encourage the provision of retailing, business services, entertainment and leisure, and community services in step with the needs of the Mango Hill development and surrounding populations.*
- (e) to promote the development of the town centre core in a managed, orderly and efficient manner, with infrastructure provided in accordance with infrastructure agreements between the State Government, the Council and the principal developer.*
- (f) to promote the establishment of a town centre which is physically attractive and functionally convenient through the spatial arrangement, design and construction of its component parts.*
- (g) to enable the progressive development of the town centre core by including provision for redevelopment and intensification of premises used for core functions and associated car parking areas at the time of development/preparation of sector plans.”*

As stated in the introduction to this section, these DEO are not the only outcomes being sought by the DCP for the Town Centre. They must be read in conjunction with the entire DCP.

## **4.0 Planning Intent**

This precinct plan, as required by the DCP, provides a more detailed interpretation of the DCP Structure Plan, the desired environmental outcomes and the general planning and design intents. These planning and design intents will guide the final detailed planning and development through appropriate design and siting guidelines in the relevant sector plan(s).

The DCP provides an outline of the planning intents for the Town Centre Core (for example see Section 4.2 of the DCP). These intents can be broadly summarised as follows:

The Town Centre Core is to:

- (i) be developed as the physical, social, commercial and functional focus for the DCP area and surrounding areas;
- (ii) include a combination of buildings, landscaped areas and streets which provide for major social, cultural and economic needs of the population;
- (iii) provide a foundation for a Major Employment Centre in the northern Growth Corridor;
- (iv) provide a mixed and flexible environment to meet future employment needs;
- (v) provide for the most intensive and highest order activities in terms of retailing, commercial and professional services, community services and entertainment and leisure services;
- (vi) provide for possible high density residential development;
- (vii) provide highly developed pedestrian areas and linkages to the Town Centre Frame and the wider open space and pathway network; and
- (viii) provide a high degree of accessibility within the regional transport network through connections to the transit centre, road network, public transport including possible future rail system, pedestrian and cycle networks.

The Town Centre Core is expected to include:

- a major shopping centre of approximately 60,000 m<sup>2</sup> GLA,
- a bulky goods centre and retail showrooms up to a maximum 20,000 m<sup>2</sup> GLA,
- supporting small scale incidental retailing in a main street environment,
- high order business and commercial services,
- high order administrative and community services,
- high order entertainment and leisure activities including a cinema complex developed in conjunction with the major shopping centre,
- a transit centre,
- public spaces, plazas and landscaped open space, and
- possibly high density residential development.

## **5.0 Development Intent**

## 5.1 Development Context

Figure 3 outlines the Development Context and Concept Principles for the Town Centre Core Precinct.

The precinct's strategic location on a site which is highly visible and accessible from the existing major road network will encourage its progressive development from the early stages to serve both the developing DCP community and the established and/or developing communities to the north, west, south and east.

This positioning at the interface between the DCP area and existing and future surrounding development, and its locational context as part of the planned town centre, have been important considerations in establishing the concept principles.

## 5.2 Development Character

### 5.2.1 General Urban Form

The DCP requires this precinct plan to principally establish the character of the Town Centre Core. The Core includes a number of character areas. In general terms, these could be described as :

- (a) Town Centre Approaches
- (b) Bulky Goods Area
- (c) Major Shopping Centre
- (d) Town Main Street

In relation to general urban form, these areas are dealt with in turn below.

#### (a) *Town Centre Approaches*

Initially, these approaches will be from the Bruce Highway via Anzac Avenue, from Anzac Avenue itself and from within the DCP area. Approaching from Brisbane via the Bruce Highway, there are only limited views of the Town Centre Core. These views may be capitalised upon with a distinctive architectural feature such as a tower, with limited, restrained, but distinct signage that announces the location of both the Town Centre and the North Lakes development generally.

Anzac Avenue provides the primary entry, including arrivals from Brisbane, the Shire to the west of the Bruce Highway, the north and Redcliffe to the east.

The intention is that all these arrivals will be presented with a landscaped "green gateway" to the Town Centre area, with a densely evergreen landscaping theme on the section of North Lakes Drive off Anzac Avenue. Landscaping along Anzac Avenue shall be such that in regard to the shopping centre buildings shall be evident. Service and storage areas, car parking areas, etc must be screened.

Some large, free standing buildings of a corporate, institutional or formal nature

would be encouraged along this approach, however it is not intended to include development such as showrooms, service stations, fast food premises, and similar uses.

Additional approaches to the Town Centre will ultimately be from the Bruce Highway, via the new exit ramp and service road along the south-western frontage of the core and a new road forming the western boundary of the core. The construction of these works is not planned for the first stage of the major shopping centre, but will occur at a later stage in accordance with both the MHIA and the Mango Hill Infrastructure Agreement – Main Roads (MHIA-MR). While the exit ramp and service road will link to Anzac Avenue, it also provides local access to the Bulky Goods Retail and Related Uses Area and access to the town centre via the Western Road. The character of this road is further described below.

*(b) Bulky Goods Area*

The existing landform of the bulky goods area of this precinct will change dramatically. A major regrading of the presently undulating country is proposed by the principal developer. The exit ramp and service road will remain generally responsive to the current terrain and the Bruce Highway. The buildings proposed for the bulky goods area are expected to be large in scale and will require a significant footprint for both building platforms and ancillary areas such as parking, circulation and services. Several large building platforms will be produced with large retaining walls and/or batters rising to the north-east from the exit ramp and service road. The buildings will be erected above the retaining walls/batters. Road access to the buildings and beyond to the Town Centre will be initially lower than the platform level and will rise from the exit ramp and service ramp to the higher land above.

This will be an area where, for safety reasons, motorists will need to concentrate on the rapidly changing environment. These roads must be well landscaped to reduce distractions from adjacent buildings. Smaller scale businesses are not preferred in this environment. The large buildings in the bulky goods and related uses development area will be expected to display some general architectural relationship to the major shopping centre. A clearly defined pathway system which also helps to integrate site landscaping will be provided between these large buildings, and from them to the shopping centre. These buildings will present an attractive façade to both the Bruce Highway and the major shopping centre. The service and storage areas for these buildings will be effectively screened from view from adjoining and nearby public roads. The planting of trees and vegetation in large scale masses must reduce the built form impact and substantially limit the bulky appearance of the buildings.



The landscaping must be planned and designed so as not to affect the integrity of the infrastructure such as engineering services, drainage systems and retaining structures, including those forming part of the landscape works. These matters, if not fully addressed by the sector plan, will be required to be fully reported on by the applicant when submitting an application for development permits for material change of use and operational works.

In order to achieve the required aesthetic character and not adversely affect road safety, signage in this area will be undertaken in a coordinated manner. It will be limited and generally only name the primary tenants in the respective buildings. Advertising hoardings and other signs relating to services not provided in this part of the precinct will not be permitted.

The Western Road must be a legible route to move traffic efficiently from the exit ramp and service road to the Town Centre. It is to be relatively uncluttered with building setbacks to accommodate well landscaped carparking areas and changes in level between road pavement and building platforms. This area may include general commercial activity and service trades such as showrooms, service stations and auto services, service industries and general commercial activity. It is not regarded as a primary retail area and food premises would be limited as discussed in section 6.1.3 of this precinct plan. It is likely similar development will occur on the area to the west of this road. Street treatments and landscaping should be such as to make the through route nature of the road evident, and give views to the parking entrances to the major shopping centre as well as transition to the more urbanised environment of North Lakes Drive to the north.

(c) *Major Shopping Centre*

The major shopping centre development area will create a visually interesting major landmark befitting its function as the principal commercial, shopping and entertainment focus for the community within the DCP area and wider region. The general land use/environmental intentions for this part of the Core are described in the DCP. Broadly, these can be summarised as a vibrant and memorable major shopping and entertainment area linked in a pedestrian friendly way to an active Town Centre Frame in a way that promotes a “main street environment”.

The precinct plan interprets these principles in a way that relies in part on a conventionally based shopping mall and food court/cinema complex, but which:

- is based on recent trends in externalising sections of malls and encouraging mall developments to meet and interact with a public “main street”,
- provides an active public street interface to the adjoining Frame area with provision for progressive expansion along North Lakes Drive,
- recognizes and respects development on adjacent frontages within the Frame,

- effectively landscapes its surrounding car park (while allowing street views to key elements of the shopping centre core buildings) so as to substantially remove the visual impact of a expanse of car parking as the entry view to the Town Centre,
- uses a form of architecture and elevational detail which reduces the apparent bulk and scale of the building.

The shopping centre buildings are intended to present distinctively and with architectural merit, and may incorporate a significant vertical element such as a tower, with limited identification symbols. The tower may incorporate communication facilities only if these are provided internally within the tower and in a manner which does not detract from the architectural design nor public safety. In regard to the latter aspect, proponents may be required to provide an impact statement to the Council prior to establishment of the equipment demonstrating compliance with all relevant standards.

*(d) Town Main Street*

North Lakes Drive at its entry from Anzac Avenue will be characterised by a densely landscaped “green gateway”. This transitions to a main street environment where development will address street frontages in order to form an urban main street. This will be characterised by tree lined footpaths and attractively landscaped carparks to the south, where vehicles are significantly screened from North Lakes Drive. Over time, commercial developments will combine with this landscape treatment along North Lakes Drive to permanently screen and/or sleeve surface carparks and possible future multi-storey carparking.

Commercial development on North Lakes Drive will progressively intensify towards the corner of North Lakes Drive and The Corso. Integrated multi-storey development such as offices, motels, hospitals, education establishments, etc. may locate along the North Lakes Drive frontages provided that these forms of development are “sleeved” by small scale incidental tenancies with active frontages principal at the ground floor. Otherwise development will be generally two storeys in height. Where single storey development occurs, it shall include a two storey facade. Freestanding development of this nature may also occur in proximity to Anzac Avenue. Bulky showroom/hardware/ homemaker/warehouse style activities will not be located on these frontages. Such uses are more appropriately located adjacent to the Bruce Highway frontage.

Opportunities for residential development, ranging from caretakers’ flats to units and motels, will be encouraged, with the aim of keeping people in the business and entertainment areas throughout the day and evening. While residential amenity is to be considered in these situations, a realistic approach to amenity will be required having regard to the primary activities of the Town Centre Core.

Development adjacent to the intersection of North Lakes Drive and The Corso will provide the main street urban environment envisaged by the DCP (see Section 5.3.2 of the DCP). The long term aim will be to progressively develop a continuous active frontage on both sides of North Lakes Drive expanding east and west from The Corso/North Lakes Drive intersection. For the first stage of development, both in this Precinct and the adjacent Frame to the north, the intention will be to concentrate development around this intersection. This “critical mass” will be the initial centre of urban town activity for North Lakes, and in time should both provide the prime link to the Frame and develop a distinctive character of its own. In time, The Corso will link northward to Lake Eden, in an interesting urban mixed use environment. At its northern end, The Corso is expected to develop a centre of activity of a different yet vibrant character.

The intersection is also the major pedestrian entrance to the major shopping centre. Through the intersection, The Corso transitions to an intensive highly pedestrianised plaza which is open and inviting to the public, and leads south to the shopping centre food court and the commencement of the airconditioned section of the shopping centre. The first section of the plaza (between the North Lakes Drive footpath and the southern side of the internal circulation laneway) will be permanently open to the public, and the balance of the plaza will be open to the public, subject to normal security arrangements, until late at night. Pedestrian safety and priority will be paramount where people cross the circulation laneway, and for at least 25 metres each side of the crossing point. Paving and landscape treatments will be continuous or closely integrated from the northern part of the plaza out to and across the plaza to visually link the Town Centre Frame to the plaza, and encourage pedestrian movement.

Active frontages will line the plaza, and its transition to the airconditioned mall of the major shopping centre will be as seamless as possible, preferably operating as an air zone entry. The plaza will include a main entry to the cinema complex, in a prominent location to achieve strong linkages to development at the intersection of North Lakes Drive and The Corso. It will be an exciting, commercial environment, protected from the weather but with an open, light atmosphere. The southern face of the plaza near the mall entry must be active, notwithstanding this may be an area which also provides frontage to larger “mini majors”. A high standard of detailing and pedestrian finishes will be used. The plaza will include a main entry to the Cinema Complex if a main entry to the Cinema Complex is not located on North Lakes Drive.

Westward from this precinct the character of North Lakes Drive will progressively alter as it continues through the Town Centre Frame towards the future Mixed Industry Business Area. Free standing commercial, service storage and distribution activities are likely to characterize development in this area.

“Active frontage” and its derivatives mean uses which:

- reinforce and encourage pedestrian activity,
- encourage direct business and/or social activity along the street and provide opportunities for people to meet,
- use a direct face with the street to undertake business, not from within a separate shopping centre or arcade,
- are undertaken in premises which directly address the street,
- have well proportioned access doorways, which remain open during normal trading periods, generally located no more than 6 metres from any other doorway in the same premises or adjoining premises, and
- are undertaken in premises which have frontages which are interesting to pedestrians, display activity inside, and are generally transparent.

Uses that commonly have an active frontage include newsagent, fruit shop, bakery, chemist, post office, retailers, cafes, restaurants, hotel, etc. Uses which tend not to encourage this interactivity may be those which are essentially storage or process uses, or uses which have few face to face dealings with the public. Council wants a vibrant, active town Centre.

### 5.2.2 Landscaping

Landscaping generally will be such that it meets the landscaped “green gateway” concept described in “General Urban Form” above, and shall be restricted to species which are capable of good growth and endurance in a commercial environment in the soils found within the Precinct. The sector plan shall provide a more detailed assessment of appropriate landscape species and, where planting of other species is proposed, the onus will be upon the proponent to provide evidence to Council’s satisfaction from a qualified and experienced landscape architect, with proven experience in large scale revegetation works for a commercial environment that the plantings have reasonable prospects of surviving and producing the landscaping outcomes of the precinct and sector plans.

### 5.2.3 Traffic Access and Pedestrian Links

Traffic on North Lakes Drive is intended to be busy but consistent with the general amenity and safety standards expected in a town centre. It is intended to progressively build traffic volume to somewhere in the order of 10,000 to 15,000 vehicles per day (vpd), and traffic volumes will be managed by progressively developing other sections of the traffic grid both within the Town Centre Frame and elsewhere. This traffic volume should promote good access, vitality and night time activity, without progressing to a state of congestion .

With this in mind, while a one way vehicle exit will be permitted from the shopping centre to The Corso, this will be progressively limited and reduced so that the axis from The Corso to the shopping centre mall changes to a highly pedestrianised space, crossing the circulation lane between the shopping centre’s eastern and western car parks. The one way exit to North Lakes Drive is to be closed if, in the opinion of an independent expert to be appointed by Council, the

traffic exiting this area creates undesirable disruption to motor vehicle or pedestrian movements at North Lakes Drive.

The circulation laneway is intended to be nothing other than a local convenient circulation link. It is to carry a desirable maximum of 1,000 vpd with an absolute maximum of 2,000 vpd, and be specially treated to give pedestrian priority and ensure pedestrian safety. It will not be expanded beyond a 6m pavement two way configuration with a 2m wide footpath on either side of the laneway. Therefore, the total width of the laneway is to be no greater than 10 metres – a “city lane”.

Detailed attention must be paid to the pedestrian movement linkage from the major shopping centre airconditioned mall to The Corso. Within this link active frontages must be provided within a corridor not more than 50m wide measured from the centre of the pedestrian linkage described above. Uses, which work against this principle, shall not be located in this corridor. No part of the circulation lane beyond the 50 metre area described above is to be used for any purpose other than the passage of vehicles and pedestrians.

#### 5.2.4 Key Principles

From the character description outlined above some key principles include:

- (a) The initial stages of development fronting North Lakes Drive will be focussed at the intersection of North Lakes Drive and The Corso. The area surrounding this key intersection will be developed to contribute to the creation of a critical mass in stage one of any development. This critical mass will form a focal point for the town centre. The initial stages of development within this precinct must include this intersection by developing built form up to the property boundary at the intersection. This concept has been depicted in figure 3 and is to include small scale incidental tenancies;
- (b) North Lakes Drive will provide the primary address and access for the major shopping centre. All parking areas around the major shopping centre development area will be enhanced by landscaped vehicular and pedestrian links and connected by an internal circulation road in accordance with the design principles to be established in the Landscape Concept Plan (see Figure 5). Potential conflict points between vehicular and pedestrian movements will be minimised. The built form along North Lakes Drive will be enhanced by a streetscape character that integrates buildings and landscape in an attractive and safe public environment. North Lakes Drive will form the principal component of the main street environment, as described in the DCP, at the interface between the Town Centre Core and the Town Centre Frame. This environment will be further enhanced by the development of The Corso as an extension of the main street environment. The Town Centre Core development area will form the southern anchor node to The Corso main street environment, which will extend north to the Town Park and Lake Eden.

The parking areas fronting the North Lakes Drive (to at least 100 metres east and west of The Corso) must be setback from the frontage to allow for future development. In the interim, this area shall be landscaped to significantly screen car parked vehicles and shall be kept free of all services, unless otherwise approved by Council, but part of the area may be used for “nose in” car parking from the internal circulation carriageway. The internal circulation carriageway is to be located in this area no closer than the alignment of the circulation lane (in the order of 17m) from North Lakes Drive;

- (c) The relationship of the Town Centre Core precinct with the Bruce Highway and its intersection with Anzac Avenue is one that is highly visible and large scale. The design of major building elements should provide an attractive “front “ façade to the major roads. Landscaping along these frontages will be an important element in the design;
- (d) The major shopping centre development area will create a visually interesting major landmark befitting its function as the principal commercial, shopping and entertainment focus for the community within the DCP area and wider region;
- (e) An attractively landscaped detention basin will be developed at the intersection of the Bruce Highway and Anzac Avenue as part of the stormwater management strategy for the precinct. With Council’s approval, adjacent land uses may be integrated with the landscape elements of the detention basin;
- (f) The pedestrian entries to the major shopping centre must acknowledge the importance of the pedestrian movement corridor being created through the extension of The Corso. Therefore access from the landscaped carparking area to the major shopping centre development in proximity to The Corso extension must focus on North Lakes Drive and the circulation laneway. However a minor secondary entry to the major shopping centre development area will be permitted in proximity to the circulation laneway provided:
  - (i) pedestrian pathways in the carpark layout focus on the other shopping centre entries;
  - (ii) the width of this minor secondary entry must be no more than 2.0 metres;
  - (iii) this entry is not to be highlighted as a major entry and entry feature cues are of a moderate nature;
  - (iv) no external shops shall be provided adjacent to this food court access;

- (v) this access is to be closed upon completion of Stage 2 of the Shopping Centre if an independent expert, to be appointed by Council, determines that the entry significantly adversely affects pedestrian activity in the movement corridor created through the extension of The Corso.

The layout of the carpark in the area between the minor secondary entry and the eastern entry to the circulation laneway must maximise carparking spaces in the vicinity of the circulation laneway and encourage pedestrian movement towards the circulation laneway. Drive-through take-away food facilities are not favoured in this area, but are encouraged to the west of the pedestrian plaza. In particular, in the first stage of development a well defined, high standard pedestrian pathway shall be located through the carpark on the eastern side of the circulation lane. It shall be approximately 100 metres in length, and it shall deliver pedestrians to the pedestrian pathway of the circulation laneway on its southern side. When subsequent stages of development of the shopping centre are undertaken, a similar path undertaking similar functions shall be progressively developed in the carpark to the west of the circulation laneway.

The DCP anticipated that a transit centre would be established within the Town Centre Core. However, it is now the preferred strategy given the location of the future rail corridor, that public transport access to the precinct be provided by a bus interchange to be conveniently located adjacent to the Town Centre Core. The bus system will ultimately link with the local and regional transport infrastructure system.

#### 5.2.5 Other

Examples of desirable outcomes and undesirable outcomes are shown in Appendix A and they shall be used in interpreting these clauses. Nothing elsewhere in this precinct plan or a subsequent sector plan shall be taken to detract from the general character intention set out in this section, unless Council, by resolution, decides otherwise having due regard to the facts and circumstances at the time.

### 5.3 **Concept Overview**

As the commercial, shopping and entertainment focus for North Lakes and the surrounding area, the development concept for the Town Centre Core precinct envisages a high intensity, mixed use urban centre linked to the Town Centre Frame and the surrounding residential areas by a highly developed network of roads, paths and open spaces. The development intention is to establish over time a large-scale fully integrated town centre as defined by the DCP, providing a comprehensive range of regional, district and local retail and service opportunities appropriate to the town centre's accessibility and its regional context.

The provision of good linkages, the co-location of like uses, consistent landscape and signage will all contribute to achieving this integrated environment.

The development concept and indicative pattern of land uses for the precinct is shown in Figure 4. This plan identifies the principal land use elements including:-

- .1 The major shopping centre development area. The area is envisaged to include high order comparison shopping, department store, discount department stores, large supermarkets, a wide range of specialty shops and other retail, commercial services, a cinema complex, other forms of entertainment, restaurants and a food court. Other possible uses may include higher density residential uses, indoor recreation, occasional market, offices, place of worship, and special uses;
- .2 Development areas for bulky goods retail and related uses along the southern periphery of the precinct;
- .3 Small scale commercial/retail/entertainment premises possibly mixed with residential uses on sites along the North Lakes Drive frontage in a main street environment responding to similar forms of development on the northern frontage of North Lakes Drive;
- .4 Car parking areas;
- .5 A landscaped detention basin situated at the intersection of the Bruce Highway and Anzac Avenue; and
- .6 North Lakes Drive, which includes provision for bus pick-up and set-down.

The Precinct Plan Map (refer Figure 4) shows the major land uses and structuring elements in sufficient detail to allow for the preparation of a more detailed sector plan(s). Unless otherwise explicit in the precinct plan's text, the precinct plan does not necessarily define the final nature or location of specific land uses, nor does it show the final location and extent of road and open space networks. Consistent with the DCP, it is important that flexibility be maintained for future planning which needs to respond to changing requirements of the community and the marketplace. The sector plan(s) will provide more detail on the precise locations of roads, parks and development areas. However, this paragraph must not be seen to diminish the key principles and character elements set out in the precinct plan or DCP.

#### **5.4 Regrading Concept**

The proposed regrading of the Town Centre Core precinct will form part of an overall proposed regrading concept, including both the Town Centre Core and the Town Centre Frame. Rather than considering the major shopping centre development area in isolation, the overall town centre regrading concept will allow for:

- (i) the integration of levels between the core, the frame and adjacent major roads and development areas;
- (ii) integration between the major shopping centre development area and the bulky goods retail and related uses development area;
- (iii) consideration of the visual relationship of the site to the Bruce Highway and the provision of batters and/or retaining walls along the Bruce Highway frontage;
- (iv) the efficient management of earthworks; and



- (v) the development of pedestrian and cycle networks which are safe and convenient.

This regrading concept will be prepared by the principal developer and will be provided as part of the first sector plan. It will cover an area larger than this precinct including all proposed borrow and spoil areas for each stage.

The initial stage of the regrading shall include no less than:

- North Lakes Drive for the full extent of the Town Centre Core frontage,
- the initial stages of the major shopping centre development area, and
- the detention basin.

The regrading of The Corso and its environs shall be undertaken in accordance with approvals granted by Council from time to time.

Each subsequent precinct or sector plan in either the core or the frame must address this regrading concept.

## **6.0 Precinct Plan**

### **6.1 Land Use Pattern**

#### **6.1.1 Background**

In accordance with section 2.3.2(f) of the DCP, the desirable land uses are to be identified in generic terms as part of this precinct plan. The desirable and undesirable land uses are illustrated on Figure 4 and described below. The sector plan(s) stemming from this precinct plan will finalise the specific land use rights as required by section 2.4.9 of the DCP.

Within the precinct, broad types of building development areas are described and while these have been classified according to either the predominant use or building form, each area is intended to permit a wide range of uses provided they are integrated in functional and urban design terms with adjoining development.

Apart from:

- Stage One of the major shopping centre development area,
- the frontage buildings flanking the main pedestrian entry to the major shopping centre development area on North Lakes Drive (for a distance of not less than 100 metres centring on the projection of The Corso), and
- associated car park areas and internal access roads,

all of the following development will be established over time.

### 6.1.2 Major Shopping Centre Development Area

This area will contain the major shopping centre, which will be developed in stages to contain approximately 60,000m<sup>2</sup> gross lettable area.

At the time of preparing the DCP in 1998, the proposed staging took into account market potential, tenant demand and commercial feasibility at that time. The DCP nominated a stage one development of 16,000 m<sup>2</sup> GLA opening in 2000, with the first full year of trading in 2001. Stage two (approximately 30,000 m<sup>2</sup> GLA) was nominated to open in 2005, with the first full year of trading in 2006. Stage three (approximately 8,500 m<sup>2</sup> GLA) was nominated to open in 2010, with the first full year of trading in 2011.

The staging has been revised in the manner provided for in the DCP, to reflect the altered timing of stage one and the commercial viability of the centre. At the time of preparing this precinct plan, the major shopping centre is to operate initially at an upper limit area of approximately 25,000m<sup>2</sup> GLA.. This stage one is proposed to open in 2002, with the first full year of trading in 2003. Stage two (approximately 21,000 m<sup>2</sup>GLA) is nominated to open in 2007, with the first full year of trading in 2008. Stage three (approximately 8,000 m<sup>2</sup>GLA) is nominated to open in 2012, with the first full year of trading in 2013.

However, the DCP recognises that a high degree of flexibility in planning for the development of the shopping centre is required, and that the staging is approximate only and will be subject to the commercial viability of the centre and the ability of the market to support the shopping centre. The intended strategy described above may be varied by the Council upon the submission of a report to the satisfaction of Council which assesses the market potential and economic effects of the proposed modified staging.

The key elements of this development area will include:

- (i) Major retailing and specialty tenancies offering high order comparison shopping for non-food lines, as well as major and specialty tenancies for food and grocery shopping;
- (ii) A pedestrian and entertainment/leisure oriented retail precinct integrated with the active frontage uses located on North Lakes Drive and the pedestrian urban spaces between North Lakes Drive and the entry to the major shopping centre development area. This area will be developed as a shared pedestrian priority/vehicular access area and as the primary pedestrian focus within the precinct. Pedestrians will have priority in this area as the shared access area is only for the circulation of cars between car parks;
- (iii) High order entertainment facilities, possibly including cinemas and other forms of technology-based entertainment;

- (iv) A range of convenience-oriented commercial, professional and personal services, as well as small scale incidental retail, which may function independently of the major shopping centre in terms of trading hours.

### 6.1.3 Bulky Goods Retail and Related Uses Development Area

This area is to primarily contain the bulky goods retail and related uses, and may include one or more buildings to a combined total area of a maximum 20,000m<sup>2</sup> gross lettable area. The area is close to the major shopping centre development area, to derive maximum benefits from the staging of development and shared car parking. Its location in the southern portion of the precinct will benefit from highway exposure and car-oriented access.

Retail development such as stand-alone shopping centres, department stores, discount department stores, cinemas, supermarkets and other major retail facilities which would compromise or diminish the role or function of the major shopping centre development area are not intended in the bulky goods retail and related uses development area.

Pedestrian links will be provided between the buildings in this area and between those buildings and the major shopping centre.

### 6.1.4 North Lakes Drive Frontage Development

Small scale incidental commercial, retail, residential and entertainment premises will be developed along North Lakes Drive. These buildings will define the edge of the street, creating a strong link with the buildings defining the opposite side of North Lakes Drive. Their outward oriented design, pedestrian friendly character and active frontages combined with the streetscape design of North Lakes Drive will create an attractive and inviting pedestrian environment.

At the time of the first stage of the shopping centre development, a frontage of at least 100 metres (being generally 50 metres either side of the projection of The Corso) must be built. The second stage, being the extension of active frontage along North Lakes Drive, will be constructed as part of the Stage 2 extension of the shopping centre, contemporaneously with the construction of the shopping centre Stage 2 extension. The frontage development will also be completed either before or contemporaneously with the completion of the Stage 2 shopping centre works. These construction works shall commence when an acceptable level of occupancy for the Stage 1 frontage buildings occurs (not less than 85% average occupancy in the preceding 24 month period). For the purposes of this paragraph Stage 2 will be when the major shopping centre development area expands beyond 35,000 square metres gross leaseable area.

This frontage development must be two storey in appearance from North Lakes Drive but may consist of a mix of single storey and two storey tenancies. Buildings development along the North Lakes Drive frontage will not be demolished and replaced with carparking. These buildings are expected to be actively managed and tenanted to ensure that active frontages are maintained and positively contribute to the overall level of activity in the Town Centre.

The development along North Lakes Drive is intended for a wide range of uses including specialty retail, commercial and professional offices, entertainment and hotel uses and possibly residential units at the upper levels integrated into mixed use developments. The expansion of buildings and landscaping from stage one must ensure a continuous built form and streetscape treatment along the urban main street section of North Lakes Drive, so that the street continues to be framed in a consistent manner. Services, waste storage and removal, plant areas and vehicular access must be accessed from a circulation laneway to the south of the buildings. However, they must be detailed in a way that conceals these building services and storage facilities and which keeps an attractive view for pedestrians entering and using the city lane.

These developments will be required to contribute to the ambience, urban character and functional layout of the built form and pedestrian environments.

#### 6.1.5 North Lakes Drive

North Lakes Drive, as an urban main street, will be the interface between the Town Centre Core and the Town Centre Frame, and will contribute to the establishment of a high degree of integration between these two land use elements. It will develop with a pedestrian scale character on both sides of the street. This will include buildings built up to the property boundary to define the street environment, generous footpaths, awnings, display windows and a high quality streetscape urban design character. The main street environment will be extended into the Town Centre Frame by the development of The Corso linking the major shopping centre development area to Lake Eden.

#### 6.1.6 Recreation, Entertainment & Leisure Activities

The Town Centre is intended to provide highly developed recreation, entertainment and leisure activities including urban spaces, cinemas, cafes and restaurants.

The principal opportunities for recreation in the Town Centre Core will be through the provision of landscaped urban spaces primarily focussed on the pedestrian urban space between North Lakes Drive and the main pedestrian entry to the major shopping centre development area. They will be integrated into the overall landscape concept plan for the precinct, extending throughout the Town Centre Core and Frame and the balance of the DCP area.

Activities such as a cinema complex, indoor entertainment centre, indoor and outdoor dining facilities, including restaurants, cafes, food court and the like, may be provided. Uses within this area will be intended to operate over extended hours and provision should be made to ensure access and public safety to achieve this. Specifically, the cinema shall be constructed so that its entrance and foyer take access from this pedestrian area, albeit the actual cinema entrances are likely to be located at the first floor level. In the event the cinema entry is within (or becomes within) an airconditioned enclosed mall a quality alternative entrance direct to the un-airconditioned pedestrian way shall be provided and operated. This alternative entry is to be located no greater than 65 metres from North Lakes Drive.

#### 6.1.7 Car Parking Areas

A connected series of landscaped surface car parking areas will surround the major shopping centre development area accessed by an internal circulation road and a network of pedestrian paths. On the northern side of the major shopping centre development area only limited access between the east and western car parks will be provided by a two way 6 metre wide laneway. Two metre wide footpaths on either side of the laneway will accommodate pedestrian movements. Surface car parking areas may be redeveloped as the Town Centre expands.

Structured car parking may be provided on the southern side of the major shopping centre development area to accompany later stages of development. Structured car parking may be provided on the northern side of the major shopping centre development area provided the structure is behind small scale incidental retail development fronting North Lakes Drive. This “sleeving” of the car parking will maintain active frontages to North Lakes Drive.

Roof top and basement/undercroft/undercover car parking may also be provided to accompany later stages of development. However, this shall not be undertaken if this activity would significantly detract from the architectural qualities described for this building in the DCP and relevant precinct and sector plans. In particular, vehicles parked in these facilities shall be significantly screened from view from public roadways within proximity of the site. The intention is that the buildings and any car parking structures read as attractive buildings, not rows of parked cars.

As discussed in section 5.2, the extent of car parking area north of the major shopping centre area will be kept to a minimum and is expected to be setback from North Lakes Drive to allow for future development.

### 6.1.8 Residential and Other Facilities

It is expected that in the longer term, higher order business, commercial, administrative and community services and possibly higher density residential uses may be developed within the Town Centre Core, including within the major shopping centre development area. Residential buildings or parts of buildings must be designed in a manner that maximises residential amenity.

## 6.2 **Transport and Circulation System**

### 6.2.1 Vehicular Access

Parking and vehicular access must be provided, designed and located to ensure convenient and safe parking and vehicular access.

Vehicular access to the precinct is provided via:

- (i) intersections from the proposed extension of North Lakes Drive as it passes along the northern boundary of the precinct;
- (ii) the major road connections to the precinct from an exit ramp and service road parallel to the Bruce Highway;
- (iii) an access road linking between the exit ramp and service road and North Lakes Drive at the western end of the precinct; and
- (iv) the major connections to the north and particularly Discovery Drive, which provides the initial major road connection to the residential precincts of North Lakes.

In order to facilitate access to the first stage development of the major shopping centre development area and to provide suitable access from other locations in the Town Centre, an adequate circulation system must be provided through the construction of roads within the Town Centre. For example the circulation system may be by:

- (i) the construction of The Corso between North Lakes Drive and Lake Eden and extending Lakeside Drive to The Corso; or
- (ii) by linking the southern section of The Corso to Memorial Drive via the construction of the East/West connecting road.

The proposed circulation system and the staging and timing for its construction must be detailed in the first Sector Plan for the Town Centre Core Precinct.

In any case, to promote certainty for both investors and the community, the road reserve for The Corso north of the East-West Road must be opened at the time of construction of this circulation system.

External entry points to the precinct will be connected to an internal circulation road within the precinct, to facilitate the distribution of internal traffic around the precinct to the various car parks and the bulky goods retail and related uses development area. Traffic control measures will be incorporated as appropriate to reduce vehicle speeds on this internal system.

Provision for local bus and taxi access will be included at pick-up and set-down locations in proximity to major entries. This will be detailed as part of any material change of use development application submitted to Council. The major shopping centre must provide adequate taxi rank space conveniently located to entrances.

Provision for direct emergency vehicle access will be made within the precinct.

#### 6.2.2 Car Park Areas

Car parking will be accommodated in a number of surface car parks as well as possible structured parking and/or roof parking in the later stages of development. Surface car parking will include the provision of shade trees together with shade structures within selected areas of the car park. Any shade structures will be integrated with the use of landscaping. Structured parking and/or roof parking, if developed, will be designed to complement the overall built form appearance of the precinct. Vehicles in structured car parks will be significantly screened when viewed from public roads (see section 6.1.7 of the precinct plan).

#### 6.2.3 North Lakes Drive

North Lakes Drive is intended to progressively develop as an urban “main street” as stated in the DCP. It will be developed in a way that allows ease for pedestrians crossing at key points. As traffic numbers grow, more formal controls such as pedestrian crossings may be necessary and will be provided by the principal developer if so required by the Council.

North Lakes Drive will provide safe and convenient access to car parking areas within the precinct. It will also provide short-term car parking on-street for as long as traffic volumes permit, as well as provide bus pick-up and set-down to service the Town Centre.

#### 6.2.4 Public Transport Corridor and Public Transport Interchange

The public transport corridor, public transport interchange and park and ride are no longer positioned within the Town Centre Core. A permanent location for public transport services will be provided adjacent to the precinct in the Town Centre Frame at a location agreed with Queensland Transport.

### 6.2.5 Pedestrian and Cycle Access and the Pedestrian Environment

An integrated pedestrian network is proposed to link the major shopping centre development area, the bulky goods retail and related uses development area, car parks, the development along North Lakes Drive and the wider Town Centre Frame. These pedestrian links will be attractively landscaped and be safe and convenient for all users. They must provide access for people with disabilities.

The main access points into the major shopping centre will be directly from public spaces or footpaths. If access via car parking areas is unavoidable, these routes must be clearly identified and designed to maximise safety and convenience.

The built form within the precinct must allow a high level of access and convenience for pedestrians, cyclists and motor vehicles. The network of roads within the precinct must be highly interconnected with pathways so as to minimise both pedestrian distances between destinations and conflicts between vehicles and pedestrians. Provision of convenient cycle access to the major shopping centre development area and the bulky goods retail and related uses development area as well as the provision of appropriate end use facilities must be included in the detailed planning for the precinct.

## 6.3 **Open Space and Landscape Concept**

### 6.3.1 Introduction

The Landscape Concept Plan provides a diagrammatic framework for the creation of a distinctive urban setting and town centre character through an integrated overall approach incorporating landscaping and urban development within the Town Centre Core (refer Figure 5). Key elements of this concept plan are described below.

The precinct plan area contains varying topography, which will be substantially modified by earthworks. The landscaping described in this plan and subsequent sector plans shall, having regard to the location in which it is provided, be of sufficient width and density and so maintained as to achieve the objectives and intentions described in the plans.

### 6.3.2 Frontages to Bruce Highway/Anzac Avenue

The locations of street tree planting and landscape buffers around the Bruce Highway and Anzac Avenue frontages of the precinct are shown indicatively on the Precinct Landscape Plan. However, to meet the desired objectives, the landscaping will require significant reinforcing within private development sites. The location of trees and landscaping must form landscaping buffers between development in the core and these major arterial corridors. However, the buffer may take into account limited viewing opportunities to the buildings, and sightline requirements at vehicular and pedestrian entry points to the precinct.

### 6.3.3 Frontage to North Lakes Drive



The verges of North Lakes Drive will be consistently framed with appropriate landscape and canopy trees to provide safe and shaded pedestrian environments that will include generous footpaths, possible bus stops, street trees, street furniture and lighting. The North Lakes Drive frontage buildings used for cafes and the like will be encouraged to provide pavement dining. The landscaping concept of significantly screening the car parks described in 5.2 will apply.

#### 6.3.4 Entries off North Lakes Drive

Any planting adjacent to the vehicular and pedestrian access points must highlight the access to and from the precinct and ensure vehicle drivers' sightlines are maintained. Entries will include pedestrian pathways providing linkages from surrounding development to the major shopping centre development area.

The landscape treatment of entry avenues and the internal circulation road is to reinforce the open space and urban design corridors linking the major shopping centre development area with the wider Town Centre Frame.

#### 6.3.5 Pedestrian Linkages and Plazas

Within the precinct it is intended that a series of urban open spaces and pedestrian links connect with, and extend into, the major shopping centre development area. These linkages will form an extension of the internal shopping centre spaces. They will be linked to each other and to the various pedestrian mall entries to form an interconnected, landscaped open space and pedestrian system.

In particular, the urban open spaces associated with the North Lakes Drive frontage buildings and the plaza flanking the main pedestrian entry to the major shopping centre development area, will together create a sense of place, which encourages community use and promotes civic pride. They will form an anchor for the landscaped urban street extending north to the Town Park and Lake Eden. The sector plan and subsequent application for material change of use will specify how this integration must occur, but it may be, for example, by common pedestrian pavement surfaces, special treatments of roadway surfaces, a particular integrated style of landscaping, etc

#### 6.3.6 Landscaped Car Park Areas

It is important these large external areas be extensively planted with canopy shade trees and that they are integrated with the planned network of landscaped pedestrian and road frontage treatments. The extensive use of shade trees and screening through the car parking areas must provide visual and physical relief from heat and glare, as well as contribute to the creation of an attractive urban landscape setting for the Town Centre Core. Car park areas may include appropriate shade structures, which are integrated within the overall development.

#### 6.3.7 Landscape Buffer Planting

Many of the functional elements of the Town Centre Core require buffering and screening to reduce their impacts upon the amenity and visual character of the precinct. In particular, loading docks, waste storage and collection areas, and plant and building services areas require the incorporation of appropriate screening measures.

#### 6.3.8 Landscaped Detention Basin

The landscape detention basin will be shaped and landscaped to replicate and function as a wetland environment, using an informal planting layout of native species, wetlands, reeds, trees and other vegetation to create a natural appearance to this key entry statement. Adjacent land uses may be integrated with the landscape elements of the detention basin.

#### 6.3.9 Maintenance of Landscaping

All landscaping must be maintained in a manner which ensures the design intent as described above is achieved and retained.

### **6.4 Building Form and Architectural Design**

The built form of the major shopping centre development area must create a landmark that reinforces the development area as a key place-making element, befitting its function as the major commercial, shopping and entertainment focus for the community.

The architecture of any development within the precinct will be contemporary. All buildings will have a compatible architectural character, with the consistency of the overall design character reinforced by the finishes, colours and details that will combine to create a distinctive modern centre with a strong sense of place.

The architecture of the buildings fronting North Lakes Drive must act as important elements of the townscape as described in section 6.1.4 and 6.1.5 defining the form and spatial elements of the street. The buildings are to be no less than two storeys in scale on the property boundary. Facades must present an appearance of small scale incidental tenancies with a continuity of architectural character. Pedestrian access should promote pedestrian activity along the street. The sector plan must describe in detail the facade treatment along these frontages.

Integration of building design and urban spaces with appropriate lighting, signage and landscaping will contribute to this desired sense of place.

The desired character of the street environment, particularly with reference to North Lakes Drive, is to be achieved through the variety of characteristics and embellishments of each individual building. However, this streetscape requires some consistent elements, such as awnings over footpaths to achieve architectural and landscape harmony.

Appendix A provide illustrations of preferred and undesirable urban design outcome for building forms, architectural elements, outdoor spaces, major entry areas, and landscape

character within the precinct. These matters shall be developed in detail in the sector plan.

Unless otherwise approved by Council, buildings shall include an awning generally 3.7m wide cantilevered over the pedestrian route, provided so it is continuous with awnings on adjacent premises. Footpath dining shall be arranged such that pedestrians are encouraged to use the covered section of the footpath.

## **6.5 Engineering Services**

Urban infrastructure will be extended to the Town Centre Core Precinct in accordance with the infrastructure agreements between the Council, the State Government and the principal developer. Development sites within the precinct will be serviced prior to the commencement of their intended use. A summary of key engineering services is provided below.

### **6.5.1 Water Supply**

The major water supply main is to be located in the proposed extension of North Lakes Drive along the northern boundary of the precinct. The precinct will be connected to reticulation supplied by this main.

### **6.5.2 Sewerage**

Sewerage infrastructure will be provided by a gravity sewer in the south-west part of the precinct draining westwards under the Bruce Highway to connect to the Pine Rivers Shire Council reticulation system and Pine Rivers Shire Council Pump Station Number 108.

### **6.5.3 Energy**

Electricity supply will be provided by Energex or another appropriate supplier of electricity by underground cable to a sub-station within a building located within the precinct. All electrical distribution within the precinct will be either below ground or within buildings and structures.

A gas supply main exists at Anzac Avenue. The supply of gas to the precinct will be negotiated as an underground supply to the precinct.

### **6.5.4 Communications**

Communications and cable services will be installed underground. A communication tower is proposed to be located within this precinct.

## **6.6 Stormwater Management**

The precinct is primarily part of the Freshwater Creek catchment and in its current form, generally drains to the west under the Bruce Highway into this creek. Development of the precinct will have approximately 90% of the precinct draining to the Freshwater Creek catchment. A small percentage of the precinct will drain to the Tributary C catchment. Existing catchments drain through outlets under the Bruce Highway. Peak flows from the Town Centre Core will be limited to pre-development values by providing a landscaped detention basin in the southern corner of the precinct. The catchments will be linked to this detention basin.

Council's Local Planning Policy LP41 (Contributions for Implementing Mitigation of Stormwater Quality and Quantity) will be applicable to development within the precinct. Stormwater Management Plans will address all proposed development in the precinct.

## **7.0 Design Intents and Performance Criteria – Town Centre Core Area Land Use Element**

### **7.1 Introduction**

The following general intents and performance measures for various design elements are intended to address the design and siting measures outlined in Section 4.4 of the DCP. The precinct plan measures will ultimately provide the basis of comprehensive guidelines in the town centre core sector plan(s).

Compliance with the objectives and performance indicators contained in the precinct plan will achieve an acceptable level of performance in the planning, design and development of the Town Centre Core Precinct.

### **7.2 Building Setbacks**

#### *Objectives*

To ensure that buildings are positioned to achieve the streetscape character outcomes required by this precinct plan and DCP.

#### *Performance Indicators*

- .1 For the major built element of shopping centre development area, the building setbacks are to:
  - (i) include variations so as to ameliorate the visual effects of building length and bulk;
  - (ii) provide for vehicular, and pedestrian access between the major shopping centre building and the bulky goods buildings; and
  - (iii) ensure that any medium or high rise buildings will include a podium base to create a desirable pedestrian environment.
- .2 For the bulky goods retail and related uses development areas, the building setbacks are to:

- (i) ensure development is to be sufficiently set back from the internal circulation road (not the internal laneway) to permit convenient access to landscaped car parking areas of major tenancies;
- (ii) provide for vehicular, and pedestrian access between the major shopping centre building and the bulky goods buildings;
- (iii) allow, along the Bruce Highway and western road frontage for the provision of screening and retaining walls or battering of grade differences between the building levels and the Bruce Highway if required, to ensure a visually satisfactory outcome is achieved as discussed in section 5.2 and 6.3.2;
- (iv) ensure that any medium or high rise buildings will include a podium base to create a desirable pedestrian environment; and
- (v) allow for sensitive environmental responses to slope, access and integration requirements.

.3 For the mixed use development with an active frontage to North Lakes Drive the building positions are to:

- (i) frame the pedestrian entry to the major shopping centre (extension of The Corso) and contribute to the creation of a well-proportioned pedestrian environment between North Lakes Drive and the entry to the airconditioned section of major shopping centre development area;
- (ii) ensure that buildings fronting North Lakes Drive are built up to the road alignment to provide definition and enclosure to the street environment as well as clearly defining the access points to the precinct;
- (iii) encourage the creation of urban outdoor spaces, particularly those functioning as community focal points, which define the setbacks of the surrounding buildings, rather than the spaces being the left over areas after the buildings are designed;
- (iv) ensure that any medium or high rise buildings will include a podium base with the podium defining the edge of the street to create a desirable pedestrian environment;
- (v) ensure that buildings services are arranged and provided from the rear and fully screened from the street; and
- (vi) provide setbacks between buildings adjacent to the major pedestrian entry to the major shopping centre (The Corso extension) and the internal circulation lane which ensures that the internal circulation lane operates as a city laneway. Active frontage to the laneway will be permitted for a maximum distance of 25 metres either side of the centre line of the extension of The Corso. Within the above distance, the setback between the buildings measured perpendicular to the laneway must not exceed 18 metres in accommodating uses with an active frontage. Elsewhere buildings and other landscape/streetscape treatments must be used to narrow the setback between the buildings. Use which include activity frontage such as retailing, outdoor dining and the like will not be permitted in this laneway beyond 25 metres either side of the centre line of the extension of The Corso.

### 7.3 Site Coverage

#### *Objectives*

To encourage a high intensity of land uses within the precinct in order to establish vibrancy, vitality, viability and efficiency of the Town Centre Core as commercial and social centre for a new town and as a focus of the Shire's northern Major Employment Centre.

#### *Performance Indicators*

- .1 For all development within this precinct, the site coverage may be the total site area within this precinct provided that:
  - (i) any required pedestrian thoroughfares are accommodated within the site;
  - (ii) adequate pedestrian shelter is provided to a pedestrian thoroughfare at ground level;
  - (iii) adequate pedestrian facilities are provided at ground level;
  - (iv) open space is provided in accordance with the infrastructure agreement;
  - (v) sufficient on-site car parking is provided;
  - (vi) appropriate landscaping is provided in accordance with the provision of Clause 4.4 (d) – Landscaping / Townscaping;
  - (vii) a high level of accessibility for pedestrians to land use elements of this precinct is maintained; and
  - (viii) sufficient openness is maintained so as to achieve a high degree of visual and landscape amenity for pedestrians and land use elements.

### 7.4 Building Design

#### *Objectives*

To promote building designs which minimise undesirable visual impacts of bulk and scale.

To enhance public safety and convenience in the design of buildings, pathways, civic spaces and public car parking facilities, particularly given the intention of the precinct to function over extended hours.

To develop a high quality pedestrian environment with vital and attractive street frontages and attractive and useable key urban spaces.

#### *Performance Indicators*

- .1 For all development within this precinct, the building design is to:
  - (i) contain building forms which include:
    - continuous pedestrian shelter for the frontage to a pedestrian thoroughfare whether provided as a free-standing shelter or as part of a building frontage,

- continuous shelter over an outdoor food court, if proposed, with the cover to be designed in accordance with architectural style and materials of the major shopping centre,
  - open framed appearance possibly with layered façade treatments,
  - recessed windows in external walls,
  - where practical, outward orientation of some shop fronts of the major shopping centre to provide integration of the major shopping centre with other core and frame uses, and
  - horizontal and vertical variations in lengthy facades;
- (ii) ensure the primary façade of a building preferably will address a pedestrian thoroughfare whether or not the thoroughfare is located within a street. The façade of a building addressing a street which does not contain a pedestrian thoroughfare, must still present an attractive and variable façade in keeping with adjacent development;
  - (iii) contain building forms which complement and integrate with those of adjacent buildings in terms of their architecture, height and bulk;
  - (iv) allow building heights that will generally be low to medium rise with occasional high rise development;
  - (v) include orientation to reduce energy requirements;
  - (vi) be sensitive to issues of sunlight penetration to urban outdoor areas as well as the impact of seasonal wind and rain patterns;
  - (vii) create a visually interesting landmark befitting the function of a major Town Centre development;
  - (viii) ensure that buildings relate physically and functionally with each other in terms of their architecture, location of major entries and changes of level across the precinct;
  - (ix) be of a proportional scale to their surroundings;
  - (x) ensure that the design and siting of buildings at or near ground level contribute to a desirable pedestrian environment and streetscape character, in order to create safe, comfortable and pleasant public areas;
  - (xi) reflect a distinctive contemporary architectural style, with all buildings sharing a palette of compatible finishes, colours and details that will create a distinctive centre with a strong sense of place;
  - (xii) ensure that the built form provides attractive well lit facades with openings and other facade variations;
  - (xiii) ensure barrier free access for all pedestrians and for people with a disability; and
  - (xiv) ensure that each stage of development is designed as a complete architectural composition.

.2 In addition to .1, for the major built element of shopping centre development area, the building design is to:

- (i) achieve a high level of integration of building design and landscaping with external pedestrian thoroughfares, adjacent public spaces, the frontage buildings to North Lakes Drive and the bulky goods buildings;
- (ii) relate to the architectural character proposed for the North Lakes Drive frontage development and the buildings framing the main pedestrian entry to the major shopping centre development area;

- (iii) clearly identify entries to the shopping centre and allow shop fronts adjacent to entries;
- (iv) other than stated in (iii) above, limit the opportunity for external retail development on the façade of the shopping centre other than on the North Lakes Drive frontage and the extension of The Corso;
- (v) address the landscaped car parking areas and pedestrian paths;
- (vi) promote an openness and penetration of natural light to internal malls and other public areas; and
- (vii) incorporate a range of architectural treatments which provide relief elements to the visual effect of building mass.

.3 In addition to .1, for the bulky goods retail and related uses development area, the building designs are to:

- (i) achieve a high degree of physical and visual integration in building design, landscaping, pedestrian thoroughfares and car parking areas with the major shopping centre;
- (ii) encourage buildings which address the landscaped car parking areas and pedestrian paths, and incorporate horizontal and vertical variations in the facade and attractive facades and entries;
- (iii) encourage an appropriate quality, scale, form and legibility of architecture for buildings positioned along the Bruce Highway corridor in accordance with sections 5.2 and 6.2.3; and
- (iv) incorporate a range of architectural treatments and details which provide relief elements to the visual effect of building mass.

.4 In addition to .1, for the Mixed Use Development with an Active Frontage to North Lakes Drive and the buildings framing the main pedestrian entry to the major shopping centre development area, the building designs are to:

- (i) provide a strong urban design link with the intended or any existing development on the opposite side of North Lakes Drive;
- (ii) achieve a high level of integration of building design and landscaping with the North Lakes Drive streetscape environment, external pedestrian thoroughfares, adjacent public spaces, and the major shopping centre development area;
- (iii) relate strongly to the urban public spaces, by creating attractive, inviting, outward oriented built form;
- (iv) at the ground level only contain small scale incidental tenancies which have active frontages to North Lakes Drive;
- (v) not include articulated or broken frontages nor have internal service bays accessed from North Lakes Drive. Any service bays for these buildings must be accessed from the internal laneway;
- (vi) contain continuous active frontages. The description of these active frontages is to be developed in the Sector Plan, and full details are to be provided with the appropriate material change of use applications. The facades fronting North Lakes Drive and the internal plaza shall feature flexible frontages, such as bi-fold doors or swing doors. Manually operated sliding glass doors are not acceptable. If other forms of openings



- are proposed, they must not detract from the planning intentions for active frontage development;
  - (vii) focus on the intersection of The Corso and North Lakes Drive as Stage one and progressively develop the built form along North Lakes Drive; and
  - (viii) comply with the intent setout in section 6.4.
- .5 Appendix A shows a series of urban design images and a sketch which must guide the development of the Town Centre Core. The images and the sketch are indicative of desirable and undesirable characteristics. They are not intended to represent the final architectural design of development within the Town Centre Core.

## **7.5 Landscaping/Townscaping**

### *Objectives*

To ensure that townscape outcomes are of a high standard.

To ensure that landscaping provides visitors with a full range of visual clues for orientation, differentiation and direction to particular parts or activities within the precinct.

### *Performance Indicators*

- .1 For all development with this precinct, the townscape and landscape treatments are to:
- (i) provide adequate landscaped areas so as to create a landscape landmark and setting for the town centre core, provide passive recreation space and break up the scale of the buildings and car parking areas;
  - (ii) allow landscaping/townscaping in pedestrian thoroughfares, streets and public spaces so as to provide visual themes linking different activity areas within the town centre core;
  - (iii) in highly visible areas, such as those fronting pedestrian thoroughfares and streets in the town centre core, provide landscaping with a high degree of visual interest; and
  - (iv) include with the landscaping for surface car parking areas advanced shade trees planted at a rate not less than 1 tree per 6 vehicle spaces, and screening trees and shrubs planted so as to screen car parking areas from roads and other areas readily accessible to the public;
  - (v) provide a cohesive landscape framework and texture within which buildings and other functional elements of the Town Centre Core may be integrated;
  - (vi) reflect a comprehensive approach to landscaping as a means of linking elements in the Town Centre Core with the Town Centre Frame, by creating a distinctive overall image of coordinated and planned development;

- (vii) provide outdoor fittings and furniture together with opportunities for the strategic location of selective works of urban art within the precinct. Individual elements are to be of good quality, materials, design and achieve a strong design continuity with the architecture and landscape planting;
- (viii) frame key vistas to and from the Town Centre Core;
- (ix) mitigate the visual impact of lengthy building facades and building bulk;
- (x) ensure the appropriate pedestrian treatment is provided within the streetscape to match the level of development fronting the pedestrian environment; and
- (xi) ensure services such as electricity substations and transformers are fully screened and landscaped in a way which does not impact on the streetscape.

## **7.6 Car Parking, Service Areas and Loading Docks**

### *Objectives*

To provide attractive, safe and efficient car parking and building services and circulation systems within the Town Centre Core.

### *Performance Indicators*

- .1 For all development with this precinct, the car parking areas and building services are to:
  - (i) ensure that large expansive car parking areas are to effectively screen their visual impact upon pedestrian thoroughfares, the street frontage of the site and from other areas readily accessible to the public;
  - (ii) ensure that loading docks and service vehicle storage areas are screened to ameliorate such impacts as unsightly appearance, noise, headlight glare and unpleasant odours;
  - (iii) ensure that pedestrian and vehicle circulation is designed to reduce potential conflict points;
  - (iv) include appropriate lighting for after hours safety and security purposes; and
  - (v) provide a circulation system for transport vehicles such as taxis and buses which is designed to be convenient and reduce potential conflicts with pedestrians and other vehicles.
  
- .2 In addition to .1, for all development, the car parking areas are to:
  - (i) provide a strong landscape edge to all car parks, in particular where they abut North Lakes Drive;
  - (ii) provide adequate car parking in locations convenient and accessible to the main activity areas and the key entries to the major shopping centre;
  - (iii) provide opportunities for shared use of car parking;
  - (iv) provide adequate areas for staff carparking which will be specifically designated and are available for staff park all year round;

- (v) provide car parking areas that are responsive to the topography of the precinct;
- (vi) provide a safe, convenient, direct and attractive dedicated pedestrian, pathway between each pedestrian access of the major shopping centre and the landscaped carpark area. Car parking convenient to an pedestrian access would include spaces located no less than 70 metres from each pedestrian access;
- (vii) provide safe, convenient and attractive pedestrian access to public transport facilities, seating and shelter facilities;
- (viii) provide sufficient vehicle spaces, conveniently located, for emergency vehicles;
- (ix) provide sufficient vehicle spaces, conveniently located, for people with disabilities;
- (x) provide pedestrian route access through the carpark for people with disabilities;
- (xi) ensure that the car parking, service vehicle and access systems are capable of being used at a level of safety consistent with community expectations with emphasis on the safety of pedestrians;
- (xii) ensure that the car parking, service vehicle and access systems are capable of being used without causing unreasonable congestion on the external road system, and without causing unreasonable detriment to the local community through such effects as excessive on-street car parking, noise generation, or traffic intrusion into adjacent streets;
- (xiii) ensure for traffic-generating developments with access via signalised intersections or roundabouts the dedication of sufficient land as public roadway to ensure lawful priority of traffic movements with respect to the Traffic Act;
- (xiv) ensure driveways satisfy the basic traffic design criteria for all intersections with regard to driver behaviour, safety of pedestrians and vehicle characteristics;
- (xv) ensure entry and exit driveways provide for queues of vehicles so that queues do not disrupt traffic operations on the external streets;
- (xvi) restrict vehicles to low speeds in the vicinity of pedestrian activity achieved through use of appropriate road geometry or physical devices designed to limit speed;
- (xvii) provide sight distances, appropriate for the likely operating speeds in all areas of potential pedestrian/vehicle and vehicle/vehicle conflict;
- (xviii) ensure no reversing of vehicles, particularly service vehicles, shall occur in areas of high pedestrian activity;
- (xix) ensure on-site traffic congestion does not impact on the external traffic system;
- (xx) have minimum and maximum gradients of car parking areas determined on the basis of the type of surface, vehicle performance, user comfort, likely operating speeds, the manoeuvrability of shopping trolleys and prams and access for people with disabilities;
- (xxi) provide sufficient spaces for bicycles and motorcycles conveniently located for users;
- (xxii) provide sufficient bicycle lockers for staff to promote cycling to and from work;

- (xxiii) provide for servicing by commercial vehicles including the largest service vehicle likely to access the site;
  - (xxiv) be designed, constructed and maintained so that the pavements are structurally sufficient for the anticipated future traffic and landscaping needs; and
  - (xxv) have surface and underground stormwater drainage systems which satisfy the objectives and design philosophy as described in the Queensland Urban Drainage Manual.
- .3 In addition to .1, for all development, the building services are to:
- (i) ensure service areas are suitably located and designed; and
  - (ii) designed to comply with the development requirements in Section 5 of this precinct plan.
- .4 For all developments, applications must be supported with reports by a Registered Professional Engineer with experience in traffic engineering. Any traffic report will include:-
- (a) A review of the impact on public roads in the precinct for all stages of development of those public roads with traffic operating conditions based on an appropriate planning horizon-year (minimum 10 years);
  - (b) Estimates of traffic generations with appropriate directional distributions during selected peak design periods;
  - (c) Predictions of operating conditions with and without the proposed development, including recommendations on external roadworks upgrading requirements relevant to that development;
  - (d) An assessment of the access, circulation and parking arrangements proposed, particularly with respect to their compliance with the precinct and sector plan , including certification of compliance and justification for any specific non-compliance;
  - (e) A list of all of the assumptions made in the preparation of the report, and a list of the design parameters adopted in the technical analysis;
  - (f) Consideration of traffic operations, parking and any temporary works required during construction.
- .5 For all developments, the design of the car park including pavements and stormwater drainage must be undertaken by a Registered Professional Engineer of Queensland who must certify compliance with the applicable codes for these development works. The construction must also be inspected by the Registered Professional Engineer of Queensland who must certify that the construction has been undertaken in accordance with the approved car park design.

## **7.7 Signage, Colours and Materials**

### *Objectives*

To create a distinctive, vibrant, urban landscape appropriate to the Town Centre Core as the physical, social and commercial focus for the North Lakes community.

To provide a coordinated system of signs that make it easy for the public to orient themselves and identify key attractions and facilities, as well as contributing to the overall visual identity of the Town Centre Core Precinct.

### *Performance Indicators*

- .1 For all development with this precinct, the signage, colours and materials are to:
- (i) ensure the form, scale, materials and colour selection of signage are in keeping with the character of the town centre core and contribute to a vibrant, coordinated and distinctive urban landscape;
  - (ii) provide for roof-top and pylon signage only where it lends to the town centre core image of a high intensity activity centre;
  - (iii) provide for signage which allows for materials and colours related to potential end users' commercial requirements modified as necessary to ensure a degree of harmony between development sites and the overall visual character of the town centre core;
  - (iv) ensures external walls and surfaces of buildings in the town centre core are compatible with the overall visual character of the town centre core; and
  - (v) limit the use of highly reflective finishes;
  - (vi) ensure overall unity and harmony in major materials and colours in buildings and exterior signage throughout the precinct, while providing sufficient flexibility for corporate identification and marketing purposes;
  - (vii) ameliorate the visual impact of lengthy facades through combinations of materials and colours coordinated with building detail treatments and landscaping themes;
  - (viii) ensure that external graphics contributes to the visual character of the Town Centre Core and are designed as an integral element of the architectural design; and
  - (ix) not impact adversely on traffic safety.

In addition, the following measures should be achieved:-

- .2 Key gateway signage statements are to be provided along major road frontages to identify the major uses within the precinct. These gateway signs are to be attractive entry statements and of an appropriate scale and nature;
- .3 Architectural graphics may be designed as part of the architectural character of the major shopping centre;
- .4 Signs should be relative to the scale and proportion of buildings.

## **7.8 Environmental Management**

### *Objectives*

To identify strategies to manage key environmental risks through the design, construction and operational phases of any development within the precinct.

### *Performance Indicators*

- .1 For all development with this precinct, the environmental management is to:
- (i) ensure building services, plant rooms and equipment rooms located on roofs or externally around buildings are to be sited, designed and constructed in order to:
    - form an integral part of the overall development on an allotment,
    - generally not be visible from pedestrian thoroughfares, streets or other areas readily accessible to the public, and
    - protect the amenity of the area from noise, vibration, smells, fumes, electrical interference or otherwise; and
  - (ii) ensure that environmental management structures or control devices, such as gross pollutant traps, waste disposal bins, flues and the like, are to be designed so as not to detract from the overall visual character of the town centre or the immediate locality.

Further objectives are outlined in Section 8.0, Environmental Management Objectives of this precinct plan.

## **7.9 Transit Centre Pedestrian and Cyclist Access**

### *Objectives*

To provide convenient and safe pedestrian and cyclist access to public transit facilities located adjacent to the Town Centre Core Precinct.

### *Performance Indicators*

- .1 Design and siting measure 4.4(h) of the DCP relates to the provision of pedestrian connection from the possible future rail link to the town centre. As the rail link is no longer proposed to pass through the town centre, the interchange is proposed to relocate to a site in the Town Centre Frame at a location to be agreed with Queensland Transport. The public transport interchange and park and ride facility will not be located in the Town Centre Core.
- .2 Establish key pedestrian and cycle links which are integrated with the overall path and bikeway master planning for the DCP area.

## **7.10 Mixed Use Development**

### *Objectives*

To encourage a mix between compatible land uses within an appropriate and satisfactory standard of amenity for such development.

## *Performance Indicators*

- .1 For all mixed use development with this precinct, the :
- (i) residential components of mixed use developments are to be designed to offer a reasonable level of residential amenity, in terms of noise, vibration, fumes, glare, privacy, security and identity, by responding to non-residential development characteristics such as:
    - hours of operation,
    - location of loading bays, delivery docks, service areas, waste storage and disposal facilities, flues, airconditioners and the like, and
    - access arrangements; and
  - (ii) high density residential development is to be designed and sited generally in accordance with AMCORD and Queensland Residential Design Guidelines for such development where not otherwise stated in sector plans;
  - (iii) design is to allow for the achievement of a high standard development which can satisfy the needs of each of the different uses;
  - (iv) design is to enable the use of space to be readily changed over time (eg. dwelling units converted to offices and offices to dwelling units);
  - (v) design is to respond to views, overlooking, shadowing and scale relationships with adjacent developments;
  - (vi) design is to provide separate access and reserved parking for any residential development; and
  - (vii) design is to encourage active frontages at street and pedestrian levels.

## **8.0 Environmental Management Objectives**

Development of the Town Centre Core Precinct presents a range of environmental management issues that are required to be managed effectively throughout the, construction and post-construction phases of any development of the precinct. The design of any development must ensure that these issues can be managed during these phases of the development.

The objective will be to identify strategies for managing the key environmental risks occurring during both the construction and the post-construction phases of the development.

The following objectives and performance criteria provide a summary of the environmental issues that will, inter alia, need to be considered as part of the detailed planning and design for the major shopping centre development area and other related development within the precinct. These environmental requirements will need to be outlined in greater detail in the subsequent sector plan(s).

Any application for a development permit for operational works or material change of use must be accompanied by an Environmental Management Plan or plans which must demonstrate that these environmental issues have been fully addressed in the design process and that they can be managed for that development. Management systems must be implemented to ensure that the environment objectives and performance criteria continue to be met throughout the life of the development and the use of the precinct.

## **8.1 Construction Phase**

All development work consisting of building, drainage and operational works conducted in the precinct must address at least the following key issues:

### **8.1.1 Earthworks Management**

#### *Objective*

To adopt appropriate environmental management practices to avoid, or mitigate and manage, the potential adverse effects of earthworks and related land development activities.

#### *Performance Indicators*

- (i) Identify the extent of acceptable earthworks activities consistent with the protection of overall environmental values and prepare designs complying with these limitations (refer section 5.3);
- (ii) Erosion and Sediment Control - Implement appropriate soil erosion protection measures, and monitor and maintain;
- (iii) Bulk Earthworks -Manage the excavation and reshaping to establish the finished surface profile which seeks to minimise the environmental impact of the earthworks on the surrounding environment; and
- (iv) Comply with the Environmental Protection Act, Environmental Protection Policies and other relevant legislation from time to time.

### **8.1.2 Stormwater Management**

#### *Objectives*

- (i) To manage stormwater within and from the precinct so as not to cause a nuisance or annoyance to any person; and
- (ii) To permit discharge of stormwater from catchments upstream of the precinct based on development within the upstream catchment existing at the time of preparation of relevant stormwater management plan for the precinct.



### *Performance Indicators*

- (i) Implementation of management systems which seek to control the quality of surface water in compliance with:
  - (a) the Environmental Protection Act 1994 and the Environmental Protection Policy (Water) and other relevant legislation;
  - (b) the planning scheme, local laws, the Design Manual and policies except where Clause 2.6 of the Mango Hill Infrastructure Agreement applies;
  - (c) the Mango Hill Infrastructure Agreement;
  - (d) the performance objectives of the Freshwater and Saltwater Creek Catchment Management Plans; and
  - (e) the Stormwater Management Plans for Tributary C and Freshwater Creek.
- (ii) Control of volumes and flows from this precinct for all storm events so as not to cause nuisance or annoyance to any person;
- (iii) Adequate provision during construction to ensure that the landform is stabilised and erosion is controlled in accordance with an erosion and sediment control strategy endorsed by Council;
- (iv) Identify point sources of pollution in the catchment and minimise their impact until they can be eliminated.

#### 8.1.3 Acid Sulfate Soils

##### *Objective*

To protect environmental values from the effects of acid sulfate soils and attain acceptable surface water quality of the receiving environment.

##### *Performance Indicators*

- (i) Undertake investigations to determine if these soil types exist;
- (ii) Protect water within and downstream of the precinct, including Freshwater Creek, from adverse impacts of acid sulfate soils within the precinct; and
- (iii) Compliance with the Environmental Protection Policy (Water) and other relevant legislation from time to time.

#### 8.1.4 Air Quality

##### *Objective*

To minimise the effects of traffic and construction works on air quality.

##### *Performance Indicators*

- (i) Adopt effective air pollution mitigation measures to comply with the Environmental Protection Act, Environmental Protection Policy (Air) and other relevant legislation from time to time in relation to dust, smoke, fumes and gases; and

(ii) Construction activities are to comply with Council's Policy LP32.

#### 8.1.5 Acoustic Conditions

##### *Objective*

To minimise noise effects of traffic and construction activities on urban residential areas and limit undue impacts on other land use activities.

##### *Performance Indicator*

Implement effective noise mitigation measures to comply with the Environmental Protection Act, Environmental Protection Policy (Noise) and other relevant legislation from time to time.

#### 8.1.6 Dirt/Mud on Public Roads

##### *Objective*

To minimise site-generated dirt / mud on public roads, particularly after rain periods.

##### *Performance Indicators*

Implement management and maintenance actions in accordance with Best Management Practice.

#### 8.1.7 Flora and Fauna

##### *Objective*

To manage the impact of development on rare, vulnerable, endangered, or presumed extinct flora or fauna as a result of construction works activities in the precinct.

##### *Performance Indicator*

Implement investigations to determine if any rare, vulnerable, endangered or presumed extinct fauna or flora exists in the precinct and implement management strategies to mitigate harm to such species.

## **8.2 Post-Construction Phase**

The post-construction phase for any development applies for the whole of the period of the use of that development. The following key issues must be addressed throughout the period of use:

### 8.2.1 Stormwater Management

#### *Objectives*

- (i) To manage stormwater within and from the precinct so as not to cause a nuisance or annoyance to any person;
- (ii) To ensure that stormwater infrastructure constructed within the catchment of Freshwater Creek and the Tributary C catchment of Saltwater Creek is designed to meet agreed discharge standards for specific stormwater pollutants;
- (iii) To maintain peak flow at agreed levels as identified in the approved stormwater management plans;
- (iv) To permit discharge of stormwater from upstream catchments through the precinct in accordance with the MHIA and the relevant Stormwater Management Plan;
- (v) To identify potential pollutants from uses conducted in this precinct and implemented strategies to manage any potential environmental harm;
- (vi) To ensure that stormwater discharge from the precinct is an acceptable quality particularly in relation to oils, grits, organic litter, inorganic litter, hydrocarbons, nitrogen, and phosphorus;

#### *Performance Indicators*

- (i) Implementation of management systems which seek to control the quality of surface water in compliance with:
  - (a) the Environmental Protection Act 1994 and the Environmental Protection Policy (Water) and other relevant legislation from time to time;
  - (b) the planning scheme, local laws, the Design Manual and policies except where Clause 2.6 of the Mango Hill Infrastructure Agreement applies;
  - (c) the Mango Hill Infrastructure Agreement;
  - (d) the performance objectives of the Freshwater and Saltwater Creek Catchment Management Plan; and
  - (e) the Stormwater Management Plans for Tributary C and Freshwater Creek;
- (ii) Control of volumes and flows from the precinct for all storm events so as not to cause nuisance or annoyance to any person;
- (iii) Submit Environmental Management Plans with all applications for development permits for material change of use which identify the likely pollutants associated with that use and the strategies proposed to manage any potential environmental harm associated with that use. The Environmental Management Plans must address oils, grits, organic litter, inorganic litter, hydrocarbons, nitrogen, and phosphorus, in particular.

### 8.2.2 Lighting

#### *Objective*

To ensure that lighting associated with development does not create a nuisance, whilst designing to the appropriate levels of safety and creating a distinctive night-time character for major vehicular and pedestrian approaches and special places within the precinct.

#### *Performance Indicator*

Implement design elements and buffer treatments to control the obtrusive effects of outdoor lighting where it is likely to adversely affect residential amenity and traffic safety.

### 8.2.3 Noise

#### *Objective*

To ensure that noise generated does not create a nuisance.

#### *Performance Indicators*

- (i) Noise generated from development is reasonable for the type of use;
- (ii) Buildings used for purposes which require low noise intrusion, including residential uses, must be designed to adequately ameliorate noise from external sources within and external to the precinct.

### 8.2.4 Energy Efficiency

#### *Objectives*

To encourage energy efficiency in order to minimise greenhouse gas generation.

#### *Performance Indicators*

- (i) Implement design elements in buildings including overall building design, building orientation, building materials and mechanical and electrical plant to improve energy efficiency;
- (ii) Implement building energy management systems that contribute to overall building energy efficiency.

## **9.0 Infrastructure Obligations of the Principal Developer**

### **9.1 Overview of Infrastructure Obligations**

The infrastructure required to be provided by the principal developer to serve the precinct includes internal and external infrastructure to be provided in accordance with the MHIA and infrastructure agreements made with the State Government in accordance with the DCP. Initial infrastructure works have been completed as part of the first stages of development of the Lakeside Residential Precinct to the north of the town centre. The infrastructure obligations relevant to the Town Centre Core Precinct are summarised as follows:

#### **9.1.1 Roads**

Unless otherwise agreed with Council and the Department of Main Roads in the case of State Controlled Roads, construct the following roads including carriageways, stormwater drainage, verges, bus set-downs, footpaths, bikeways, landscaping, traffic control devices and streetlighting. Any reference to construction in this section is a reference to construction approved by Council and the Department of Main Roads in the case of State Controlled Roads in accordance with the rezoning conditions, the MHIA and where applicable the Mango Hill Infrastructure Agreement - Main Roads (MHIA - MR).

- .1 All internal roads;
- .2 Bridge widening and signalisation of Bruce Highway exit ramp and service road and Anzac Avenue intersection in accordance with the MHIA – MR;
- .3 A north to east highway sliplane consolidated to signals, linemarking to third lane eastbound and second right turn lane west to south, including onramp extension at Node AF in accordance with the MHIA – MR;
- .4 Three lanes eastbound and three lanes westbound along Anzac Avenue between Node AF and Node H (refer Figure6) in accordance with the MHIA – MR;
- .5 Signalisation of the intersection at Node H in accordance with the MHIA – MR;
- .6 A bridge over the Bruce Highway at Node AB in accordance with the MHIA-MR and the MHIA;
- .7 Two lane combined exit ramp and service road from Node AC to Node AF in accordance with the MHIA – MR;
- .8 Two lane single carriageway sub arterial or trunk collector from Node AE to Node T in accordance with the MHIA;

- .9 Signalisation of the intersection at Node T in accordance with the MHIA;
- .10 A four-lane arterial road (North Lakes Drive) between Node I and Node T in accordance with the MHIA. The initial stage of operation will be as a two-lane road between Node I and Node T.

Kerbside parking in North Lakes Drive is to be restricted on the shopping centre side of North Lakes Drive, across the frontage of the shopping centre, to allow two-lane westbound traffic operation, if and when the calculated “degree of saturation” of the intersection of North Lakes Drive and The Corso exceeds 85% based on actual traffic counts, at peak periods within a typical shopping week, or when observation indicates that queues on the approaches to the intersection are failing to clear in a single traffic signal cycle more than three times in one hour during such periods and which cannot be alleviated by localised intersection or traffic signal improvements. Bus stops will continue to be provided along North Lakes Drive.

Unless otherwise agreed by Queensland Transport and Council, bus pick-up and set-down sufficient for two buses on the southern side of North Lakes Drive are to be retained at locations approved by Queensland Transport and Council;

- .11 A section of arterial road (North Lakes Drive) between Nodes H and I having sufficient auxiliary lanes to accommodate the capacity and safety requirements of that road and Intersections H and I;
- .12 Signalisation of Nodes H, I and T as well as the intersection of North Lakes Drive with The Corso and all vehicular accesses to the Town Centre Core unless otherwise approved by Council. Subject to the approval of Council, some intersections may be staged as unsignalised intersections or roundabouts;
13. Pathways and bikeways will be provided in accordance with the MHIA.

The construction of the above infrastructure is to be undertaken in accordance with the staging and timing outlined in the MHIA and MHIA - MR. Where not included in either the MHIA or MHIA-MR, the above infrastructure is to be constructed immediately to the final standard unless otherwise approved by Council and the Department of Main Roads in the case of State Controlled Roads.

#### 9.1.2 Water Supply

- .1 Construct reticulation systems along all internal roads to service all properties in the precinct and all planned uses adjacent to the precinct adjacent to these roads;

- .2 Construct a water supply network within the DCP area, including those sections of the mains shown on Figure 8, necessary to service the anticipated demand in the precinct; and
- .3 Provide water headworks contribution in accordance with the MHIA.

#### 9.1.3 Sewerage

Construct all internal sewerage systems to service the properties in the precinct and make contributions towards sewerage headworks, and unless otherwise agreed with Council:

- .1 Construct the trunk gravity main TM7 from the existing Council sewerage infrastructure to connect with each lot in the precinct;
- .2 Provide sewerage headworks contributions in accordance with the Mango Hill Infrastructure Agreement.

#### 9.1.4 Stormwater

- .1 Construct stormwater management works progressively in accordance with the Stormwater Management Plan(s) for Freshwater Creek and Tributary C as approved by Council; and
- .2 Construct stormwater drainage systems to roads and lots as required by the MHIA and Council's Design Manual.

#### 9.1.5 Park

No park is to be provided in the precinct, however the principal developer is to provide land for park being 8% of the area of the precinct and Park Enhancement Works in accordance with the MHIA.

#### 9.1.6 Electricity Supply and Lighting

- .1 Provide underground electricity distribution to all properties within the precinct to Energex or another appropriate supplier of electricity and Council standards.
- .2 Provide public lighting to all roads, streets, and other public areas and facilities within the precinct, on North Lakes Drive between Nodes H and I and on the exit ramp and service road when constructed to the relevant Australian Standards and in accordance with the requirements of Energex or alternate supplier of electricity, Council and in the case of State Controlled Roads the Department of Main Roads.
- .3 Provide high voltage electricity services to service the precinct to Energex or another appropriate supplier of electricity and Council standards.

- .4 Provide all electricity services and distribution systems on North Lakes Drive and the road connecting Nodes AE to T as underground services, including conduits along all road verges within the precinct and adjacent roads to meet the anticipated demands of the DCP area.

#### 9.1.7 Communications

- .1 Arrange for the installation of underground communications services for all lots in the precinct.
- .2 Arrange for the provision of underground conduits along all road verges within the Precinct and adjacent roads to meet the anticipated demands of the DCP area.

## 9.2 State Government Infrastructure Requirements

- 9.2.1 The items of State Government infrastructure to be provided by the principal developer in conjunction with the development of the precinct includes the provisions of works to State Controlled Roads, the provision of land and a contribution towards the cost of design and construction of a public transport interchange within the Town Centre Frame, and the provision of land for park and ride facilities within the Town Centre Frame. These are to be provided in accordance with agreements with the State Government.
- 9.2.2 A local bus service is being provided to service the precinct in accordance with the infrastructure agreement with Queensland Transport.
- 9.2.3 The principal developer must contribute towards the cost of providing kerbside infrastructure associated with the public transport system. Such contribution is to be in accordance with the agreement with the State Government.

## 9.3 Infrastructure Affected by Precinct Development

- 9.3.1 The development of this precinct may place demands on the following infrastructure:
  - .1 Roads external to the DCP area and accessing the precinct;
  - .2 Water supply infrastructure;
  - .3 Sewerage infrastructure;
  - .4 Stormwater;
  - .5 Parks;
  - .6 Community facilities;
  - .7 Electricity and gas supply;
  - .8 Communications systems; and
  - .9 State Government Infrastructure.
- 9.3.2 The infrastructure described in clauses 9.1 and 9.2, together with the obligations of the principal developer under the MHIA, is required to mitigate the adverse affects on such infrastructure.



## **9.4 How the Required Infrastructure Relates to the Infrastructure Agreements**

- 9.4.1 The MHIA describes the infrastructure which must be provided by the principal developer as part of its obligations to provide infrastructure, as envisaged by Chapter 12 of the DCP. The works described in clause 9.1 are the principal developer's obligations under the rezoning conditions and the MHIA.
- 9.4.2 Infrastructure Agreements have been entered into by the principal developer with the Department of Main Roads and Queensland Transport. Any infrastructure requirements of those State Government Departments relating to this precinct will be provided in accordance with the existing or amended agreements.

## **9.5 Preliminary Program for Infrastructure Provision**

- 9.5.1 The principal developer will provide all the infrastructure referred to in clause 9.1 at times to satisfy the requirements of the MHIA which provides for the infrastructure to be constructed to meet the rate of development in the precinct. Initial infrastructure works are estimated to be constructed by October 2001. The completion of the roadworks where approved by Council will be as described in clause 9.1.1 and the MHIA.
- 9.5.2 The local bus service is being provided in accordance with clause 9.2.2.
- 9.5.3 Except as described elsewhere in this clause, no other works depend on the provision of this infrastructure.
- 9.5.4 Council is to use its best endeavours, including its powers of resumption if lawful, to obtain all necessary rights to permit the construction of water and sewerage infrastructure if such infrastructure is constructed on land external to the DCP area over which Council does not have such rights.

## **9.6 Estimated Water and Sewerage Demands**

- 9.6.1 As required by the MHIA, the principal developer states as follows:
- .1 For the purpose of assessing water supply capacity, the estimated number of Equivalent Tenements for this precinct is 568.8 ET;
  - .2 For the purpose of assessing sewerage capacity, the estimated number of Equivalent Persons for this precinct is 853.2 EP.