

MANGO HILL INFRASTRUCTURE DEVELOPMENT CONTROL PLAN

Sector Plan No. 022-2000

for

**Town Centre Frame “E” Sector Two
Lakefield Drive West**

Town Centre Frame “E” Precinct

North Lakes Development

Approved 2 June 2015 (High Density)

Contents

1.0	Introduction and Statutory Context	4
2.0	Land Use Rights	5
3.0	Development Requirements & Guidelines	6
3.1	INTRODUCTION.....	6
3.2	DEVELOPMENT CONCEPT.....	6
3.3	DEVELOPMENT REQUIREMENTS	7
3.4	DESIGN & SITING MEASURES.....	8
3.5	SPECIFIC MEDIUM TO HIGH DENSITY RESIDENTIAL DESIGN AND SITING GUIDLINES.....	15
3.6	LANDSCAPING / TOWNSCAPING	21
3.7	ACCESS.....	24
3.8	SIGNAGE	25
4.0	Environmental Management	27
5.0	Subdivision Requirements	27
6.0	Infrastructure	28
6.1	INFRASTRUCTURE TO BE PROVIDED.....	28
6.2	INFRASTRUCTURE AFFECTED OR REQUIRED BY DEVELOPMENT OF THE SECTOR	32
6.3	HOW THE REQUIRED INFRASTRUCTURE RELATES TO THE INFRASTRUCTURE AGREEMENTS.....	32
7.0	Detailed Infrastructure Program	33
7.1	ESTIMATED DATE FOR PROVISION OF INFRASTRUCTURE	33
7.2	INTENDED PROVIDER.....	33
7.3	OTHER WORKS DEPENDENT ON INFRASTRUCTURE PROVISION	33
7.4	OTHER RELEVANT INFORMATION	33

Contents

FIGURES:

Figure		Reference	Date
1.	Planning Context	TCFE2sectorfig1	October 2009
2.	Cadastral Boundaries	TCFE2sectorfig2	February 2010
3.	Precinct Plan Map	TCFE2 sectorfig3	September 2010
4.	Sector Plan Map	TCFE2sectorfig4	September 2010
5.	Sector Landscape Plan	TCFE2sectorfig5	September 2010
6.	Indicative Plan of Subdivision	TCFE2sectorfig6	September 2010
7.	Road Layout	TCFE2sectorfig7	October 2009
8.	Water Supply Headworks	TCFE2sectorfig8	October 2009
9.	Sewerage Headworks	TCFE2sectorfig9	October 2009

APPENDICES:

- A. Final Specification of Land Use for the Sector
- B. Streetscape / Character Images
- C. Plant List
- D. Bicycle Parking Requirements
- E. Town Centre Signage Guidelines
- F. Proposed Metes and Bounds Description

1.0 Introduction and Statutory Context

- 1.1 The Mango Hill Infrastructure Development Control Plan (DCP) provides for the creation of a Sector within a Precinct and the preparation by the Principal Developer of a Sector Plan in accordance with the relevant provisions of the DCP.
- 1.2 This document constitutes the Sector Plan for the **Town Centre Frame “E” Sector Two – Lakefield Drive West** (Sector Plan).
- 1.3 The location of the Sector within the DCP area is shown on *Figure 1 – Planning Context*. As illustrated on *Figure 2 – Cadastral Boundaries*, the Sector is bounded by:
- (i) Endeavour Boulevard to the north;
 - (ii) North Lakes Drive to the south.
 - (iii) Lakefield Drive to the east; and
 - (iv) The balance of the Town Centre to the west;
- 1.4 The location of the Sector within the Precinct Plan area is shown on *Figure 3 – Precinct Plan Map*.
- 1.5 This Sector Plan is the code of development for the land in the Sector. In the event that this Sector Plan does not provide development requirements, then the Planning Scheme provisions relevant to the particular form of development apply.
- 1.6 The DCP, approved Precinct Plans and approved Sector Plans are to be read in conjunction with the planning scheme and Council’s local laws, policies and codes and to the extent the DCP, Precinct Plans and Sector Plans do not modify provisions of the Council’s planning scheme, local laws, policies and codes they will apply to the DCP area.
- 1.7 To the extent the provision of Council’s planning scheme, local laws, policies or codes are modified by the DCP, Precinct Plans or Sector Plans, then the provisions of the DCP, the Precinct Plans or Sector Plans will prevail.
- 1.8 Development in the Sector must comply with the provisions of the Sector Plan.

2.0 Land Use Rights

The final specification of land use rights for land in this Sector is contained in *Appendix A – Final Specification of Land Use for the Sector*.

3.0 Development Requirements & Guidelines

3.1 INTRODUCTION

Clause 2.4.2 of the DCP states that a Sector Plan must specify the requirements for development and car parking and the guidelines for design and siting, landscaping and signage for land in the Sector.

3.2 DEVELOPMENT CONCEPT

The Sector is situated along the southern part of Lakefield Drive; it is located south of the Southern Residential Precinct (Precinct Plan 004), to the West of The Corso West Precinct (020), with North Lakes Drive and the Balance of the Town Centre Frame to the south. Development in the Sector should create an area of support facilities and services to the town centre core in medium density commercial or mixed use premises with higher levels of activity than surrounding areas but less than the core. Development will be predominantly of mixed use character with areas of medium to high density residential forms of development. The development concept for the northern part of the Sector is for generally medium to high density residential and low-rise commercial development with land uses that support, complement and minimise impacts on the adjacent residential environment. The development concept for the southern part of the Sector particularly that fronting North Lakes Drive and the southern end of Lakefield Drive is that of a more urbanised character and may include, low-rise commercial land uses that establish active street frontages through the use of clearly defined pedestrian doorways, glazing treatments and pedestrian awnings built to the property boundary, which complement the medium to high density nature to the north and the higher density nature of the eastern precincts and the Town Centre Core.

The levels of activity and density of development within this Sector are expected to be similar to that of the Town Centre Core and eastern Town Centre Frame areas and higher than the residential areas north of Lake Eden. The function and character of the sector is to be reinforced through building design and architectural features that typify commercial, mixed use or higher density residential forms to achieve a mosaic pattern across the town centre frame but reflecting compatible building height, scale and materials. The through-route nature of both Endeavour Boulevard and North Lakes Drive is to be emphasised through the use of open landscaping along the verges allowing visual exposure of the buildings from the road and by limiting pedestrian crossings to intersections. Lakefield Drive is to continue to be a visually prominent part of the Town Centre with built form and architectural treatments that are consistent and compliment the northern medium to high density residential and low-rise commercial component of the Town Centre Frame but with lower levels of activity associated with the Town Centre Core.

3.2.1 Specific Land Use and Development Densities

The residential component is to be developed as a high quality, mixed community forming an integral part of the North Lakes development. Lots 72 and 73 will retain the maximum development densities afforded to them by the Mango Hill Infrastructure Development Control Plan (where located above ground level). Lot 74 is afforded a maximum development density of 135 dwellings per hectare for high density residential uses. Mixed

uses consistent with the Town Centre Frame by nature and streetscape are also permitted on Lot 74 at ground level and to the site frontage. Basement, undercroft or lower level car parking on Lot 74 is to be screened from the street by built form or a minimum 3 metres of landscaping. Hardstand car park areas are to contain shade trees at a rate of 1 tree per 6 car parking spaces.

Development in the Sector should:

- (i) provide a mixed and flexible environment to meet future employment and consumer needs;
- (ii) respond appropriately to community expectations of the facilities and services likely to be found in the town centre;
- (iii) ensure connectivity, integration and strong functional and architectural relationships with the adjacent residential development and development within the balance of the Town Centre;
- (iv) ensure that car parking areas in the Sector are enhanced by landscaped vehicular and pedestrian links and that potential conflict points between vehicular and pedestrian movements are minimised through considerate design;
- (v) continue surrounding landscape/streetscape themes along Endeavour Boulevard to reinforce the through-route nature of this corridor;
- (vi) where possible, provide opportunities for shared carparking and service areas between different developments and uses;
- (vii) follow good environmental practice which protects the amenity of the area;
- (viii) ensure that building design defines main pedestrian thoroughfares and provides an interesting and inviting panorama for both pedestrian and vehicular traffic.
- (ix) ensure that the main street environment of North Lakes Drive is maintained and continued along the southern end of Lakefield Drive through various methods including built form which defines street edges;
- (x) At the intersections of Endeavour Boulevard and Lakefield Drive, and North Lakes Drive and Lakefield Drive corner treatments including design and height elements should create focal points for the sector.

Figure 4 – Sector Plan Map is one illustration of how these requirements may be satisfied.

3.3 DEVELOPMENT REQUIREMENTS

3.3.1 In respect of every development in this Sector the person who undertakes that development or uses the site must, unless already provided:

- (i) construct a full width pedestrian pavement to Council's specification for the full length of those road frontages required by Council to the development site;
- (ii) construct concrete kerb and channeling to the Council's specification for the full length of each road frontage to the development site;
- (iii) construct reinforced concrete industrial crossings to the Council's specification from the kerb and channeling to the property alignment of the development site at approved locations where vehicular access to the development site is required;
- (iv) provide drainage work specified by the Council as necessary in connection with the

- works set out above including debris traps where drainage discharges directly or indirectly to the lake and/or waterway system;
- (v) provide reticulated sewerage and water supply adequate for the purpose of the development by connection to the Council's services in accordance with the requirements of the Council; and
 - (vi) bear the cost of any alteration necessary to public utility mains, services or installations involved in the construction of the works referred to in this clause.

Any works within the road reserve must be undertaken in accordance with the North Lakes Town Centre design manual.

3.3.2 In respect of every development in this Sector the person who undertakes that development or uses the site must:

- (i) have all landscaping designed by a qualified landscape architect;
- (ii) not impose a load on any public utility including the disposal of wastes, greater than that which is contemplated by the provisions of this Sector Plan;
- (iii) not cause interference with the amenity of the area by the operation of machinery or electrical equipment, or from light, noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, grit, oil, dust, waste water, waste products, electrical interference or otherwise; and
- (iv) prevent continuous or frequently occurring noise levels which when measured and assessed in accordance with the Environmental Protection Act 1994, at a boundary of the allotment:
 - (a) exceed those prescribed by the Environmental Protection Act 1994; or
 - (b) cause a nuisance.

3.3.3 Requirements for Staging of Development

- (i) On completion of work in any stage, the remainder of the lot must be cleared of all rubble, debris and construction material and equipment and landscaped to the satisfaction of Council so as to be capable of being maintained.
- (ii) Each stage must form a coherent development and any future development sites must be provided with temporary landscaping and community facilities, so the presentation of the lot to the street does not give a temporary or partially completed appearance.

3.4 DESIGN & SITING MEASURES

3.4.1 Building Setbacks

Building setbacks are to:

- (i) setbacks for North Lakes and Lakefield Drive are to be complementary to surrounding development and therefore, buildings on the corner of North Lakes Drive and Lakefield Drive, and Lakefield Drive and Endeavour Boulevard are to be developed up to the road frontages shown on *Sector Plan Map – Figure 4*;

- (ii) setbacks on the balance of Lakefield Drive are to be generally developed up to the road frontages shown on *Sector Plan Map – Figure 4*, but are to be no less than three (3) metres from the road frontage;
- (iii) setbacks to Endeavour Boulevard are to be generally no less than seventeen (17) metres from the road alignment, unless they are a maximum of two (2) storeys and provide a contemporary architectural style that maximises visibility and activity from the road reserve;
- (iv) be consistent with surrounding development to provide continuity in streetscape treatment;
- (v) generally be developed up to any pedestrian thoroughfares (not being a road); and
- (vi) setbacks to the aged care facility to the west are to be an average of 9m to the wall of the facade, and incorporate stepping in the design to address privacy and reduce shadow impacts where necessary (these setbacks apply where development is greater than two (2) storeys in height). Mature landscape planting shall be appropriately located to address amenity impacts where a building greater than two (2) storeys in height encroaches within the 9m average setback distance. .

3.4.2 Site Coverage

Site coverage and associated plot ratio are not restricted for non-residential development provided the following elements are appropriately addressed by the design of the development:

- (i) architectural articulation and an appropriate level or design;
- (ii) buildings include well-presented frontages that provide a recognisable entrance;
- (iii) development is in context with, and visually compatible with the appearance of any neighbouring buildings;
- (iv) pedestrian facilities including pedestrian shelters are provided at ground level;
- (v) sufficient on-site car parking is provided; and
- (vi) lots with residential development only shall have a maximum site coverage of 50% in order to increase landscaping areas..

Any non-residential development that can not satisfy these elements may have maximum site coverage of 50%.

3.4.3 Building Design

Buildings proposed in the Sector must:

- (i) be generally in accordance with the measures referred to in section 5.4 of the DCP and in relation to Part 7, Special Requirements in Relation to Particular Development of the Planning Scheme;
- (ii) be a minimum of two storeys along Lakefield Drive;
- (iii) be in context with and visually compatible with the scale and bulk of surrounding development and streetscape patterns, including the residential development to the north of the Sector;
- (iv) not exceed the height of buildings on adjacent sites by more than four (4) storeys

- for those portions of the buildings adjacent to and visible from the street or pedestrian areas;
- (v) provide continual weather protection in the form of awnings to a minimum depth of 3.7metres along North Lakes Drive and the southern end of Lakefield Drive. Extending this building frontage treatment along the northern end of Lakefield Drive is encouraged.
 - (vi) variations in the materials and finishes of these awnings are acceptable, provided they are set at a compatible height and complement adjoining development (refer *Appendix B – Streetscape / Character*: Image 15). Council may consider on its merits, the occasional use of colonnades to provide pedestrian weather protection if the colonnade is lightweight in appearance and conducive to active frontages uses;
 - (vii) where awnings are used, variations in the materials and finishes of the awnings are acceptable, provided they are set at a compatible height and complement adjoining development (refer *Appendix B – Streetscape / Character*: Images 13, 14 and 15);
 - (viii) be sensitive to the issues of sunlight penetration to urban outdoor areas;
 - (ix) where building heights exceed three (3) storeys, assessment of the need to setback the taller components of any building must be undertaken. The assessment must address at least the impact of bulk and form on the streetscape and pedestrian environments in the immediate vicinity, as well as the impact of overshadowing;
 - (x) be of an open framed, light-weight appearance possibly including layered façade treatments;
 - (xi) include large windows and/or balconies at upper levels which provide for viewing of external areas;
 - (xii) create an attractive presentation to all road frontages and external pedestrian thoroughfares through the use of clearly articulated and well proportioned access doorways, landscaping and generally no more than two (2) rows of carparking and a centre manoeuvring aisle in front of the building. Where openings are not provided, glazing must be maximised at ground floor level;
 - (xiii) present an active building frontage incorporating pedestrian awnings, identifiable pedestrian access doorways and glazing treatments along North Lakes Drive and the southern end of Lakefield Drive. Continuation of this built form theme along the northern portion of Lakefield Drive and Endeavour Boulevard is encouraged.
 - (xiv) orientate main entrances to address the street frontage or outdoor forecourt and provide well-lit pedestrian access and vehicular access to the street environment;
 - (xv) be designed with attractive rooflines that are compatible with residential form and pitch, complement the overall building design and including varying elements for visual interest;
 - (xvi) include articulation and variation of the façade to minimise building bulk and minimise the visual impact of long blank walls;
 - (xvii) contribute to a desirable pedestrian environment and streetscape character in order to create safe, comfortable and pleasant public areas;
 - (xviii) allow sensitive environmental responses to slope, access and integration requirements;
 - (xix) complement the overall character of the Sector and the DCP area generally, whilst allowing corporate identity for tenants;
 - (xx) incorporate materials and colours that are not highly reflective to avoid

- unreasonable glare nuisance to surrounding developments; and
- (xxi) for all non-residential buildings greater than 2500m² within this Sector, an Energy Efficiency Report must be submitted with the application for the Development Permit for Building Works. This report is to be certified by a suitably qualified person that the building generally complies with the energy efficiency guidelines in this Sector Plan.

3.4.3.1 Building Design Guidelines

Appendix B – Streetscape / Character Images provides photographs which are indicative of some desirable and undesirable characteristics. They are not intended to represent the final architectural or landscaping design of development within this Sector.

Building design within the Sector is encouraged to:

- (i) be of medium rise, with a minimum height of two (2) storeys and a maximum of six (6) storeys of residential component within the buildings;
- (ii) include innovative contemporary building design derivative from Queensland building traditions, and designed to suit the climate, light and local culture;
- (iii) be designed to be multi-purpose and easily adapted for future changes;
- (iv) ensure that buildings relate physically and functionally with each other in terms of their architecture, location of major entries and any changes of level across the Sector; and
- (v) ensure that the design and location of any buildings or structures within the Sector take account of:
 - (a) topography and the preference to minimise site earthworks;
 - (b) drainage;
 - (c) soil conditions;
 - (d) services;
 - (e) orientation towards focal points and aspect to achieve energy savings;
 - (f) microclimate considerations;
 - (g) pedestrian movement patterns;
 - (h) vehicular access to avoid or minimise the conflict points with pedestrians;
 - (i) streetscape and landscape design;
 - (j) adjoining developments in terms of design;
 - (k) minimising the effect of overshadowing on pedestrian areas;
 - (l) the functioning of Endeavour Boulevard and the secondary access roads;
 - (m) landscape screening of retaining walls and other elements with low visual amenity; and
 - (n) views and vistas to prominent built and topographic features.

3.4.3.2 Material, Finish and Colour Guidelines

Building design within the Sector is encouraged to:

- (i) reflect a distinctive contemporary architectural style, with buildings sharing a palette of compatible finishes, colours and details that contribute to a strong sense of place;
- (ii) use materials and colours relating to those in the local environment, including the

use of key character elements, for example, block stone work may be incorporated into the base of buildings to relate to the stone detailing within North Lakes. Other key character elements may include the use of timber detailing, earthy tones, heavy plinth bases and feature species planting;

- (iii) include the integrated use of elements such as timber, glass and tin;
- (iv) include corrugated pre-finished and coloured metal sheets for major roofing materials. The application of these materials must minimise any reflective nuisance to surrounding development;
- (v) incorporate brighter colour accents for minor detail elements such as window and door frames, columns, handrails, ornamental features and signage details; and
- (vi) incorporate materials that:
 - (a) are robust, durable and resistant to vandalism;
 - (b) present a suitable finish to pedestrian areas;
 - (c) incorporate walls which present as solid and permanent elements;
 - (d) are of a high quality, clean and free of defects;
 - (e) are low maintenance, resulting in minimum use of detergents for cleaning; and
 - (f) assist with thermal performance and energy efficiencies, where practicable.

3.4.3.3 Design for Climate and Energy Efficiency Guidelines

Building design within the Sector is encouraged to:

- (i) include the use of external shade structures, ventilated spaces, overhangs and screens to allow enjoyment of the outdoors while also providing relief from the sun, wind and rain;
- (ii) maximise ventilation by taking advantage of prevailing breezes and the use of adequate and effective insulation materials in roof cavities and wall spaces of buildings in order to minimise demands for energy required for air-conditioning;
- (iii) articulate and shade external walls, and particularly the longer external walls, with eaves, overhangs, sills or other treatments to reduce the exposure to direct sunlight, heat and glare, while windows in external walls should be recessed or shaded wherever possible to achieve energy savings;
- (iv) restrict the use of highly reflective materials on external walls or windows as a means of minimising energy requirements and excessive sunlight, glare and heat into adjoining developments;
- (v) incorporate the use of gas or solar hot water heaters and solar energy devices;
- (vi) implement energy efficient management systems for the building;
- (vii) where possible, use building materials which impose energy efficiency;
- (viii) where possible, orientate buildings to respond to westerly sun exposure, northerly exposure and solar access in the winter, potential impacts of cold westerly winds in winter and limited cooling breezes from the south in summer;
- (ix) design and landscape car parking areas to reduce the impacts of reflected heat and glare into adjacent buildings, and to reduce the effects of heat storage during summer months;
- (x) provide ventilated roof cavities by taking advantage of prevailing breezes; and
- (xi) where possible, orientate buildings to minimize westerly sun exposure and

maximize northerly exposure and solar access in the winter.

3.4.3.4 Water Efficiency Guidelines

Development within the Sector is encouraged to:

- (i) collect and store roof water for toilet flushing and landscape use; and
- (ii) minimise water consumption through incorporation of flow restrictors, AAA rated water efficient taps and shower roses and dual flush (3/6 litre) cisterns.

3.4.3.5 Car Parking

- (i) Car parking within the sector is to be provided at the minimum rate of 1.5 spaces per dwelling unit of which at least one space is to be fully enclosed, plus 0.5 spaces per dwelling unit for visitor parking.
- (ii) The car parking rate may be modified in accordance with Section 13.3 of the Mango Hill Infrastructure Development Control Plan
- (iii) Carparking will be limited to the generalised carparking areas in accordance with the Sector Plan; and must be in accordance with the Planning Scheme requirements current at the time of lodgement of the material change of use application, the DCP and the Council's Design Manual. For the purpose of this calculation this Sector is considered to be included in a Local Business Zone. Should the Planning Scheme (approved by the Governor in Council on 7 May 1998) be amended or replaced the car parking requirements are to be calculated on a similar basis under the new document;
- (iv) As part of the total car parking requirements, provide not less than one (1) car park per fifty (50) spaces (or part thereof) for people with disabilities;
- (v) Carparking must be controlled to minimise its impact on the surrounding road network, any internal circulation and other development adjacent to the Sector
- (vi) Pedestrian access must incorporate design elements which:
 - (a) provide safe pedestrian routes, that focus on the connectivity between the site and adjacent development within the Town Centre Frame;
 - (b) ensure that pedestrian movement areas through car parks to a building are clearly defined;
- (vii) The visual impact of any structured or basement carparking from the surrounding roads, should be minimised. Any structured parking is to be 'sleeved' behind landscaping or development fronting any road frontage. Surface car parking may include shade structures within selected areas of the car park; and
- (viii) On-street car parking shall be provided for along the frontage of North Lakes Drive.

3.4.3.6 Bicycle Parking

Employee and customer bicycle parking spaces and the type of bicycle parking devices are to be generally in accordance with ***Appendix D – Bicycle Parking Requirement and allow for:***

- (i) one (1) shower cubicle with ancillary change room per ten (10) bicycle spaces required by 3.6.1(vi) above. Facilities may be utilised by both males and females provided adequate privacy and accessibility is ensured for both sexes; and
- (ii) if the demand for the bicycle spaces is not consistent with the table contained in

Appendix C, Council, on a case by case basis, may permit a reduction of the number of end of trip facilities.

3.4.4 Safety and Crime Prevention

The design and siting of any structures, landscaping, buildings and public spaces must:

- (i) avoid obscured corners and narrow or dead-end alleys;
- (ii) maximise the opportunity for casual surveillance of public spaces and car parking areas from surrounding buildings, roads and pedestrian areas;
- (iii) include lighting of public places; and
- (iv) include for a non-residential use with a gross floor area of 2,500m² or more, an Environmental Design assessment such as Crime Prevention Through Environmental Design (CPTED) or similar crime prevention safety audit, which must be undertaken by applicants during the design phase and properly taken into account in the final design of the project. A copy of the assessment shall be provided to Council at the time of lodging each development application for a Material Change of Use. This assessment is to have due regard to the design and maintenance of buildings and external areas within the Sector, as well as the factors outlined in this sub-section.

3.4.5 Lighting & Glare Requirements

Lighting and Glare Management within the Sector must:

- (i) ensure lighting systems are designed to prevent direct and/or reflect glare to surrounding areas. This applies particularly to disabling and uncomfortable glare to pedestrian and vehicular movement or at entrances, steps, stairs and pedestrian paths;
- (ii) where provided within landscaped areas, the choice and location of lighting must allow for plant and tree growth, and conversely, not become obscured as the landscape matures;
- (iii) include safety lighting in open space and car parking areas which are to be used at night-time;
- (iv) ensure that permanent strobe, laser, flashing, oscillating, moving or alternating lights are not permitted in locations within the Sector where they are likely to cause a nuisance;
- (v) have regard to the efficiency of energy consumption in the design of lighting systems;
- (vi) wherever possible, include architectural floodlighting of a building or space through the integration of the luminaries into the fabric of the building; and
- (vii) comply with the requirements of *AS4282 – Control of Obtrusive Effects of Outdoor Lighting*.

3.4.6 Plant & Equipment Requirements

The design and siting of plant and equipment must comply with the following requirements:

- (i) all air conditioning and ventilation plant and other equipment located on the roof or externally around the building are to be treated as an integral part of the building form and be suitably screened from view to match with surrounding materials;
- (ii) where lift motor rooms, plant rooms and the like are proposed, they are to be treated as an integral part of the building form in order to create a coherent roofscape;
- (iii) 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 area;
- (iv) contain design elements and buffer treatments to control any obtrusive effects where it is likely to adversely affect residential amenity, visual aesthetics, public safety and traffic safety;
- (v) if necessary, adopt effective air pollution mitigation measures to comply with the *Environmental Protection Act, Environmental Protection Policy (Air)* and other relevant legislation in relation to dust, smoke, fumes and gases, where necessary; and
- (vi) if necessary, adopt effective noise pollution mitigation measures to comply with the *Environmental Protection Act, Environmental Protection Policy (Noise)* and other relevant legislation, where necessary.

3.4.7 Telecommunications Equipment

Telecommunications equipment is to be:

- (i) generally co-located with other telecommunications equipment installed in the Sector;
- (ii) constructed in a form complementary to the façade and roofline of the building on which it is to be mounted; and
- (iii) where possible, coloured so as to blend in with the background of the building on which it is to be mounted.

3.4.8 Regrading

The earthworks approach for the Sector must:

- (i) ensure that changes of level at the site boundary allow non-discriminatory access to each allotment from the road frontage/s and to adjoining allotments;
- (ii) take into account the efficient management of earthworks;
- (iii) be generally in accordance with surrounding approved Sector Plans; and
- (iv) achieve a high level of functional and visual integration between the Town Centre Core, Town Centre Frame and the residential development to the north

3.5 SPECIFIC MEDIUM TO HIGH DENSITY RESIDENTIAL DESIGN AND SITING GUIDELINES

As a medium to high density residential development, the design and siting of all dwellings within the sector is to generally comply with the acceptable solutions outlined in the

Integrated Development Guidelines of the Queensland Residential Design Guidelines (QRDG). In addition to, or by way of further qualification of, the Integrated Development Guidelines outlined in section 3.5 are to also be complied with in the development of the sector.

The following Medium to High Density Residential Design and Siting Guidelines for North Lakes are to be complied with in the development of any medium to high density housing sites on the Sector Plan Map Figure 4 within Town Centre Frame "E" Sector Two:

3.5.1 Building Controls

- .1 Site coverage is limited to 50%. Site coverage is defined as that portion of a site covered by a building (including garages), fixed structure, or outdoor storage area, but not including unroofed parking areas, basement car parking (which does not project greater than 1m above finished ground level as at the date the lots are created) and roof eaves.

Pergolas, gazebos, verandahs, shade structures and other leisure and recreational purpose areas (whether fully roofed or not) are included in site coverage. These semi-enclosed outdoor structures are permitted to a further maximum building site coverage of 10% of the total lot area.

- .2 Buildings within the Sector must:
 - (i) be a minimum two (2) storeys in height above the finished ground level; and
 - (ii) not exceed eight (8) storeys in height.
- .3 A minimum of 30% of the area of the site is to be provided as landscaped private open space at ground or podium level.

3.5.2 Building Setbacks

- .1 Building setbacks are to be:
 - (i) no less than three metres from the front boundary alignment. However, unenclosed spaces such as verandahs, terraces, balconies and pergolas may project into the front setback by a maximum of 1.5 metres; and
- .2 Eaves, excluding gutter, are permitted to extend up to 600mm within the setback areas (other than where buildings are built to a zero lot line boundary).

3.5.3 Landscaping

- .1 Landscape planting is to be provided, wherever practicable, to soften the appearance and give scale to buildings and a 3 metre landscape setback to all street frontages of each lot in the Sector.
- .2 Of that part of the lots within the sector not used for buildings, driveways and parking (ie. the balance area), the use of permeable or absorbent finishes, eg. grass,

planting or garden beds, is to be maximised. .

- .3 Along the perimeter of the sector, trees and shrubs are to be planted of a species likely to grow to provide a landscape canopy between the buildings and car parking areas within the sector and the adjacent (external) properties and major roads. The size, layout and density of trees planted in the setback areas are to take account of the need for landscaping as privacy screening, as well as useable outdoor space and solar access considerations.

3.5.4 Building Appearance

- .1 The building façade fronting the primary street frontage must incorporate the following design elements:
 - (i) A minimum of 20% of the façade area of each dwelling unit must be either windows or glass; and
 - (ii) One of the following:
 - (a) A defined central entry where a shared entry/lobby area provides access to multiple dwelling units within a building; or
 - (b) Separate defined entry points for all dwelling units with an individual access point.
- .3 The building façade facing a secondary street or have a common boundary with a park must incorporate the following design elements:
 - (i) A substantial balcony, verandah, patio or other covered outdoor entertaining area for each dwelling unit in a building;
 - (ii) Building recesses or projections incorporating articulated plan form;
 - (iii) A minimum of 20% of the façade area of each dwelling unit must be either windows or glass;
 - (iv) Where a horizontal length of a wall has a height of three or more storeys, it is not to be greater than 15 metres in length in one plane (i.e. where external faces offset one metre or more are not provided for that the length of wall);
 - (v) All entrance foyers must include either sidelight or highlight windows in the entry alcove. The only exception is when a set of double doors are used;
 - (vi) The material to be used to infill above windows and doors on a façade facing a street or public area must be the same material and colour used on the remainder of that façade;
 - (vii) Each dwelling unit is to provide an internal storage area with a minimum volume of 8m³. This storage area may form part of the garage. Freestanding sheds are not permitted;
 - (viii)
 - (ix) Flat rooflines are permitted for residential apartment buildings which will complement the character of surrounding commercial buildings;
 - (x) Ground level open type pergolas may be built abutting any side boundary. No part of any such structure abutting a side boundary is to be attached to the wall of an adjoining building;
 - (xi) All external plumbing (waste pipes and vents) must be concealed within wall cavities; and

- (xii) The underside of decks should be properly finished to compliment the building and screened from public view.

3.5.5 Building Colours and Materials

- .1 The requirements of Section 3.4.3.2 apply.

3.5.6 Garages/Carports

- .1 All dwelling units are to provide under cover car parking spaces in accordance with the rate specified in Section 3.5.8.
- .2 Where a garage is integrated into the building design of an individual dwelling unit, the garage must be:
 - (i) setback a minimum of 6 metres to the front boundary alignment; and
 - (ii) setback a minimum of 900mm from the front building line (the front building line is a line that contains no less than 3.5 metres of the dwelling excluding unenclosed spaces); and
 - (iii) covered by an enclosed three storey section of the dwelling or a roofed verandah or balcony (provided that it and the balustrading has a minimum transparency of 50%) extending over the entire width and depth of the garage.
- .3 Basement car parking (whether provided for an individual unit or in a shared car parking arrangement) is permitted where:
 - (i) a minimum setback of 3 metres to the front boundary alignment is provided; and
 - (ii) an enclosed three storey section of the dwelling or a roofed verandah or balcony (provided that it and the balustrading has a minimum transparency of 50%) extends over the entire width and depth of the garage;
 - (iii) The garage does not project greater than 1 metre above finished ground level as at the date the lot was created to the top of the slab is permitted where that area projecting above ground level is suitable screened with landscaping. For the purposes of calculating the maximum site coverage, basement car parking which projects no greater than 1m above finished ground level will not be included;
 - (iv) appropriate screening by landscaping or fenestration from the ceiling can reduce visibility from adjacent (external) properties and major roads; and
 - (v) Garage roller doors will be considered on their architectural merit where they complement the design of the dwelling.

3.5.7 Boundary Fencing

- .1 Fencing is not to be provided along Endeavour Boulevard, Lakefield Drive or North Lakes Drive;
- .2 Where front fencing is proposed and associated with medium density residential development or create front courtyards to residential units and is considered to make a positive contribution to the streetscape in the opinion of Council, those fences are to be:
 - (i) a maximum of 1.8 metres high;

- (ii) constructed of rendered and painted masonry piers and base (minimum 300mm base), and infills of matching masonry, coloured metal tube and painted or treated timber lattice or battens; and
 - (iii) a minimum 25% transparent;
 - (iv) Solid pre-coloured metal fencing is not permitted;
 - (v) 'Soft' enclosures and demarcations of the front property boundary, e.g. hedges, earth mounding and landscape planting, are encouraged. Where hedges are established to delineate a front boundary, gates may be incorporated, providing established and vigorous plantings are utilised for hedges; and
 - (vi) Set back 3 metres from road frontages.
- .3 Where the principal developer has constructed a fence, it must be maintained by the owner to the standard at which it was constructed.
 - .4 Retaining walls are generally not permitted between the rear of the building and the rear fence, unless integrated with terraced garden beds.
 - .5 Retaining walls must be designed to complement the style of the home and must not exceed 1.0m in height, and
 - .6 Fencing associated with temporary construction or as part of staged construction is permitted during the construction phase only.

3.5.8 Carparking

- .1 Car parking within the sector is to be provided at the minimum rate of 1.5 spaces per dwelling unit of which at least one space is to be fully enclosed, plus 0.5 spaces per dwelling unit for visitor parking.
- .2 The car parking rate may be modified in accordance with Section 13.3 of the Mango Hill Infrastructure Development Control Plan where supported by a suitably qualified traffic engineer.
- .3 As part of the total car parking requirements, provide not less than one (1) car park per fifty (50) spaces (or part thereof) for people with disabilities;
- .4 Carparking must be controlled to minimise its impact on the surrounding road network, any internal circulation and other development adjacent to the Sector
5. Pedestrian access must incorporate design elements which:
 - (a) provide safe pedestrian routes, that focus on the connectivity between the site and adjacent development within the Town Centre Frame;
 - (b) ensure that pedestrian movement areas through car parks to a building are clearly defined;
- .6 The visual impact of any structured or basement carparking from the surrounding roads, should be minimised. Any structured parking is to be 'sleeved' behind landscaping or development fronting any road frontage. Surface car parking may include shade structures within selected areas of the car park;
- .7 On-street car parking shall be provided for along the frontage of North Lakes Drive;
- .8 Employee and customer bicycle parking spaces and the type of bicycle parking devices are to be generally in accordance with **Appendix D – Bicycle Parking Requirement and allow for:**
 - (a) one (1) shower cubicle with ancillary change room per ten (10)

bicycle spaces required by 3.6.1(vi) above. Facilities may be utilised by both males and females provided adequate privacy and accessibility is ensured for both sexes; and

- (b) if the demand for the bicycle spaces is not consistent with the table contained in *Appendix C*, Council, on a case by case basis, may permit a reduction of the number of end of trip facilities.

3.5.9 Driveways

- .1 Driveways providing access to parking areas (i.e. being either a shared basement car parking arrangement or individual garages/carports) must be completed prior to occupation of dwelling units. Acceptable finishes for driveways are:
- (i) coloured concrete pavers constructed on a concrete base, clay pavers or natural stone pavers constructed on a concrete base; or
 - (ii) stencilled concrete; or
 - (iii) exposed aggregate.
 - (iv) Plain concrete driveways are not permitted except within the road reserve to finish between a public footpath and the kerb.
- Other driveway finishes may be considered on their merits by Council in consultation with the principal developer and, if acceptable, are to be recorded in Council's 'North Lakes Register of Alternative Acceptable Design Solutions'.
- .2 Where a garage is integrated into the building design of an individual dwelling unit the driveway must be no wider than 6.0 metres at the garage door and provide at least 500mm of landscaping either side of the driveway.
- .3 Driveways are to be paved for their full width (ie. "car tracks" are not permitted).
- .4 The maximum grade for driveways is 1:5. All driveway grades from the property boundary (not the kerb) to the garage are to conform with the North Lakes standard drawings for residential driveway layout and construction. The profile of the section of driveway between the front property boundary and the kerb is to follow the Council approved grade.
- .5 If a crossover is provided and not used then it must be removed and the verge and kerb must be constructed at the owners cost, to Council's standard.
- .6 If a footpath has been constructed in front of the property the driveway must abut and not cut through the footpath. The balance of the driveway between the footpath and the kerb may be plain concrete to match the footpath.

3.5.10 Ancillary Structures

- .1 Signs

Signs and hoardings for advertising products and businesses are not permitted on residential lots with the exception of businesses being undertaken from home within the definition of a detached house, approved home occupations or display

home signage, which may only be erected with the prior approval of the principal developer. Builders/tradespersons' signs are permitted where they are required on lots but only during construction.

.2 Air Conditioners

Air conditioners are to be located below the eaveline and screened from public view. Air conditioning units may only be permitted above the eaveline if they are of a low profile and coloured to match the roof colour.

Roof-mounted or unscreened wall and window mounted air conditioning units facing the street or parks are not permitted.

.3 Television/Radio Antennae & Satellite Dishes

Internal or under the roof antennae are encouraged. An external antennae, if required, is to be located towards the rear of the dwelling. Satellite dishes are only acceptable below the roof line.

.4 Solar Water Heaters

Where practicable, solar water heaters are to be located on roof pitches which minimise their visibility from public areas. Solar collector panels are to lie on the roof and not be supported on a frame. Where practicable, storage tanks are to be detached and concealed from view by locating them within the roof space.

.5 Other Structures

Clotheslines, hot water systems, gas systems, fuel storage tanks, rainwater tanks and meter boxes are to be screened or located away from any street or park frontage.

.6 Unsightly Objects

To maintain an attractive overall streetscape, trucks, caravans, boats or trailers are not permitted to be parked on lots unless they are completely housed within a garage or screened from public view.

3.6 **LANDSCAPING / TOWNSCAPING**

3.6.1 **Landscape / Townscape Concept**

The landscape framework for the Sector is represented by the design principles shown indicatively on *Figure 5 – Sector Landscape Plan*.

3.6.2 **Character**

The landscape character of the Sector should reflect the through-route nature of Endeavour Boulevard and the changes in land use, character and traffic levels between the balance of the Town Centre Frame and the residential development to the north of the Sector. The 'main street' environment of North Lakes Drive and the landscaping character of adjoining

Precinct 020 should be taken into account. Landscaping should promote safety and low speeds, with due concern for maintaining sightlines.

Landscaping is also required in private development sites to reinforce the landscaping proposed along street frontages. Landscaping may be required to buffer and screen functional elements of uses such as car parking along road frontages to reduce their impacts upon the amenity and visual character of the Sector. It is intended that landscaping be used to soften the appearance and minimise the scale and bulk of buildings within the Sector. Landscaping may include an attractive entry statement such as gateway signage walls, landscape planting and water features to create a sense of arrival.

The overall landscape character of the Sector is to be established by integrating plantings with the street lighting, furnishings, paving treatments, built form, materials and colours of development in the Sector.

Where building heights exceed three (3) storeys, consideration should be given to additional setbacks of the upper levels of any building which will serve to create a podium where additional landscape treatment could be incorporated and provide for further articulation of the built form.

3.6.3 Frontage to North Lakes Drive

Landscape planting along North Lakes Drive should soften the appearance and give scale to buildings within the Sector, articulate urban spaces and provide shade for on-street car parks, bus stop waiting areas and adjacent pedestrian areas.

The 6.5 metre verges on both sides of North Lakes Drive are to be consistently framed with appropriate landscape and canopy trees to establish a "day one effect". It is proposed to have an open landscape character with themed shade trees spaced along the verges to provide partial shade to the kerbside car parking and the street furniture. Streetscape treatment must include generous footpaths, street trees, street furniture and street lighting.

Landscaping and street furniture are to exhibit a general design theme and continuity of materials and elements, as well as create a comfortable and attractive environment. They should contribute to the town centre identity and assist with visitor orientation and identification.

Any works within the road reserve must be undertaken in accordance with the North Lakes Town Centre design manual.

3.6.4 Frontage to Endeavour Boulevard and Lakefield Drive

Landscape planting along Endeavour Boulevard is to be used to provide an accent to buildings in the Precinct, rather than a screen. The landscaping along Endeavour Boulevard should reflect the traffic role and function of the road, filter the impacts of the anticipated traffic flows and recognise the transition in land uses from the Precinct to the mixed-use development likely to be established to the north of Endeavour Boulevard.

Any planting adjacent to vehicular and pedestrian access points within the Precinct must address the transitional nature between the highly pedestrian Town Centre (including The Corso and North Lakes Drive) and the through-route nature of Endeavour Boulevard.

Landscaping shall promote safety and low speeds, but with due concern for maintaining sightlines.

Landscaping may be required to buffer and screen functional elements along these frontages to reduce their impacts upon the amenity and visual character of the Precinct.

3.6.5 Requirements

Landscaping in the Sector must:

- (i) correspond with the design principles illustrated on *Figure 5 – Sector Landscape Plan*;
- (ii) generally achieve the landscape character described above and the landscape concept described in section 4.2 of the Precinct Plan;
- (iii) provide a minimum landscape strip of three (3) metres along all street frontages of each lot within the Sector except with buildings required to be built to the frontage in Section 3.4.1;
- (iv) be designed to complement and integrate with the landscaping and design character of adjoining Sectors and Precincts;
- (v) include canopy trees, planted by the Principal Developer, generally with a minimum clear trunk of 1.8 metres planted at informal intervals within the road reserve of Endeavour Boulevard and other streets adjoining this Sector. Street trees planted along North Lakes Drive are intended to provide visual continuity to the street, reduce the road scale and provide shade to on-street car parking and adjacent pedestrian areas. Predominantly native planting will be used;
- (vi) reduce the appearance of an expanse of carparking areas by providing advanced shade trees at the rate of not less than one (1) tree per six (6) parking spaces and by providing low plantings along carparking aisles which do not impact on drivers sightlines;
- (vii) screen carparking areas from roads and other areas readily accessible to the public; but occasionally views of key elements of each proposed building may be provided;
- (viii) provide adequate landscaped areas so as to create a landscape setting and passive recreation space for development. Canopy shade trees must be planted so that integration with the planned network of landscaped pedestrian and road frontage treatments is achieved;
- (ix) allow for pedestrian linkages and landscape planting extending from entry points to development sites within the Sector to connect, where possible, through car park areas to the pedestrian pathway associated with internal driveways;
- (x) be employed to reduce reflected glare from building facades;
- (xi) not compromise the safety of vehicles accessing sites within the Sector or in surrounding development;
- (xii) include lighting of public areas, including carparking areas for public safety;
- (xiii) be capable of efficient and effective maintenance;
- (xiv) generally frame entry areas to sites;
- (xv) screen services such as electricity substations and transformers in a way that does not affect the streetscape;
- (xvi) delineate between the pedestrian and vehicular environments, as well as to provide some relief from headlight glare and visual monotony; and

- (xvii) where retaining walls or batters are required, provide a landscape buffer located clear of these works to reduce the impact of the wall if visible from a street. Retaining walls and batters must be of a scale and materials that complement the surrounding built environment while responding to landform.

3.6.6 Plant Species Guidelines

Planting within the Sector is encouraged to incorporate:

- (i) plant species themes that are consistent and complimentary to surrounding development. The species of trees, shrubs, and groundcovers used within the Sector should be selected from the Plant List included in *Appendix C - Plant List*. Plants of similar characteristics may be substituted for a species in the Plant List, if approved by Council. The selection of landscape material is to be cognisant of safety considerations by excluding thorny or poisonous plants that may be hazardous;
- (ii) the use of native species as the predominant plantings to visually reflect the original natural setting of the DCP area, as well as offer benefits of reduced maintenance and water requirements. Exotic and flowering species may be used occasionally as feature planting, to announce entries to the Sector, to provide shade trees in public outdoor spaces, or as accents of colour and texture within the framework of native plant material; and
- (iii) planting densities and heights appropriate for particular areas such as retaining walls and the like are to be shown on a Landscape Plan submitted as part of the Material Change of Use application.

3.7 ACCESS

3.7.1 Access

The requirements for access are set out below:

- (i) indicative vehicular ingress and egress points for main roads (Endeavour Boulevard and Lakefield Drive) are shown on Figure 4 – Sector Plan Map. The design of this access must limit turning movements to left in / left out from this Sector. However, the location of the access points may vary along the road provided other access restrictions noted on Figure 4 are not compromised;
- (ii) A single access will also be permitted off Lakefield Drive giving vehicular access to Lots 72 and 73 via reciprocal access easements,
- (iii) the intersections of the Lakefield Drive with Endeavour Boulevard and North Lakes Drive with Lakefield Drive are to be developed as a vehicular traffic priority areas;
- (iv) adequate measures to achieve a high level of public safety on the shared access laneways / driveways is to be provided and, where appropriate, should include:
 - (a) good visibility at all pedestrian crossings and establishing pedestrian priority, where appropriate;
 - (b) pavement treatments which achieve a very low traffic speed, while permitting easy and even-surfaces for desirable walking conditions for pedestrians;
 - (c) finishes that are in keeping with existing finishes within the road or the road verge;
 - (d) suitable barrier treatments at the entrance points;

- (e) the provision of continuous pedestrian access between buildings, car parks and pedestrian areas; and
- (f) the provision of site and building illumination within car park areas, pedestrian areas and along pedestrian paths during the hours of operation of any component of the development and, at other times, by the provision of security lighting.
- (v) access for all people including people with a disability is to be achieved by ensuring that development complies with Council provisions relating to access for people with disabilities;
- (vi) provide convenient and safe pedestrian and cyclist access within or to development adjacent to the Sector and to public transport facilities. Such access is to be integrated with the path and street system of Endeavour Boulevard and North Lakes Drive;
- (vii) direct access for emergency vehicles is to be provided to every building within the Sector by the provision of a minimum 3.5 metre clear carriageway width;
- (viii) consideration must be given to the design and location of access points adjoining the Sector so as to minimise potential conflicts with the car parking areas, pedestrian areas, paths and service areas within the Sector; and
- (ix) ensure that no reversing of vehicles, particularly service vehicles, shall occur in areas of high pedestrian activity.

3.7.2 Servicing

Development within the Sector must provide:

- (i) if required, loading zone parking which is to be accessed from the internal vehicle circulation areas;
- (ii) storage for refuse and recyclable materials which are suitably screened from circulation areas;
- (iii) service connection points incorporated into hard and soft landscaping areas;
- (iv) service connections that do not protrude from paving or driveways or cause any hazard for pedestrians or vehicles;
- (v) where appropriate, provide landscaping and other screening devices to undesirable views of service areas, loading bays, refuse areas and plant and machinery, within the Sector and in adjacent Sectors; and
- (vi) sharing of service areas, where possible.

3.8 SIGNAGE

Signage in the Sector must:

- (i) with respect to signage that identifies development within the Sector and associated development, be generally integrated into any frontage walls, entry statements or entry structures, if provided. This signage may be located along the frontage of Endeavour Boulevard and North Lakes Drive;
- (ii) ensure that lighting of any signage will not cause a nuisance to drivers or pedestrians;
- (iii) be restricted to a minimum clearance of 2.4 metres to the pavement if located above pedestrian areas;
- (iv) be visible, legible and not result in a cluttered or discordant streetscape;

- (v) provide limited use of highly reflective finishes;
- (vi) incorporate professional and coordinated graphics;
- (vii) not permit bunting, streamers, sandwich boards and other low-quality, temporary, or opportunistic signs; and
- (viii) ensure that any support structure or cabling to illuminate signs will not be visible.

3.8.1 Signage Guidelines

- (i) Signage guidelines are included at *Appendix E - Town Centre Signage Guidelines*. The Signage Guidelines are to be taken into consideration, along with other relevant issues, when considering matters regarding signs and architectural graphics of all kinds. They are not to be interpreted as giving rights to any number or types of signage.
- (ii) A Coordinated Signage Plan is to be submitted with any development application for Material Change of Use within this Sector. The Coordinated Signage Plan must distinguish between artworks/murals, on-site business advertising, animated signage, and “third party” advertising in terms of sign dimension, location, illumination and animation on the face of the sign.

4.0 Environmental Management

There is no Environmental Management Plan having application to this Sector.

Management systems for land within the Sector must be implemented to ensure that the Objectives and Performance Indicators referred in the following sections of the Precinct Plan continue to be met throughout the life of the development and the use of the Sector:

Development within this Sector must comply with:

- (i) Section 5.1 – Environmental Management Objectives;
- (ii) Section 5.2 – Stormwater Management Objectives; and
- (iii) Section 5.3 – Earthworks Management Objectives.

5.0 Subdivision Requirements

As shown in *Appendix F – Proposed Metes and Bounds Description* the area of the Sector is 1.6 hectares.

Indicative areas and frontage widths of allotments within the Sector are shown on *Figure 6 - Indicative Plan of Subdivision*.

Reciprocal access easements are to be created where shared access is proposed for adjoining lots.

The minimum area and frontage of any future/or proposed allotment within the Sector is to be as follows:

- (i) minimum lot area – 1,000m²; and
- (ii) minimum lot frontage – 30m.

Further subdivision of any allotment as outlined above, shall only be permitted by a community title scheme and/or volumetric title, to facilitate individual retail and/or commercial tenancies, residential units and common property, where development of that allotment is in accordance with a material change of use development permit issued in accordance with the Sustainable Planning Act.

6.0 Infrastructure

6.1 INFRASTRUCTURE TO BE PROVIDED

The infrastructure required to be provided by the Principal Developer to serve the Sector includes internal and external infrastructure provisions in accordance with the Rezoning Conditions, the Mango Hill Infrastructure Agreement 1999 (MHIA) and agreements made with the State Government in accordance with the DCP. These obligations are summarised as follows:

6.1.1 Roads

Unless already constructed, the Principal Developer must construct the following roads including carriageways, stormwater drainage, verges, bus setdowns, footpaths, bikeways, landscaping, traffic control devices, traffic signals and street lighting as applicable. Any reference to initial construction in this section is a reference to construction approved by Council in accordance with the rezoning conditions, the MHIA and where applicable, the Mango Hill Agreement – Main Roads (MHIA-MR).

- (i) The intersections of Endeavour Boulevard with Lakefield Drive and North Lakes Drive with Lakefield Drive to suit the standard of construction of adjacent roads including auxiliary left turn, right turn and stand up lanes and traffic signals, if required. The staging of traffic signals may be undertaken in accordance with the timetable approved by Council in accordance with the MHIA; and
- (ii) The intersection of Lakefield Drive and Endeavour Boulevard is to be reconfigured as recommended by the SKM Traffic Report dated 6 December 2010 (Revision 2) Design Case 1, with pedestrian movements, line marking option (through and left turn approaches to Lakefield Drive, north and south), with associated phasing and changes to traffic signals. Such works are to be completed prior to commencement of the use of the three proposed lots shown on *Figure 6 Indicative Plan of Subdivision*.
- (iii) Bikeways and pathways required along the road frontages of to the Sector and the Central Access Road in accordance with the MHIA.

(refer to *Figure 7 – Road Layout*).

The construction of the abovementioned infrastructure to the final standard is to be undertaken in accordance with the staging and timing outlined in the MHIA. The initial standard of construction referred to above is to be undertaken to suit the rate of development of the Sector. Where initial construction is not stated, the road is to be constructed to the standard described above to suit the rate of development of the Sector.

6.1.2 Water Supply

The Principal Developer is required to:

- (i) Construct reticulation systems along all internal roads to service all properties in the Precinct;

- (ii) Construct a water supply network within the DCP area necessary to service the anticipated demand in the Sector, including those sections of the mains shown on **Figure 8 – Water Supply Headworks**; and
- (iii) Make contribution towards water headworks and bulk water supply in accordance with the MHIA.

6.1.3 Sewerage

The Principal Developer must construct all internal sewerage systems to service the properties in the Sector and contribute towards sewerage headworks, unless otherwise agreed with Council:

- (i) Construct the trunk gravity main from the existing Council sewerage infrastructure to connect with each lot in the Sector as required (refer to **Figure 9 – Sewerage Headworks**); and
- (ii) Provide sewerage headworks contributions in accordance with the MHIA.

6.1.4 Park

The requirements for park provision throughout the MHIDCP area are provided for in the MHIA 1999. No area within this Sector will be dedicated as park. Additional park contribution in relation to high density residential development as required by the MHIA 1999 arising from development within this Sector, is to be provided in the approved Sector Plans over Lot 721 on SP 193905, Parish of Redcliffe; or as otherwise agreed by the Council.

6.1.5 Stormwater

Unless otherwise agreed with Council, the Principal Developer must:

- (i) Comply with the provisions of the Stormwater Management Plans for Saltwater Creek and Tributary C as approved by Council and construct stormwater management works so far as they relate to this Sector.
- (ii) Stormwater management works so far as they relate to the Sector are to be provided in accordance with the MHIA, Council's Design Manual, the Stormwater Management Plan for Tributary C, including the construction of all drainage and landscaping works in Tributary C and the Stormwater Management Plan for Saltwater Creek.
- (iii) In addition, the Principal Developer is to construct stormwater drainage systems and stormwater management systems as required by the MHIA and the Environmental Protection (Water) Policy.

6.1.6 Electricity Supply, Gas, Lighting and Communications

The Principal Developer must:

- (i) allow for underground electricity distribution to all properties within the Sector, by Energex or another appropriate supplier of electricity;
- (ii) arrange for the provision of underground conduits along all road verges within the Sector and adjacent roads to meet the anticipated demands of the DCP area;
- (iii) provide underground electricity to all properties within the Sector through Energex or another appropriate supplier of electricity and to Council's standards;
- (iv) provide public lighting to all roads, streets and if relevant, parks and other public areas and facilities within the Sector constructed to relevant Australian Standards and in accordance with the requirements of Energex or alternative supplier of electricity and Council standards;
- (v) provide high voltage electricity services to the Sector through Energex or another supplier of electricity and to Council standards; and

- (vi) provide all electricity services and distribution systems as underground services, including conduits along all road verges within the Sector and adjacent roads to meet the anticipated demand of the DCP area.

6.2 INFRASTRUCTURE AFFECTED OR REQUIRED BY DEVELOPMENT OF THE SECTOR

- (i) The development of the Sector may place demands on the following infrastructure:
 - (a) Roads external to the DCP area and the Sector;
 - (b) Water supply infrastructure;
 - (c) Sewerage infrastructure;
 - (d) Stormwater infrastructure;
 - (e) Parks;
 - (f) Community facilities;
 - (g) Electricity and gas supply;
 - (h) Communications systems; and
 - (i) State Government Infrastructure.
- (ii) The infrastructure described in clause 6.1 above, together with the obligations of the Principal Developer under infrastructure agreements will mitigate the adverse affects on the above infrastructure.

6.3 HOW THE REQUIRED INFRASTRUCTURE RELATES TO THE INFRASTRUCTURE AGREEMENTS

The infrastructure agreements describe the infrastructure that 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 6.1 of this document are the Principal Developer's obligations under the rezoning conditions and the infrastructure agreements.

7.0 Detailed Infrastructure Program

7.1 ESTIMATED DATE FOR PROVISION OF INFRASTRUCTURE

The Principal Developer is to provide the infrastructure referred to in clause 6.1 of this document at times to satisfy the requirements of the MHIA and provide reconfiguration of the Lakefield Drive and Endeavour Boulevard intersection prior to commencement of the use of the three proposed lots shown on *Figure 6 Indicative Plan of Subdivision*.

7.2 INTENDED PROVIDER

The Principal Developer is to provide the infrastructure referred to in Section 6.1 at times to satisfy the requirements of the Rezoning Conditions and the MHIA which provides for the infrastructure to be constructed to meet the rate of development in the Sector.

There are no items of State Government infrastructure to be provided by the Principal Development in conjunction with the development of the Sector.

7.3 OTHER WORKS DEPENDENT ON INFRASTRUCTURE PROVISION

No other works depend on the provision of the infrastructure specified in Section 6.1.

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.

7.4 OTHER RELEVANT INFORMATION

7.4.1 Estimated Water and Sewerage Demands

As required by the MHIA, the Principal Developer states as follows:

- (i) For the purpose of assessing water supply capacity, the estimated number of Equivalent Tenements for this Sector is 24 ET (Lot 72 is 6.54ET, Lot 73 is 7.5ET and Lot 74 is 10.5ET); and
- (ii) For the purpose of assessing sewerage capacity, the estimated number of Equivalent Persons for this Sector is 48 EP (Lot 72 is 13.08EP, Lot 73 is 15EP and Lot 74 is 21EP).
- (iii) If a future use of the Sector imposes a greater demand on minimum water supply and sewerage infrastructure than assigned in an approved development site within the Sector, Council is to approve the use provided the developer demonstrates that:
 - (a) To do so will not adversely impact on water supply and sewerage infrastructure standards within the DCP area and elsewhere if considered appropriate by Council's engineer having taken into consideration development approved in the DCP area at the time of an application and future development in the DCP area as provided for by the DCP;

- (b) The principle developer has confirmed, in writing, that the increased demand will not prevent servicing the total number of ETs and EPs provided in the MHIA; and
- (c) In the event the developer satisfies Council of the requirements in (a) and (b) above, the Council will require payment of headworks changes for ETs and EPs note already paid in respect of the proposed development.

APPENDIX A

FINAL SPECIFICATION OF LAND USE FOR THE SECTOR

**FINAL SPECIFICATION OF LAND USE
(TOWN CENTRE FRAME 'E' PRECINCT)
FOR TOWN CENTRE FRAME 'E' SECTOR TWO**

Purposes for which premises may be erected or used without the consent of Council (Permitted Development) COLUMN A	Purposes for which premises may be erected or used without the consent of Council subject to conditions (Permitted Development subject to conditions) COLUMN B	Purposes for which premises may be erected or used only with the consent of Council (Permissible Development) COLUMN C	Purposes for which premises may not be erected or used (Prohibited Development) COLUMN D
Self Assessable	Code Assessable	Impact Assessable Development	
Caretaker's residence Local utilities Park	Accommodation units Amusement premises Apartments Car park Car wash (associated with an existing building) Catering premises Child care centre (associated with an existing building) Commercial services Convention centre Educational establishment Entertainment library Family day care centre Hardware centre (associated with an existing building) Hotel Indoor recreation Licensed club Motel Office Passenger terminal (associated with an existing building) Place of worship (associated with an existing building) Restaurant Retail nursery (associated with an existing building) Shop <300m ² GFA Shopping centre <1,500m ² GFA Technology industry Tourist facility Townhouse units Veterinary clinic	Any other use not listed in Column A, B or D.	Adult product shop Agriculture Air strip Animal husbandry Aquaculture Bulk garden supplies Camping grounds Caravan park Cattery Cemetery Concrete batching plant Contractor's depot Correctional institution Crematorium Dairy Extractive industry Fuel depot General industry Hazardous industry Heavy vehicle parking Heavy vehicle sales Host farm Junk yard Kennels Lot feeding Motor sport or shooting Piggery Poultry farm Rural industry Shopping centre >1,500m ² GLA Showground Simulated conflict Stable Stock sales yard Transport terminal Transportable home village Turf farming

APPENDIX B

STREETSCAPE / CHARACTER IMAGES

**NORTH LAKES DEVELOPMENT
STREETSCAPE / CHARACTER IMAGES
TOWN CENTRE FRAME “E” SECTOR TWO (SECTOR PLAN 022-2000)**



Image 1 – Acceptable
Innovative contemporary building design. Includes integrated use of elements such as block work, glass and tin and horizontal and vertical variations in the façade for visual interest.



Image 2 – Acceptable
Attractive, clearly identified and defined entry which allows for pedestrian linkages and landscape planting extending from carparking areas to development.



Image 3 – Acceptable
Landscaping along carparking aisles and between carparking spaces reduces the appearance of an expanse of carparking areas.



Image 4 – Acceptable
Where buildings are proposed to be located at the corner, an outward orientated building design is required and where appropriate, generous footpaths, awnings, display windows and a high quality streetscape urban design character.

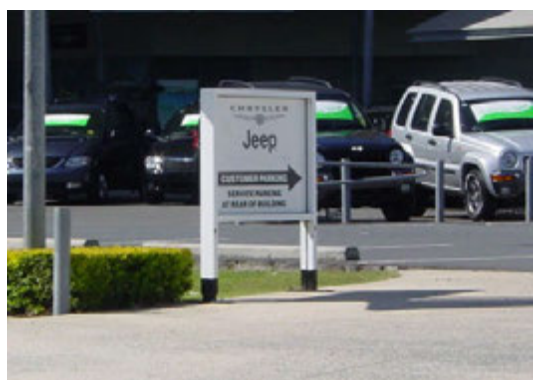


Image 5 - Acceptable
Directional signage can include business logo.
Unacceptable
Signage should be integrated with landscaping frontage treatment.



Image 6 - Acceptable
Varied roofline and integration of signage into built form.
Unacceptable
Ill-defined access and lack of landscaping.

**NORTH LAKES DEVELOPMENT
STREETSCAPE / CHARACTER IMAGES
TOWN CENTRE FRAME “E” SECTOR TWO (SECTOR PLAN 022-2000)**



Image 7 – Acceptable
Convenient and safe pedestrian and cyclist access within or to development adjacent to the Sector. Such access is to be integrated with the path, carpark and street system.



Image 8 – Unacceptable
Multiple signs and repetition.



Image 9 - Unacceptable
Incoherent layout and access arrangement with no landscaping to soften and enhance the built form. Unattractive built form and roofscape that does not provide visual relief or provide visual interest for passers by.



Image 10 - Unacceptable
Inappropriate streetscape treatment due to lack of landscaping and signage clutter and exposed carparking.



Image 11 – Acceptable
Corner treatments should provide a building design orientation and presentation towards both street frontages.



Image 12 – Acceptable
Architectural features, building design and rooflines that are compatible with residential development in terms of height, scale and bulk, complement the overall building design and include varying elements for visual interest.

**NORTH LAKES DEVELOPMENT
STREETSCAPE / CHARACTER IMAGES
TOWN CENTRE FRAME "E" SECTOR TWO (SECTOR PLAN 022-2000)**



Image 13 – Acceptable

Two storey building scale, awnings, outdoor seating, interesting street furniture, and use of footpath contributes to a vibrant and active main street environment



Image 14 – Acceptable

Acceptable development will present active street frontages addressing the street and incorporate pedestrian awnings to provide continual weather protection.



Image 15- Acceptable

Buildings fronting North Lakes Drive will include zero setbacks and awnings to provide continual pedestrian shelter, integrated street treatment and landscaping in pedestrian friendly main street environment

APPENDIX C

PLANT LIST

**Appendix C: Indicative Plant Schedule -
Town Centre Frame "E" Sector Two –
(Sector Plan 022-2000)**

Botanical Name	Common Name
Trees & Palms	
Acmena smithii	Lilly Pilly
Agathis robusta	Kauri Pine
Allocastrum littoralis	Black She Oak
Allocastrum torulosa	Forest She Oak
Araucaria cunninghamia	Hoop Pine
Archontophoenix cunninghamia	Pickabeen Palm
Backhousia citriodora	Lemon Scented Myrtle
Backhousia myrtifolia	Carrol
Banksia integrifolia	Coast Banksia
Barklya syringifolia	Crown of Gold Tree
Brachychiton acerifolium	Flame Tree
Brachychiton rupestre	Bottle Tree
Buckinghamia celsissima	Ivory Curl Flower
Callistemon salignus	Pink Tips
Callistemon viminalis	Weeping Bottlebrush
Callitris columellaris	Bribie Island Pine
Cassia fistula	Golden Shower Tree
Cassia javanica/Cassia siamea	Cassia
Castanospermum australe	Black Bean
Casuarina cunninghamiana	River She Oak
Casuarina glauca	Swamp She Oak
Cupaniopsis anacardioides	Tuckeroo
Elaeocarpus eumundii	
Eucalyptus citriodora	Lemon Scented Gum
Eucalyptus ptychocarpa	Swamp Bloodwood
Eucalyptus curtisii	Plunkett Mallee
Euodia elleryana	Pink Euodia
Ficus Hillii	Hill's Fig
Ficus macrophylla	Moreton Bay Fig
Ficus rubiginosa	Port Jackson Fig
Flindersia australis	Crows Ash
Flindersia pimenteliana	Flindersia
Flindersia schottiana	Bumpy Ash
Grevillea robusta	Silky Oak
Harpullia pendula	Tulipwood
Hymenosporum flavum	Native Frangipani
Jacaranda mimosifolia	Jacaranda
Lagerstroemia indica	Crepe Myrtle
Livistona australis	Livistona
Livistona decipiens	Weeping Cabbage Palm
Livistona nitida	Livistona
Lophostemon confertus	Brush Box
Lophostemon suaveolens	Swamp Box
Melaleuca linariifolia	Snow in Summer
Melaleuca leucadendron	Small Leaved Paperbark
Melaleuca quinquenervia	Broadleaved Paperbark
Metrosideros queenslandicus	Queensland Golden Myrtle
Oreocallis sp. nova (wickhamii)	Tree Waratah
Peltophorum pterocarpus	Yellow poinciana
Phoenix canariensis	Canary Island Palm

**Appendix C: Indicative Plant Schedule -
Town Centre Frame "E" Sector Two –
(Sector Plan 022-2000)**

Botanical Name	Common Name
Trees & Palms	
Podocarpus elatus	Brown Pine
Roystonea regia	Cuban Royal Palm
Syzygium australe	Scrub Cherry
Syzygium francisii	Giant Water Gum
Syzygium jambos	Rose Apple
Syzygium leuhmanii	Small Leaved Lilly Pilly
Syzygium paniculatum	Dwarf Magenta Cherry
Tristaniopsis laurina	Water Gum
Waterhousia floribunda	Weeping Myrtle
Xanthostemon chrysanthus	Golden Penda
Shrubs	
Baeckea sp. Mt Toza	Dwarf Baeckea
Baeckea virgata	Twiggy Myrtle
Baeckea virgata dwarf	Dwarf Baeckea
Banksia Birthday Candles	Dwarf Banksia
Banksia ericifolia	Heath Banksia
Banksia integrifolia	Coastal Banksia
Banksia robur	Swamp Banksia
Banksia spinulosa var collina	Hairpin Banksia
Callistemon Dawson River	Dawson River
Callistemon Little John	Little John
Callistemon Ned Kelly	Ned Kelly
Callistemon pachyphyllus	Bottlebrush
Cyathea australis	Rough Tree Fern
Gardenia Florida	Double Gardenia
Grevillea "Coconut Ice"	Coconut Ice
Grevillea "Majestic"	Majestic
Grevillea "Robyn Gordon"	Grevillea
Grevillea "Superb"	Superb
Grevillea banksii	Red Silky Oak
Grevillea Honey Gem	Honey Gem
Grevillea Ned Kelly	Ned Kelly
Hibiscus rosa sinensis	Hibiscus
Hovea acutifolia	Pointed Leaf Hovea
Leptospermum flavescens	Tantoon Tea Tree
Leptospermum petersonii	Lemon Scented Tea Tree
Leptospermum Pink Cascade	Pink Cascade
Melaleuca linariifolia Snowflake	Dwarf Tea Tree
Murraya paniculata	Orange Jessamine
Pittosporum revolutum	Brisbane Laurel
Pittosporum undulatum	Mock Orange
Syzygium Blaze	Dwarf Lilly Pilly
Syzygium Elite	Compact Lilly Pilly
Syzygium Tiny Trev	Dwarf Lilly Pilly
Tibouchina jules	Tibouchina
Westringea fruticosa	Wynyabbie Gem

**Appendix C: Indicative Plant Schedule -
Town Centre Frame "E" Sector Two –
(Sector Plan 022-2000)**

Botanical Name	Common Name
Groundcovers	
Agapanthus africanus	Lily of the Nile
Agapanthus orientalis	Lily of the Nile
Agapanthus Peter Pan	Dwarf Agapanthus
Anigozanthos hybrids	Kangaroo Paws
Blechnum cartilagineum	Fern
Cissus rhombifolium	Grape Ivy
Cissus Ellen Danica	Grape Ivy
Crinum pendunculatum	River Lily
Dianella revoluta	Flax Lily
Dietes bicolor	Japanese Iris
Dietes grandiflora	Japanese Iris
Evolvulus pilosus	Blue Sapphire
Gardenia radicans	Dwarf Gardenia
Grevillea Bronze Rambler	Bronze Rambler
Grevillea Royal Mantle	Prostrate Grevillea
Hardenbergia violacea	Purple Coral Pea
Hardenbergia violacea Bushy Blue	Bushy Blue
Helichrysum ramosissimum	Yellow Buttons
Hemerocallis species	Day Lily
Hibbertia dentata	Toothed Guinea Flower
Hibbertia scandens	Snake Vine
Liriope "Evergreen Giant"	Liriope
Lomandra hystrix	Creek Mat rush
Lomandra longifolia	Mat Rush
Lomandra multiflora	Long Leaved Mat Rush
Myoporum ellipticum	Creeping Boobialla
Myoporum parvifolium	Myoporum
Pittosporum Miss Muffet	Dwarf Pittosporum
Pittosporum tobira	Miss Muffet
Viola hederaceae	Native Violet
Zierra Carpet Star	Carpet Star
Grasses	
Cynodon dactylon	Green Couch
Danthonia induta	Wallaby Grass
Digitaria didactyla	Blue Couch
Greenlees Park	Hybrid Couch
Poa australis	Native Poa
Vines	
Jasminum polyanthum	Jasmine
Pandorea pandorana	Wonga Wonga Vine
Pandorea jasminoides	Bower of Beauty
Trachelospermum jasminoides	Variegated Star Jasmine
Trachelospermum jasminoides	Star Jasmine

APPENDIX D

BICYCLE PARKING REQUIREMENTS

**BICYCLE PARKING REQUIREMENTS
(TOWN CENTRE FRAME 'E' PRECINCT)
FOR TOWN CENTRE FRAME 'E' SECTOR TWO**

Land use	Employee Bicycle Parking spaces	Class	Visitor/Shopper Bicycle Parking spaces	Class
Accommodation Units (above ground level)	1 space per 4 habitable rooms	1	1 space per 16 habitable rooms	3
Amusement premises	1 space per 4 employees	2	2 plus 1 per 50m ² GFA	3
Apartments (above ground level)	1 space per 4 habitable rooms	1	1 space per 16 habitable rooms	3
Car park	1 space per 750m ² GFA	1	1 space per 50 car parking spaces	3
Car wash (associated with an existing use)	1 space per 750m ² GFA	2	N/A	
Catering premises	1 space per 100m ² GFA public area	2	2 spaces per 750m ² GFA	3
Child care centre (where the use is included within an existing building)	1 space per 1500m ² GFA	2	2 spaces + 1 space per 1500m ² GFA	3
Commercial services	1 space per 200m ² GFA	2	1 space per 750m ² GFA over 1000m ² GFA	3
Convention Centre	1 space per 750m ² GFA	2	1 space per 750m ² GFA over 1000m ² GFA	3
Educational establishment	1 space per 100 full time students	1 or 2	1 space per 100 full time students	3
Entertainment library	1 space per 300m ² GFA	2	1 space per 200m ² GFA	3
Hardware centre (where the use is included within an existing building)	1 space per 300m ² GFA	2	1 space per 200m ² GFA	3
Hotel	1 space per 40 rooms	1	N/A	N/A
Indoor recreation	1 space per 4 employees	1 or 2	1 space per 200m ² GFA	3
Licensed club	1 per 25m ² bar floor area and 1 per 100m ² lounge, beer garden	1	2 spaces per 750m ² GFA	3
Motel	1 space per 40 rooms	1	N/A	N/A
Office	1 space per 200m ² GFA	2	1 space per 750m ² GFA over 1000m ² GFA	3
Passenger Terminal	1 space per 750m ² GFA public area	1 or 2	1 space per 750m ² GFA	3
Place of worship (where the use is included within an existing building)	1 space per 750m ² GFA public area	1 or 2	1 space per 750m ² GFA	3

Land use	Employee Bicycle Parking spaces	Class	Visitor/Shopper Bicycle Parking spaces	Class
Restaurant	1 space per 100m ² GFA public area	1 or 2	2 spaces per 750m ² GFA	3
Retail Nursery (where the use is included within an existing building)	1 space per 300m ² GFA	1 or 2	1 space per 200m ² GFA	3
Retirement Village (nursing home)	1 space per 7 beds	1 or 2	1 space per 60 beds	3
Shop < 300m ² GFA	1 space per 300m ² GFA	1 or 2	1 space per 200m ² GFA	3
Shopping Centre (1500m ² GFA)	1 space per 300m ² GFA	1 or 2	1 space per 200m ² GFA	3
Technology industry	1 space per 300m ² GFA	1 or 2	1 space per 200m ² GFA	3
Tourist facility	1 space per 300m ² GFA	1 or 2	1 space per 200m ² GFA	3
Veterinary clinic	1 space per 200m ² GFA	1 or 2	1 space per 750m ² GFA over 1000m ² GFA	3
Notes:-				
1. GFA – Gross floor area, as defined in the DCP;				
2. The provision of bicycle spaces recommended in the table may be staged initially depending on the demand for use, however space should be set aside to allow 100% provision in the event that the full demand for bicycle parking is realised.				

Types of Parking Devices

Class	Security Level	Description	Main User Type
1	High	Fully enclosed individual lockers	Bike and ride commuters at railway and bus stations.
2	Medium	Located compounds fitted with Class 3 facilities. Communal access using duplicate keys or electronic swipe cards	Regular employees, students, regular bike and ride commuters.
3	Low	Facilities to which the bicycle frame and wheels can be locked	Shoppers, visitors to public offices, places of employment where there is security supervision of the parking facilities.

APPENDIX E

TOWN CENTRE FRAME SIGNAGE GUIDELINES



NORTH LAKES TOWN CENTRE FRAME SIGNAGE GUIDELINES

1.0 OBJECTIVES

The objectives of the signage standards for North Lakes are:

- (i) To implement design standards consistent with the existing and future character of North Lakes
- (ii) To ensure that signs and advertisements complement the attractiveness, safety, legibility and amenity of the North Lakes environment, both day and night
- (iii) To support the role of signs and advertising as an important factor in the marketing of North Lakes and in identifying the commercial character in areas of the development.

2.0 DEFINITIONS

Animated Signage:

An animated sign is an advertisement with a changing display, such as flashing or chasing bulbs, or any other non-static illuminated displays.

Third Party Advertising:

A “third party” advertising sign is an advertisement for a business not conducted on the land on which the sign is located, or a commodity not available on that land, and includes an advertisement for a particular brand of product sold or distributed from the premises. However, an advertising sign which incorporates the North Lakes logo as an integral element of the signage, or a sign which includes only a generic reference to the type of product available on the land is not a “third party” advertising sign in terms of the inclusion of the North Lakes logo or the generic product reference.

On- Site Business Advertising:

An on-site business advertising sign is an advertising sign which is limited in its content to the name of a business premises and the name and services offered by the occupants of the business premises. An on-site business advertising sign may also incorporate the North Lakes logo as an integral element of the signage.

Artworks/Murals:

Artwork and murals are architectural graphics and other artworks which do not contain any implied or direct reference to a business undertaking or service or commodity available from a business undertaking. However, artworks and murals may incorporate the North Lakes logo as a supporting or an ancillary element.

3.0 SIGNAGE GUIDELINES

Except in the case of road signs, the following guidelines will be applied to all advertising signage erected in the North Lakes Town Centre Core. The following guidelines are to be read in association with the guidelines contained in Section 7.9.1 of this Sector Plan.

These guidelines are intended to apply for individual signs, but where they form part of a coordinated signage plan, they can be varied.

3.1. Scale and Location of Signs on Buildings

The scale of the sign shall be compatible with the building and building elements on which it is affixed and to which it is in proximity, as well as nearby buildings, streets and other existing signs. Consideration shall be given to the sign's relationship to the overall appearance of the development as well as surrounding development.

The number and area of signs, if specified, are intended to be maximum standards.

3.2. Principal Developer Signs

Within road reservations and on land in ownership of the Council or the principal developer, signage content is limited to the message requirements of the principal developer and traffic control. Generally content of signs within these areas will be restricted to directional information for identifying locations, buildings, services and events. Commercial business names or logos will generally not be permitted except for sponsorships on temporary event signs.

3.3. Traffic Safety

A sign must not obstruct pedestrians' views of traffic or vehicle drivers' views of pedestrians, other traffic or the road ahead. A sign must not create possible confusion for drivers at critical locations such as intersections, traffic signals, or merging and weaving situations eg. red and green lit signage near traffic intersections.

3.4. Installation Fixings

No support, fixing, suspension or other systems required for the installation of a sign shall be exposed, unless designed as an integral feature of the sign. Conduits, wiring, switches etc shall be discreetly placed out of general view.

3.5. Animated Signs

Animated signs, where parts or all of the sign components move, may be acceptable in non-residential environments where no significant adverse impacts are likely to adjacent or nearby sensitive land uses.

3.6. Clutter

The visual amenity of the local area and the effectiveness of the message on the sign will be enhanced by reducing signage clutter. Proposed signs shall be assessed in the context of the number, type, size and location of existing signs on the site and surrounds.

3.7. Illumination

The luminance of an externally illuminated advertisement in the Town Centre Core (measured in candelas per square metre) is not to exceed 500 cd/m².

The luminance level of an advertisement may exceed this level where it can be shown that the increase in luminance level is unlikely to contribute to a traffic hazard or cause an inappropriate loss of amenity.

The external illumination of signs is to be carried out in such a way as to minimise the spill effects beyond the target sign. An illuminated sign must be designed to make the best possible use of the energy efficient equipment and light sources available.

At street level sign illumination is to be consistent with the general level of lighting so as to eliminate shadows and promote the safety of adjoining public areas.

The intensity of lighting and hours of illumination must not unreasonably impact on any residential properties or traffic operations.

3.8. Environmental Controls

A sign must not be nailed or similarly fixed to a tree. Every sign shall be maintained and kept in good repair.

3.9. Performance Controls

Unless otherwise approved under the coordinated signage plan, a proposed sign must meet the performance criteria outlined in the following section. The acceptable standards associated with each type of sign are provided as examples and should not be seen as precluding other solutions. However, where alternative solutions are proposed, the onus will be on the proponent to demonstrate that the relevant performance criteria are met.

SIGNS PERFORMANCE CRITERIA



Signs shall:

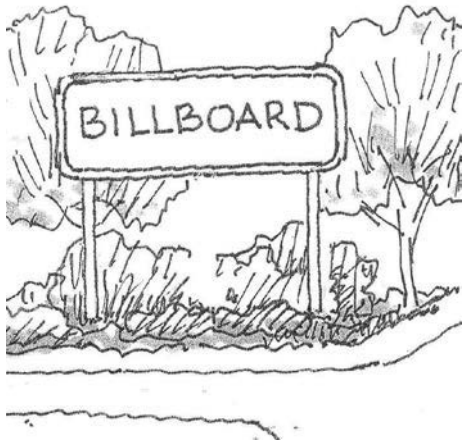
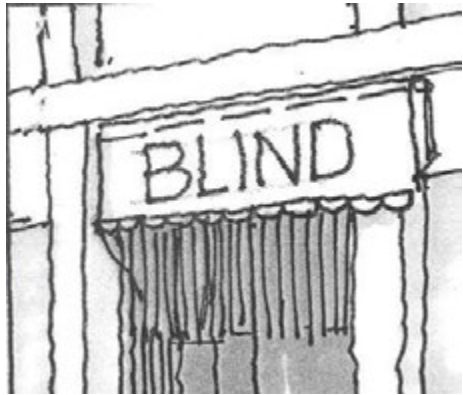
- (i) not create a hazard to traffic or pedestrians**
- (ii) be of character and design standard consistent with the objectives and controls for this sector plan**
- (iii) complement the streetscape and amenity of the locality by virtue of their size, location, illumination, utilisation of complementary shapes, forms, colours, durable quality materials and design concepts**
- (iv) if affixed to a building, complement the architectural style of the building by virtue of their size, location, illumination, utilisation of complementary shapes, forms, colours, durable quality materials and design concepts; and**
- (v) not unnecessarily repeat or duplicate similar signs.**

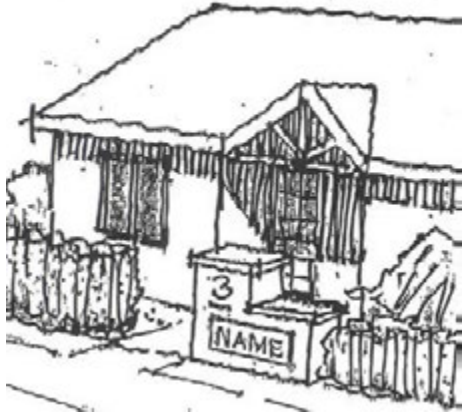
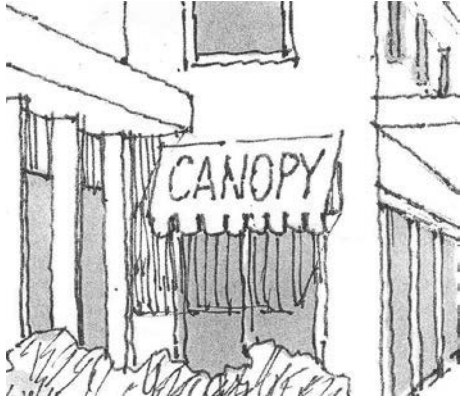
4.0 TYPES OF SIGNS


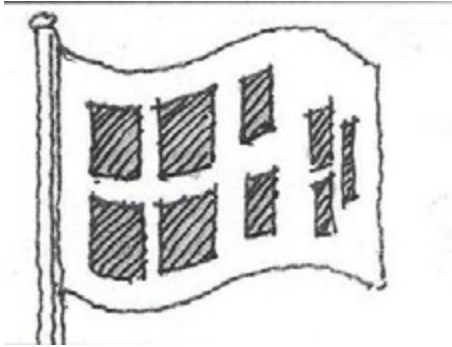
The following schedule sets out maximum criteria for various types of signs. Such signs may be permitted subject to the overall performance standards being met.


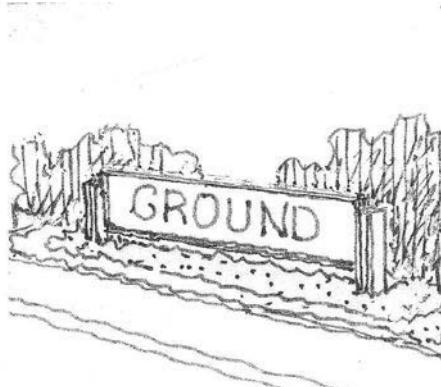
- (i) Above Awning Sign
- (ii) Awning / Fascia Sign
- (iii) Billboard Sign
- (iv) Blind Sign
- (v) Business Plate
- (vi) Canopy Sign
- (vii) Created Awning Sign
- (viii) Flag Pole Sign
- (ix) Footway Sign
- (x) Ground Sign
- (xi) Hamper Sign
- (xii) Highrise Building Sign
- (xiii) Lantern Sign
- (xiv) Pole Sign
- (xv) Projecting Flag Sign
- (xvi) Projecting Sign
- (xvii) Stallboard Sign
- (xviii) Under Awning Sign
- (xix) Vertical Banner Building Sign
- (xx) Vertical Banner Freestanding Sign
- (xxi) Wall Sign
- (xxii) Window Sign



TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>ABOVE AWNING SIGN An Above Awning Sign is an advertisement above an awning, verandah roof or the like.</p>		<p>Maximum size</p> <p>Maximum height above awning</p> <p>Extent</p> <p>Other requirements</p>	<p>Length - 2.7 metres</p> <p>Height - 0.6 metres</p> <p>Width - 0.3 metres</p> <p>1.0 metre</p> <p>Not to project beyond the edges of the awning</p> <p>No unsightly supports or rear view of sign.</p> <p>Any unsightly supports required for structural reasons are to be set back behind edges of sign</p>
<p>AWNING/FASCIA SIGN An Awning/Fascia Sign is an advertisement painted or otherwise affixed to the fascia of a building, an awning, verandah or return end of an awning.</p>		<p>Maximum extent</p> <p>Maximum height</p> <p>Maximum thickness</p>	<p>Not projecting above or below the fascia</p> <p>0.6 metre</p> <p>0.1 metre out from fascia</p>


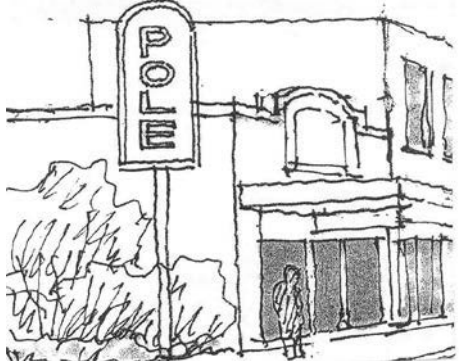
TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>BILLBOARD SIGN A Billboard Sign is a freestanding display surface, the width of which is greater than the height and which may be positioned on the ground or mounted on one or more vertical supports.</p>		<p>Maximum area</p> <p>Maximum height above ground to top of sign</p> <p>Setting</p> <p>Minimum setback from side boundary</p> <p>Front setback</p> <p>Maximum</p>	<p>20 square metres per side for a maximum of 2 sides</p> <p>6.5 metres or the height of a building in close proximity whichever is the lesser</p> <p>As a free standing structure within a landscaped environment and so as not to expose an unsightly back view of the sign to a road or other public places</p> <p>3.0 metres</p> <p>Not to project beyond front property alignment</p> <p>Generally no billboard shall be erected on a site along which are located Pylon or Large Pylon signs unless the frontage exceeds 100m in which case a separation of 60m must be achieved.</p>
<p>BLIND SIGN A Blind Sign is an advertisement painted on or otherwise affixed to solid or flexible material suspended from the edge of an awning, verandah or wall.</p>		<p>Minimum clearance between the lower most point of the sign and the footway</p> <p>Maximum number</p>	<p>2.4 metres</p> <p>1 per tenancy frontage</p>

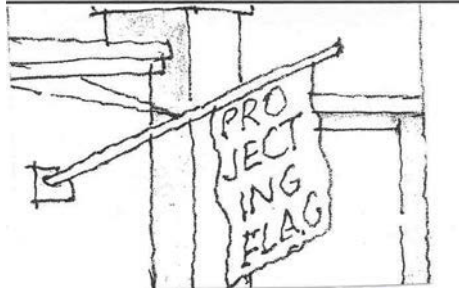
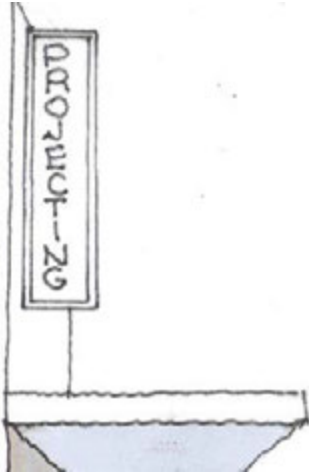
TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>BUSINESS PLATE A Business Plate is a small advertisement identifying the name and/or trade, business or calling of the occupant or business premises. A Business Plate may be painted or affixed to a wall.</p>		<p>Maximum surface area of sign residence in a residential area Maximum surface area per business occupant of premises in commercial and mixed use areas</p>	<p>0.3 square metres 0.3 square metres</p>
<p>CANOPY SIGN A Canopy Sign is an advertisement, painted or otherwise affixed, to a canopy, whether the canopy is constructed from flexible or solid material.</p>		<p>Minimum clearance between the lower most part of the sign and the footway Maximum number</p>	<p>2.4 metres 1 per tenancy frontage</p>



TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>CREATED AWNING LINE SIGN A Created Awning Line Sign is an advertisement attached to and extending beyond a fascia of an awning or the like.</p>		<p>Extent</p> <p>Maximum area</p> <p>Minimum clearance</p>	<p>Not more than 0.6 metre above the fascia to which it is attached</p> <p>The created area is not to exceed 25% of the fascia</p> <p>2.4 metres to the footpath pavement</p>
<p>FLAG POLE SIGN A Flag Pole Sign is a fabric sign hung from a pole.</p>		<p>Maximum surface area</p> <p>Maximum height above ground</p>	<p>3.0 square metres</p> <p>6.5 metres if planted in the ground</p>

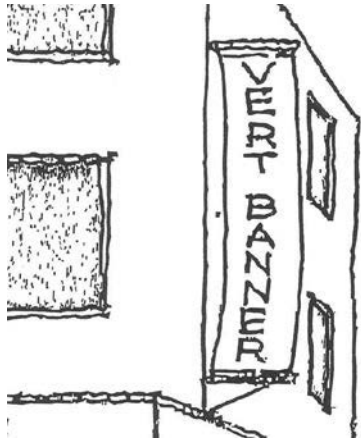
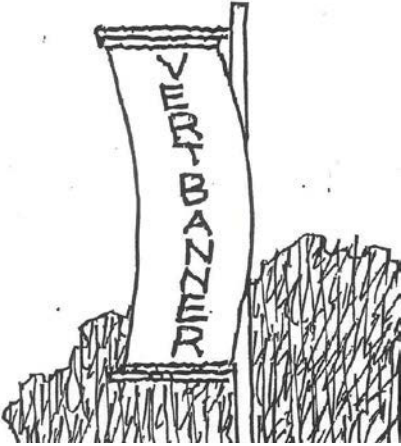
TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>FOOTWAY SIGN A Footway Sign is a portable, freestanding advertisement, normally supported by an 'A' or inverted 'T' frame, and typically displayed on a footway.</p>		<p>Maximum size</p> <p>Maximum number</p> <p>Location</p> <p>Other requirements</p>	<p>Height - 1.0 metre Width - 0.6 metre Depth - 0.6 metre</p> <p>1 per tenancy</p> <p>A Footway Sign on a footway is to be positioned near the kerb (but not closer than 0.25 metre) so as to leave clear passage for pedestrians along the footway, particularly the visually disadvantaged who rely on clear passage along the frontage of shops.</p> <p>No footway sign is to be positioned so as to obstruct, clutter or detract from street landscaping, furniture or artwork</p> <p>A Footway Sign not to be located on a public road.</p> <p>A Footway Sign is not to have moving, rotating or animated parts, such as a spinner sign. A Footway Sign is to be displayed only during trading hours and is not to be used for the display of merchandise</p>
<p>GROUND SIGN A Ground Sign is a monolithic sign which, in effect, sits on or rises out of the ground.</p>		<p>Setting</p> <p>Maximum height</p> <p>Maximum surface area</p> <p>Maximum setback from side boundary</p> <p>Maximum number</p>	<p>Erected within a landscaped environment.</p> <p>Not erected to expose an unsightly back view of the sign.</p> <p>When in a residential area, only permitted where used in a name of a multi-unit development site</p> <p>1.8 metres</p> <p>10 square metres</p> <p>3 metres</p> <p>One per frontage for frontages up to 100 metres</p> <p>For frontages over 100 metres, spacing of signs to be no less than 60 metres</p>



TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>HAMPER SIGN A Hamper Sign is an advertisement, painted or otherwise affixed, between a door head and an awning, or their equivalent levels.</p>		<p>Maximum thickness Maximum Extent</p>	<p>0.3 metre from the face of the wall The size and form are to be compatible with the building on which they are located.</p>
<p>HIGH RISE BUILDING SIGN A High Rise Building Sign is an advertisement naming or identifying a high rise building by the use of a logo or the like.</p>		<p>Maximum extent Maximum number Other requirements</p>	<p>Contained within the actual or created outline of a building or appears as if it was part of the original building if part of a structure creating a changed building outline One per building frontage A High Rise Building Sign is not to contain third party advertising</p>

TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>LANTERN SIGN A Lantern Sign is a translucent lighting fixture displaying the name and/or trade, business or calling of the occupant.</p>		<p>Maximum number for a Home Occupation or Business</p> <p>Maximum edge dimension of lantern</p> <p>Maximum height</p> <p>Maximum illumination</p>	<p>One</p> <p>0.5 metre (ie to fit into a Cube of 0.5 x 0.5 x 0.5 metres)</p> <p>2 metres</p> <p>Not greater than a standard 100 watt incandescent bulb</p>
<p>POLE SIGN A Pole Sign is a freestanding sign mounted on one or more vertical supports which has a smaller surface area and a lower height than a Pylon/Column sign.</p>		<p>Maximum number</p> <p>Aspect</p> <p>Maximum surface area</p> <p>Maximum height above ground</p> <p>Minimum setback from side boundary</p> <p>Setting</p>	<p>One two-sided pole sign per allotment street frontage</p> <p>Not erected to expose an unsightly back view of the sign</p> <p>2.4m² per side for a maximum of two sides.</p> <p>4.5 metres</p> <p>3 metres</p> <p>Erected within a landscaped environment</p>

TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>PROJECTING FLAG SIGN A Projecting Flag Sign is a non-illuminated, wall-mounted corporate flag.</p>		<p>Maximum size Maximum number Minimum spacing Minimum clearance</p>	<p>0.3 square metre per face 4 per site 2 metres 2.4 metres to the footpath pavement.</p>
<p>PROJECTING SIGN A Projecting Sign is a double-faced sign projecting at right angles to a wall and fixed to the wall. A Projecting Sign is not an Under Awning Sign.</p>		<p>Minimum clearance between the lowermost point of the sign and the footway Maximum number Orientation Extent Maximum size</p>	<p>2.4 metres One per building frontage Vertical Not projected above the height of the wall to which it is attached Height - 3.0 metres Width - 0.75 metre</p>

TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>STALLBOARD SIGN A Stallboard Sign is an advertisement, painted or otherwise affixed, at the base of a shopfront, normally below a shop window</p>		<p>Fixing</p> <p>Maximum Extent</p>	<p>Fitted flush</p> <p>The size and form are to be compatible with the building on which they are located.</p>
<p>UNDER AWNING SIGN An Under Awning Sign is an advertisement suspended under an awning or verandah.</p>		<p>Orientation</p> <p>Minimum clearance between the lowermost point of the sign and footway</p> <p>Extent</p> <p>Location</p> <p>Minimum distance between under awning signs</p> <p>Maximum dimensions</p> <p>Minimum setback from side boundary</p>	<p>At right angles to the building frontage</p> <p>2.4 metres</p> <p>Not to project beyond the awning or verandah</p> <p>Central to each shop or tenancy or shopping arcade entrance</p> <p>3.0 metres</p> <p>Length - 2.7 metres or not greater than 75% of the width of the awning or verandah which ever is lesser</p> <p>Height - 0.6 metres</p> <p>Width – 0.3 metres</p> <p>1.5 metres</p>

TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>VERTICAL BANNER BUILDING SIGN A Vertical Banner Building Sign is an advertisement of non-rigid material normally fixed at the top and bottom to brackets projecting from a building.</p>		<p>Maximum height</p> <p>Maximum width</p> <p>Minimum clearance between lowermost point of the sign and the footway</p> <p>Maximum area</p> <p>Minimum spacing between signs</p> <p>Minimum setback from side or rear boundary</p>	<p>Not to project above the height of the adjacent part of the building to which it is fixed and not to exceed 5 metres above ground level</p> <p>0.75 metre</p> <p>2.4 metres</p> <p>2.4 square metres</p> <p>6.0 metres</p> <p>3.0 metres</p>
<p>VERTICAL BANNER FREESTANDING SIGN A Vertical Banner Freestanding Sign is an advertisement of non-rigid material normally supported at two or more locations from brackets extending from a freestanding pole.</p>		<p>Maximum height (above ground level to top most support)</p> <p>Maximum width</p> <p>Minimum clearance between lowermost point of the sign and the footway</p> <p>Minimum spacing between signs</p> <p>Minimum setback from side boundary</p> <p>Maximum surface area</p>	<p>5.0 metres</p> <p>0.75 metre</p> <p>2.4 metres</p> <p>6.0 metres</p> <p>3.0 metres</p> <p>2.4 square metres</p>

TYPE OF SIGN	EXAMPLE OF TYPE OF SIGN	ACCEPTABLE STANDARD FOR SPECIFIC SIGN STYLE	
<p>WALL SIGN A Wall Sign is an advertisement, painted or otherwise affixed, flat to a wall.</p>		<p>Maximum thickness (or projection from wall) Maximum number Maximum surface area Location</p>	<p>0.3 metre One per tenancy 20% of wall space or 6 m², whichever is the lesser Ground floor level and first floor level and not to project beyond the edge of the wall.</p>
<p>WINDOW SIGN A Window Sign is an advertisement, painted or otherwise affixed, to the glass of a display window.</p>		<p>Maximum surface area of sign</p>	<p>25% of the area of the glass panel or panels on which it is displayed</p>

APPENDIX F

PROPOSED METES & BOUNDS DESCRIPTION