

MANGO HILL INFRASTRUCTURE DEVELOPMENT CONTROL PLAN

Sector Plan No. 001 - 3000

for

Town Park Sector

Lakeside Residential Precinct

Mango Hill Development

23 January 2002

(Approved without conditions by Council on 4 May 1999, incorporating amendments approved by Council on 18 October 1999 (MP99/3513) and incorporating amendments approved by Council on 23 January 2002)

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1.0 Introduction

- 1.1** The Mango Hill Infrastructure Development Control Plan (DCP) provides for the creation of a sector within a precinct. The area of the sector may be chosen by the principal developer. The principal developer must then prepare a sector plan and lodge it with Council for approval in accordance with the relevant provisions of the DCP.
- 1.2** A sector plan is the final plan in the plan making process. Its purpose is to provide the code of development for the land in the sector. It will form the basis for assessment of development applications.
- 1.3** To the extent this sector plan provides development standards which are inconsistent with those in the planning scheme, local laws, policies and codes, the standards in this sector plan prevail as provided by clause 1.11 of the DCP.
- 1.4** To the extent this sector plan does not provide development requirements, then the provisions of the planning scheme relevant to the particular form of development will apply as also provided by clause 1.11 of the DCP.
- 1.5** The principal developer has created a sector to be known for planning purposes as the Town Park Sector. This document constitutes the sector plan for the Town Park Sector.
- 1.6** The location of the sector within the DCP area and the Lakeside Residential Precinct (the precinct) is shown on Figure 1.

2.0 Sector Plan Context

- 2.1** The Town Park Sector is located in the central southern part of the Lakeside Residential Precinct and generally forms part of the main low lying overland flow path within the precinct. The sector forms part of the Open Space land use element, and lies between the Town Centre Frame and the Urban Residential Area land use elements. The location of the sector within the precinct plan is shown on Figure 2. The area of the sector is 9.5 hectares.
- 2.2** The plan in Figure 3 shows the final boundaries of the Open Space land use element relative to this sector. The Proposed Metes and Bounds Description of the sector is provided in Annexure A.

3.0 Desired Environmental Outcomes

3.1 General

In relation to the land use element of Open Space, the DCP provides for the following general desired environmental outcome:

“to provide a comprehensive and integrated system of open space fulfilling aesthetic, recreation, conservation, transportation and environmental management functions for the DCP area”

3.2 Specific

The DCP provides for a number of specific desired environmental outcomes of which the following are relevant to this sector:

- “(a) to integrate the open space system, as a key structural element, with other elements of the DCP area such as the transport network and the community facilities network;*
- (c) to provide visual relief and aesthetic amenity to the urban landscape as part of the integrated approach to planning, design and development of the DCP area;*
- (d) to provide for a wide range of satisfying, structured and unstructured recreation opportunities for residents;*
- (e) to ensure that, through integrated planning and good design, recreation opportunities offered in the open space system will be rewarding and can be pursued safely by the public;*
- (g) to integrate pedestrian and bicycle modes of transport within the open space system, linking urban residential areas with local community facilities, major community facilities, the MIBA and the town centre; and*
- (h) to use the open space system as an effective means for maintaining high levels of environmental quality through water management, habitat protection, wildlife corridors and acoustic buffering.”*

4.0 Planning Intent

- 4.1** Clause 9.2 of the DCP provides an outline of the planning intent for the Open Space land use element. It is intended that a full range of open space opportunities be conveniently available to the community as it develops. This includes the town parklands which will comprise a series of interconnected landscaped boulevards, plazas and urban open spaces within and adjacent to the town centre. The town park, in conjunction with the linear park system, is intended to service open space, recreational and environmental needs at the district level.
- 4.2** Development of the Town Park Sector and its integration with adjacent linear open space will be the first stage of environmental protection and regeneration of flora and fauna ecosystems which were almost completely obliterated by the commercial pine tree operations previously conducted on the DCP area. This will be achieved by improving existing overland flow paths by excavation and shaping, yet retaining as much as possible the natural undulating terrain and establishing trees and shrubs endemic to the area.
- 4.3** The focal point of the sector will be a large, approximately 5 hectares, water body having the dual function of stormwater management and providing an attractive landscape setting and outlook. This water body may include one or a number of special feature elements, such as urban artworks within the water or fountains, for enhanced visual interest. It will be surrounded by various uses envisaged by the common intents for the town park and adjacent linear open space, including: trunk cycle and pedestrian pathways; landscaped open space areas offering viewing opportunities as well as opportunities for unstructured leisure such as picnics, barbecues and spontaneous sport; an outdoor plaza area; pontoons and jetties; an environmental boardwalk; and possibly small beaches (provided access and water quality issues in relation to the beaches can be satisfactorily resolved). These may be complemented by possible future small scale commercial concessions such as parkland restaurants and catering premises.
- 4.4** The Town Park Sector will be developed in stages related to the timing of development of the adjacent town centre frame and urban residential areas. The first stage will be completed in conjunction with the adjacent principal developer's sales and information centre and first stages of residential development. It will basically consist of the lake and edge landscape treatments, development of an outdoor plaza adjacent to the sales and information centre, and possibly picnic and playground facilities. Advanced planting and grass seeding will occur in the balance area of the sector, with subsequent staged landscape development to be undertaken generally in conjunction with the development of each new sector fronting the town park.

5.0 Development and Landscape Concept

5.1 Development Concept

The Town Park Sector is proposed to be developed as one of the principal open space features of the DCP area and will commence the establishment of the continuous landscaped open space system which will “tie” the individual residential villages and non-residential land use elements together.

The development of the sector will evolve over a period of time with the key elements being:

- (i) creation of the non-contact water body (including edge treatments and structures such as jetties, boardwalks and small beaches), and associated stormwater management system;
- (ii) establishment of an attractive landscape setting both within the water body (e.g. macrophyte planting for water quality control) and the areas surrounding the water body, including hard landscape elements such as paths, playgrounds, shade and shelter structures, outdoor plaza area and the like; and
- (iii) possible construction of buildings and related structures such as restaurants, kiosks, and/or other forms of catering premises, which may be integrated into the landscaped open space, subject to an assessment of the environmental effects and the approval of Council.

In order to fulfill its stormwater management, ornamental and recreational functions, the water body will be constructed with a combination of hard and soft edge treatments. In areas where presentation of open water is desirable, including the sales and information centre and outdoor plaza area frontages, hard edge treatments such as timber boardwalks, rock wall or concrete revetments will be suitable. Other areas where water quality management is the primary objective will likely utilise soft edge treatments such as grassy banks, reeds and sedges. In areas adjacent to these soft edges aquatic plants will be established to assist the reeds and sedges to fulfill vital environmental management roles by helping to remove from the water excessive levels of phosphorus and nitrogen. The slow velocity of these areas of water will assist in the settlement of suspended solids.

Soft edge treatments such as small beaches may be provided at appropriate locations around the edge of the water body, particularly in areas close to residential development. These will be gently sloped into the water and consist of sand or fine gravel. A limited number of jetties and pontoons may also be integrated into the lake edge treatments.

In addition, a number of artificial wetlands will be created around the perimeter of the water body to act as filtration and treatment systems for the subcatchments of which they form part, thus acting as primary treatment areas for water discharging from the subcatchment before entering the water body proper. These artificial wetlands will be planted and maintained with a range of plants, including reeds, sedges and water tolerant trees and shrubs such as casuarinas, melaleuca and the like. Boardwalks and viewing platforms may also be incorporated into these wetlands.

Permeating the areas adjacent to the water body, pathways for cycle and pedestrian use will be established. These will form part of the trunk pathway network in the DCP area, as well as connecting to the local pathway network where residential development adjoins the sector. The trunk pathway within the sector will generally be of impermeable surfaces such as concrete or bitumen seal, however, permeable surfaces may be provided, at Council's discretion, for trails where environmental priorities prevail.

The parkland setting surrounding the water body will incorporate a range of vegetated and grassed open space areas suitable for picnics, casual sporting opportunities, barbecues and small social gatherings. A range of parkland facilities will be provided in strategic locations typically in association with structured play areas for children.

As this sector will provide a major element in the series of interconnected open spaces linked to the town centre core, it will contain a range of more formal urban park facilities. This may include ornamental/floral gardens in a structured, landscape setting incorporating sculptures and other similar works of art. Cafes and other catering premises, which can take advantage of outdoor settings and views over the ornamental water body, may eventually be located within the town park. It is also intended that the town park will be a suitable venue for occasional markets and other temporary cultural and community events.

The town park will incorporate a gently sloping outdoor plaza overlooking a performance area which may protrude into the water body. This performance area may be enhanced with special lighting effects. Given its location adjacent to the sales and information centre, it is likely that the outdoor plaza area will become an important meeting place where residents of the DCP area can come together for occasional cultural, community and promotional events.

5.2 Landscape Concept

The landscape design of the sector will emphasise the re-establishment and management of continuous corridors of trees, shrubs and grassland surrounding the ornamental water body, which will encourage the reintroduction of fauna and flora ecosystems, and provide natural outlooks from adjacent urban development. It will eventually merge with the major open spaces which adjoin the sector to the east and west, so as to enhance its open park character and water features. The landscape design of the sector must also reflect the landscape concept plan for the precinct.

The broad intents and objectives of the landscape concept plan will be achieved in this sector by:

- (i) creating areas of grassland, shrubs and trees which merge with one another much as they do in nature as part of the environmental rehabilitation strategy for the DCP area and to improve the microclimate;
- (ii) treating sympathetically the natural undulating topography which is reminiscent of elements of a pastoral landscape;
- (iii) utilising existing natural drainage patterns for the creation of the water body and for water quality treatment purposes;
- (iv) planting predominantly native trees, shrubs and groundcovers primarily of local or South-East Queensland endemic species so as to recreate to the extent possible the natural environment before the commercial pine forest activities began;
- (v) using themed planting at key locations throughout the town park, including large evergreen or ornamental feature trees;
- (vi) utilising form, texture and colour of planting so as to create interest, contrast, mood, transitional space, and framed and screened views;
- (vii) establishing a forward planting program (where appropriate) for later stages of the town park to ensure maturity of plantings and the landscape setting as early as possible;
- (viii) installing a range of robust outdoor furniture for recreational and leisure use to enhance the multiple functions and visual image of the park as a whole;
- (ix) carefully designing and siting any parkland commercial buildings (if developed) so that the town park develops a distinctive architectural vocabulary; and
- (x) integration of hard and soft landscaping elements in a sensitive and harmonious manner.

It is a fundamental requirement of the landscape concept that there is a strong continuity of design and finishes between individual items. All elements of street and park furniture and hardscape elements such as paving, lighting, walls and park signage, are to be coordinated and generally made to blend with other similar objects and their surroundings.

6.0 Land Use Rights

- 6.1** Clause 2.4.9 of the DCP requires the final specification of land use rights for land in a sector chosen from the supplementary table of development in the DCP for the particular land use element. If a purpose set out in column B of that supplementary table of development is not nominated for land in the sector, then that purpose thereafter for that land becomes permissible development (column C).
- 6.2** Land within the sector may be used for the purposes specified in column A of the supplementary table of development for the Open Space land use element which is the subject of this sector plan.
- 6.3** The following purposes in column B of the supplementary table of development for the Open Space land use element are nominated for the land in this sector:
- educational establishment
 - outdoor recreation

The other purposes set out in column B of the supplementary table of development for the Open Space element are permissible purposes for land in this sector which is within the Open Space land use element (i.e. they become column C purposes). Of these column C purposes, occasional market, restaurants and catering premises integrated into the parkland setting are considered to be acceptable future uses, provided they are in keeping with the parkland character and do not cause unreasonable impacts on the amenity of adjacent residential development.

- 6.4** The Supplementary Table of Development (Open Space Element) setting out the final specification of land use rights for land in this sector is contained in Annexure C.

7.0 Development Requirements

7.1 Introduction

Clause 2.4.2 of the DCP requires a sector plan to specify development requirements for land in the sector. Clause 1.11 of the DCP provides that to the extent a sector plan does not provide these provisions, then the provisions of the planning scheme will prevail.

7.2 General Requirements

The requirements for development specified in the planning scheme apply to development in this sector, except where inconsistent with requirements specified in clause 7.3 or the design and siting guidelines in Section 8 or where relaxations are granted in accordance with Section 10 of this sector plan.

For the purposes of this clause, where relevant:

- (i) references in the planning scheme to a zone are to be taken as a reference to the special development zone;
- (ii) references in the planning scheme to a local store are to be taken as a reference to a shop.

7.3 Specific Requirements

The following specific requirements apply to development within this sector:-

7.3.1 Subdivision Requirements

The land is, so far as possible, to be contained in one lot for future dedication to the Crown for park purposes. The exception to this requirement is where Council consents to commercial buildings (eg. restaurant and catering premises) within the town park, in which case additional lots may need to be created.

If the land in the sector is to be subdivided, then the minimum area, frontage and depth of proposed lots is to be determined by Council having regard to the proposed use of the lots.

Land within the sector not included in developable lots or access road is to be transferred to the Crown for park and must, so far as possible, be in one parcel.

7.3.2 Vehicular and Pedestrian Access

- .1 Vehicular access to any part of the sector is limited to the following:
 - (i) maintenance and emergency vehicles;

- (ii) areas set aside for parking motor vehicles, setting down passengers or sightseeing; and
 - (iii) parking and service access required for commercial parkland facilities (eg. catering premises), if developed in the town park.
- .2 External pedestrian access into the sector is to be provided generally at the Pedestrian Pathway Connection Points shown on the Sector Plan Map.
 - .3 Additional pedestrian connections may be provided in locations and to details approved by Council.
 - .4 Pedestrian and Bicycle Paths within the sector must be provided generally as shown on the Sector Plan Map in order to provide free, unobstructed access to the various facilities and spaces provided.

7.3.3 Building Locations and Setbacks

- .1 Locations for the development of small scale buildings for commercial facilities (eg. restaurant or catering premises) may only be approved with the consent of Council. The location of any such buildings must take account of topography, drainage, services, orientation, microclimate considerations, vehicular access, amenity considerations, pedestrian movement patterns, streetscape and landscape design, neighbouring site development and the overall legibility and parkland character of the sector.
- .2 Landscape and recreational structures such as pergolas, sheltered seating, shade structures, boat ramps, jetties, pontoons, sculptural elements, picnic facilities, playground equipment, fountains and the like, may be provided throughout the sector. A desirable node for these parkland structures is shown indicatively on the Sector Landscape Plan, although other locations may be acceptable subject to the approval of Council.

7.3.4 Building Height

- .1 The maximum permissible number of storeys for any buildings in the sector is two (2).
- .2 The maximum wall height of the buildings above natural ground level must not exceed 10 metres. Vertical features may extend above the buildings provided they are integrated with the built form and the park surrounds.

7.3.5 Outdoor Plaza Area

- .1 The preferred location for the development of an outdoor plaza area within the town park is shown on the Sector Plan Map. Other locations may be identified within the sector for these more formal outdoor spaces, provided they are integrated with the overall parkland design.
- .2 A performance area or stage may be constructed partially in the lake to accommodate occasional events ranging from promotional activities to plays and musical performances.
- .3 The outdoor plaza and associated performance area must remain open to the elements. Permanent roofing and other structures are not permitted. Temporary roofing for the duration of performances will be acceptable. Permanent support piers for temporary roofing or decoration may be permitted provided they are integrated with the performance area, lakefront promenade and park surrounds.

7.3.6 Lighting Glare Management

- .1 No person will cause, carry out or erect a light source in such a manner that light emanating from the source is a nuisance.
- .2 All lighting other than public lighting (e.g. road lighting) is to comply with AS4282 - 1997 *Control of the obtrusive effects of outdoor lighting*. The curfew hours applicable to this sector plan are 10pm to 6am, unless otherwise varied by Council.
- .3 Lighting must provide the level of illumination necessary for safe pedestrian movement through the sector.
- .4 Other than street lighting, external lighting sources in public spaces generally should be concealed and light beams diffused.
- .5 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.
- .6 Permanent strobe, laser, flashing, oscillating, moving or alternating lights are generally not permitted, unless it can be demonstrated to Council that such lighting effects would not unreasonably impact on the amenity of adjacent housing development. Special effects lighting may also be integrated into the town park provided Council is satisfied that amenity considerations have been addressed.

8.0 Design and Siting Guidelines

Clause 2.4.2 of the DCP requires a sector plan to specify for land in the sector design and siting guidelines, landscaping requirements and signage guidelines. The following guidelines relating to buildings, structures and landscaping apply to all development within the sector:

8.1 Buildings and Structures

8.1.1 Design Theme

- .1 The buildings, park structures and other architectural elements must:-
 - (i) achieve a site design which provides a sense of identity for the town park;
 - (ii) reflect a low rise character in keeping with both the lakeside and parkland setting, with an emphasis on a predominantly horizontal building mass and architectural features and only limited use of vertical elements integrated into the design as special features; and
 - (iii) establish a harmonious, high quality and coherent overall built environment to create a distinctive architectural vocabulary within the parklands and to complement the desired urban character of the adjacent town centre frame and urban residential areas.

- .2 In particular, the design of parkland buildings (if developed) must:-
 - (i) address any park frontages, including the use of architectural and landscape treatments which contribute to the creation of active pedestrian frontages;
 - (ii) incorporate open framed construction elements creating an architecture which softens the visual impact of buildings in the park; and
 - (iii) utilise a variety of architectural components beyond the main building facade, such as terraces, decks, pergolas, entry porticos, retaining walls and stairs, to create an area of transition between the building proper and adjacent landscaped open spaces.

8.1.2 Building Materials, Types, Colours and Quality

- .1 Natural and visually recessive materials, such as painted or natural timbers, clay tiles and pavers, terracotta, natural sandstone, split faced masonry, exposed aggregate concrete and masonry walls rendered and coloured to be visually recessive, are the preferred materials for buildings and structures. Limited use of other materials for practical reasons or to provide contrasting effects is acceptable. Promotional and other display advertising features are not considered to be building materials for the purposes of this sector plan.
- .2 Consistent with the preferred materials range, natural and recessive colours which are sympathetic to the textures of the landscape are the preferred major roof colours. Major wall colours may incorporate a broader palette of colours including light colours. Brighter colour accents are permitted for minor detail elements such as tower elements, window and door frames, columns, handrails and ornamental features, primarily to provide increased visual interest and variety, and to enhance the architectural qualities of the development.
- .3 The major materials and colours selected for any building development in this sector must not be highly reflective.
- .4 All materials must be clean and free from defects, except where recycled materials or natural materials with roughened surfaces form an integral part of the design strategy.

8.1.3 Plant and Equipment

Plant and equipment must comply with the following requirements:-

- .1 All air conditioning/ventilation plant and other equipment located on the roof or located externally around any commercial buildings (if developed) must be treated as an integral part of the building form and screened from view from external roads and the surrounding parklands by metal fences or louvre panels coloured to match the roof (if on the roof) or otherwise to match with surrounding materials.
- .2 If located externally around the building it must be positioned and housed so as not to cause nuisance or disturbance to persons or property not connected with the development and to the reasonable satisfaction of the Council.

- .3 If satellite dishes are installed, they must be located in visually unobtrusive locations, preferably near screens to plant or service areas. Where located on roofs, satellite dishes must be positioned to reduce visibility from the adjacent roads or public open space, and where practicable, located away from the side walls, parapets or eave lines of the building.

8.1.4 Building Design for Climate

- .1 Any buildings and structures within the park must incorporate appropriate responses to the South-East Queensland climate. This may include the use of decks, pergolas, overhangs, screens, shade structures and semi-enclosed outdoor spaces, to allow enjoyment of the outdoors while also providing relief from the sun, wind and rain.
- .2 Suitable landscape elements must be incorporated to enhance the building design's response to the climate by providing further sun protection and to minimise the impact of strong winds.

8.2 **Lake Edge Treatments**

8.2.1 Design

- .1 The lake edge may utilise a variety of treatments and plant materials which vary in character to reflect different waterway locations and integrate well into the natural context of the major open space system. The generalised locations of hard edge and soft edge treatments around the lake are shown on the Sector Landscape Plan (refer Figure 5).
- .2 The waterbody interface with the urban residential frontage is to generally be natural and free flowing in shape and utilise a number of soft edge treatments, including slashed grass, reeds and sedges, or areas of Melaleuca and other suitable plantings, except in the areas where open water appearance is desired.
- .3 Ponds and artificial wetlands which intercept run-off prior to entering the lake and drainage system, are to have a natural appearance with a combination of boardwalks, natural rock edges and undefined soft edges. Once established, these water bodies will support wildlife and blend with the natural open spaces and the lake. The design of the waterbody, wetlands and lake edge treatments is to be responsive to ongoing lake management and maintenance requirements.

- .4 Where an open water appearance is desired along parts of the town centre frame frontage, a hard urban edge treatment is to be constructed, combining a hard-edged promenade with a variety of more informal rock edges and soft planting around the lake generally where it extends to the west beyond the sales and information sector. Boardwalks and promenades provided as part of the lake edge treatment should utilise rock or timber materials or concrete revetments to maintain a visually recessive appearance.

8.3 Landscaping

8.3.1 Design Strategy

- .1 Landscaping is an integral part of the total design of the DCP area and the landscape in this sector must be consistent with the landscape design strategy shown on the Sector Landscape Plan.
- .2 Landscaping within the sector must:
 - (i) unify the sector through planting type, texture, colour and hard landscaping elements;
 - (ii) be in scale with the buildings and outdoor spaces and mitigate the visual impact of buildings and structures on the parklands;
 - (iii) create a comfortable and attractive environment;
 - (iv) ensure that planting effects are contextually appropriate within the broader landscape strategy for the DCP area;
 - (v) ensure predominantly low maintenance, natural planting effects and open space areas;
 - (vi) achieve an aesthetic balance of en masse groundcover planting, shrub planting and canopy tree planting;
 - (vii) address the landscaping of the various areas as shown on the Sector Landscape Plan in accordance with the requirements of this subsection; and
 - (viii) ensure that plant species are chosen which are compatible aesthetically and ecologically with each of the other species chosen for the various areas.

8.3.2 Internal Landscape

The sector must be landscaped in accordance with the design principles shown on the Sector Landscape Plan (refer Figure 5). Landscape areas must be planted in accordance with the following requirements:

.1 *Pedestrian Entry Points*

Major pedestrian entry points are to be clearly identifiable utilising elements such as signage, gateway structures, bollards, hard landscape treatments and typically formal or semi-formal planting strategies.

.2 *Bridge Area*

The bridge structure over the overflow weirs forming the east bank of the lake is to incorporate natural materials such as stone facing or split face masonry blockwork, and timber boardwalks with hand rails that allow views to the lake and parklands. The incorporation of low level planting in planter boxes along the bridge should be acceptable provided views to the lake are maintained.

.3 *Outdoor Plaza Area*

This space is to be open in character, incorporating predominantly soft surfaces which allow for people to congregate for occasional community events or performances. Terraces for seating, feature paving, lighting and decorative furnishings such as banners, sculptures and the like may be incorporated into this area along with complementary planting elements.

.4 *Lakefront Promenade Area*

A minimum 3 metre wide boardwalk/promenade adjacent to the lake edge fronting the sales and information sector and outdoor plaza area is to be provided to allow for a consistent urban, open thoroughfare. This area may be incorporated with seating and park furniture items, as well as a formal alignment of shade trees. Views to the lake are to be largely unobstructed along this area. Timber viewing platforms extending over the lake may also be constructed. The incorporation of feature paving highlights and/or banding, together with small bench seat height retaining walls adjacent to the boardwalk/promenade area are encouraged to create visual interest and extensive seating opportunities.

.5 *Landscape Areas*

Planting is to be grouped so as to create a succession of trees, shrubs and grassland spaces as people move through the town park. Open areas and sightline opportunities are to be provided at regular intervals so that people can orient themselves by means of views internally and externally. These open areas are also intended for informal recreational and leisure purposes.

Park boundaries generally are to be delineated by means of walls, bollards, earth mounding, landscape batters, or planting where there are adjoining streets or land uses where an abrupt change of character might provide hazards to some park users, such as children. This will include predominantly dense planting of landscape batters where constructed along the park edges, to create a landscaped transitional area between parkland and urban development and to soften the visual impact of buildings fronting the park.

The species of evergreen and ornamental flowering trees, shrubs, groundcovers and wetland macrophytes for soft landscape areas throughout the sector are to be selected from the Plant List (refer Annexure B). Plants of similar characteristics may be substituted for a species in the Plant Schedule if approved by Council.

8.3.3 Landscaping and Planting Plan

The final landscape works and planting within the sector, including details on planting size, layout and density, must be carried out in conformity with Landscape and Planting Plans prepared in accordance with the requirements of this sector plan by a qualified Landscape Architect. These plans must be submitted to and approved by the Council at the time of lodging a development application for operational works or building works.

8.3.4 Hard Landscape Elements

.1 *Surface Materials*

- (i) Surface treatments are to be reflective of user type, activity and location. Furthermore, the selection of surface materials must complement the setting, whether in a formal area adjacent to the sales and information centre, hard edge pathways around parts of the lake or possibly an informal natural trail at the western end of the lake. The selection of any surface material is to be based upon safety, durability, cost effectiveness, locational and visual impact considerations.

- (ii) Where practicable, preference is to be given to materials which have compatible finishes and textures to proposed native planting within the open space system of the development.

.2 Fences and Walls

- (i) A range of free standing or retaining walls may be used to establish hard, vertical planes for a number of functions within the landscape, including to manipulate the groundform, define spaces, separate functions, modify micro-climate and provide visual and sitting elements.
- (ii) Wall materials which complement the intended natural character of the parklands, such as split face masonry block, natural stone facing, boulders, rendered masonry and timber, are appropriate.

.3 Park Lighting

- (i) Lighting effects are to be designed and sited to achieve a range of desirable effects. This should include:
 - (a) practical pathway and public area lighting for amenity and safety purposes;
 - (b) the illumination of landscape and built form elements for aesthetic purposes; and
 - (c) special effects lighting for the enhancement of the night-time atmosphere, e.g. to provide a sense of warmth, variety and visual interest in the town park.
- (ii) Permanent lighting effects must not cause unreasonable nuisance to adjacent residents.

.4 Outdoor Fittings and Furniture

- (i) The selection and implementation of site furnishing is to contribute to a unifying theme of site development.

- (ii) In general, robust items are to be utilised in public spaces such as picnic/BBQ areas and semi-enclosed shelters. The form, material and colour selection of these items is to be primarily influenced by the natural character of the open space system which will extend into the residential villages, although more ornate furnishings will be suitable in special areas such as those adjacent to the sales and information centre or within the outdoor plaza and lakefront promenade areas.
- (iii) Selection of materials and the design of items must be based upon practicality and durability, with relatively low maintenance demand.
- (iv) Figure 7 provides examples of desirable design outcomes for park furniture and equipment.

.5 Above Grade Utilities

Above grade utilities, including transformers, electrical and water boxes and meter boxes, must be integrated into the landscape design or screened from adjoining streets, footpaths and building development by landscaping or screen fencing.

8.3.5 Planting Design and Maintenance

.1 Planting Design and Layout

- (i) In overall terms, the planting design for the sector is to reinforce the distinctive character of the community, re-establish landscaped corridors and create pre-determined effects. This may also be aesthetic in its function or to create a mood, provide transitional space, frame and screen views or draw attention to an area such as the lake. The form, texture and colour of planting is to be widely used to create interest and contrast. In terms of functional effects, planting is to also be utilised to create enclosure and assist in microclimate and environmental management.
- (ii) Buildings, landscape structures and planting qualities are to be planned to provide compatibility in form and scale. This will greatly assist appreciation of the context, setting and function of the various component areas of the park development. The sensitive combination of vertical and horizontal elements, light and shade, colour and texture will ensure that the landscape and architectural aspects of the development create a cohesive and harmonious environment.

.2 Forward Planting

In the peripheral areas of the sector beyond the initial stage, forward planting is to be utilised to establish a landscape framework. In this way, appropriate species can be utilised in context with future land uses. This technique has distinct advantages, particularly as planting may be established in future stages of the sector to provide a manageable landscape which can mitigate adjacent development impacts. Furthermore, future planting resources will be provided in a cost-effective manner and these resources can be monitored and amendments made to plant selection, management and maintenance techniques, where appropriate.

.3 Planting Selection and Integration

- (i) Selection from a wide range of planting will be appropriate depending upon the particular characteristics and site conditions of each part of the sector and the need to express special interest features related to the building and landscape design and the various parkland functions (refer Annexure B). In particular, the edge planting treatments at the urban residential interfaces are to achieve softening of the built form and integration of development frontages, esplanade road and the park. Planting effects generally are to be practical, aesthetically appealing and ecologically suitable. To this end, the predominant use of native plant species is preferred.
- (ii) The selective use of other compatible exotic species may be appropriate in some settings provided they offer distinct practical and/or amenity advantages, such as soil binding properties, speed of growth or to provide appropriate accents of colour, form and texture within the framework of native plant material.

.4 Implementation

- (i) The more intensive plant establishment measures, such as temporary protective fencing, imported topsoil and irrigation, will generally be limited to those areas of high importance and visual significance, including the areas adjacent to the sales and information centre.
- (ii) Ripeline planting and direct seeding may be used to re-establish vegetation cover on a broad scale and this technique may be appropriate across the later stages of the town park.
- (iii) Hydromulching/hydroseeding with suitable grass and native tree, shrub and groundcover seed mixes may be utilised on slopes with

batter areas which require regeneration and protective plant stabilisation.

- (iv) In general, plant loss may be compensated by overplanting and allowing natural selection to cull plant density and layout. This method of mass planting will be effective in areas of future development, for establishment of wildlife corridors and habitats, or any other area where more detailed effects are not required.

.5 *Maintenance and Management*

- (i) Management and maintenance practices are to be durable with due consideration being given to simplicity and speed of maintenance requirements and the aesthetics and practicality of the end result. Maintenance measures are to be in accordance with the relevant provisions of the Infrastructure Agreement and approved maintenance schedules.
- (ii) Within and adjacent to areas of existing vegetation, maintenance and management practices must include the careful monitoring of development activities, especially clearing of areas of remnant vegetation and earthworks, to ensure the implementation of actions that are preventative as well as restorative.
- (iii) Landscape works which require a high degree of attention to maintain appearance must only be utilised where cost and setting warrant as well as to attain a certain standard of community benefit. In general, however, the preference is for low maintenance, natural landscapes, evocative of the natural qualities of the region.

8.4 Signage and Artworks

8.4.1 Signage within the sector must provide:

- .1 visible and legible signs;
- .2 an uncluttered parkland environment (including any signage associated with commercial development sites);
- .3 professional and co-ordinated graphics for the identification of different uses within the sector; and
- .4 signs compatible with their surroundings.

8.4.2 The location, form, scale, materials and colour selection of signage must be in keeping with the parkland architecture and open space setting, and must not dominate the urban landscape at ground level.

8.4.3 Signs must be only for providing direction or information, or identifying component areas and intended uses. Interpretive signage may also be strategically located where practicable within the town park. These interpretive signs could indicate the ecological values and stormwater functions of the lake, as well as identifying various types of planting.

8.4.4 A hierarchy in signage, size, materials and placement is to be utilised to ensure uniformity in style and character. The preferred materials are to be natural in selection and colour. Maintenance requirements are to be carefully considered as durability will be a major cost consideration.

8.4.5 Signage must not extend above the walls or roof fascia lines of buildings within the park, and no signs are permitted on the roof of the building or on the roof surface.

8.4.6 Signage must be designed to prevent confusion to visitors or users of facilities within the sector.

8.4.7 All forms of signage other than those permitted by this sector plan are not permitted, except where temporary signs are required for marketing and promotional purposes, occasional markets and other similar community events. Any temporary signs are to be compatible with their surrounds and must not create confusion or obstructions for visitors to the town park.

8.4.8 Works of high quality urban art, including paving patterns, water features and sculptures, are encouraged. These artworks should contribute strongly to enhancing the parkland architecture and landscape, and achieve humanising elements.

8.5 Parkland Development Undertaken in Stages

8.5.1 Development of the sector may be undertaken in stages generally in accordance with the following:

.1 *Stage 1*

- (i) construction of the lake including edge treatments;
- (ii) possible construction of the outdoor plaza and performance area;
- (iii) possible construction of landscape structures, shelters, picnic facilities, playground equipment and the like around the eastern half of the lake;
- (iv) construction and planting of wetlands A & C as shown on the Sector Plan Map;
- (v) landscape planting of the area to the east of Wetlands A & C; and
- (vi) grass seeding and planting with tube stock.

.2 *Future Stages*

- (i) Completion of landscaping, both soft and hard elements, for that part of the parkland adjacent to development of an urban residential or town centre frame sector.

.3 *Timing of Stages*

- (i) Stage 1 of the development of the sector is to be undertaken in conjunction with the development of the Sales and Information Sector and Residential Sector One.
- (ii) Future stages will most likely be undertaken in conjunction with the development of adjoining sectors of the town centre frame and urban residential areas.

9.0 Infrastructure Obligations of the Principal Developer

9.1 Infrastructure to be Provided

The infrastructure required to be provided by the principal developer to serve the sector includes internal and external infrastructure to be provided in accordance with 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:

9.1.1 Roads

Construct the following roads including carriageways, stormwater drainage, verges, bus setdowns, footpaths, bikeways, landscaping, traffic control devices and streetlighting. Any reference to initial construction in this section is a reference to construction approved by Council in accordance with the rezoning conditions and MHIA.

- .1 A four lane median divided arterial road (currently referred to as Town Centre Drive) between Node H and Node I in accordance with the MHIA and State Government Agreements. The initial standard of construction will be a two lane median divided road;
- .2 Anzac Avenue/Town Centre Drive intersection to suit the construction of Town Centre Drive between Nodes H and I and the requirements of the Department of Main Roads and Queensland Transport, including associated auxiliary right turn, left turn and stand-up lanes and traffic signals;
- .3 A two lane sub-arterial or trunk collector standard road (currently referred to as Lake Road South) between Node I and Node J in accordance with the MHIA. Part of this road may be constructed as a two lane median divided road with the approval of Council;
- .4 A four lane median divided arterial road (currently referred to as Lake Road North) between Node J and Node K in accordance with the MHIA. The initial stage of construction will be a two lane median divided road between nodes J and K;
- .5 Intersections at Nodes I and J to suit the standard of construction of adjacent roads including, if required, auxiliary left turn, right turn and stand-up lanes and traffic signals. The staging of traffic signals may be undertaken in accordance with a timetable approved by Council in accordance with the MHIA;

- .6 Bikeways and pathways, including commuter and recreational bikeways, along the full length of the park around the Lake or adjacent roads as well as along the above roads in accordance with the MHIA; and
- .7 A bikeway/pedestrian underpass under the road between Nodes J & K at the time of the initial construction of this section of road.

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 will 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.

9.1.2 Water

Reticulated potable water is to be provided to facilities within the sector located at:-

- .1 picnic and playground nodes; and
- .2 commercial development sites (only if developed with the prior consent of the Council).

9.1.3 Sewerage

Sewerage reticulation is to be provided to toilet facilities within the sector (if developed).

9.1.4 Park

- .1 The requirements for park provision throughout the DCP area are set out in the MHIA. Land within the sector which does not become included in developable lots or road reserves is to be dedicated to the Crown as park. The estimated total area of park provided within this sector is 9.5 hectares, of which 5.0 hectares is above the Q20. The calculation of 5.0 hectares includes that part of the sector occupied by the town park lake which is above the pre-development Q20 flood level, as provided for in the MHIA.
- .2 Park enhancement works are to be provided in accordance with the MHIA.

9.1.5 Stormwater

The principal developer must comply with the provisions of the Stormwater Management Plan for Tributary C as approved by Council and construct stormwater management works so far as they relate to this sector. This includes construction of the lake in accordance with the Stormwater Management Plan.

The linear park system of which the town park forms part is an integral element of the Stormwater Management Plan and conveys stormwater from the adjacent land areas downstream. As well as the central lake feature, the Town Park Sector contains stormwater devices such as pipe outlet details, gross pollutant traps, stormwater filtration wetlands, and open channel paths for overland flows from upstream sectors, including overland flows in the outdoor plaza area.

The provisions of the Stormwater Management Plan override Clause 45(a) of the planning scheme.

The principal developer must construct stormwater drainage systems as required by the MHIA and, to the extent it is not applicable, Council's Design Manual.

9.2 Infrastructure Affected by Development

Without the provision of additional infrastructure, the development of this sector may place demands on the following infrastructure:

- .1 Roads external to the DCP area and the sector;
- .2 Water Supply infrastructure;
- .3 Sewerage infrastructure;
- .4 Community facilities;
- .5 Electricity supply;
- .6 State Government infrastructure.

The infrastructure described in clause 9.1, together with the obligations of the principal developer under the MHIA, is required to mitigate the adverse affects on such infrastructure.

9.3 How the Required Infrastructure Relates to the Infrastructure Agreement

The MHIA describes the infrastructure which must be provided by the principal developer as part of his obligation to provide infrastructure as envisaged by chapter 12 of the DCP. The works described in clause 9.1 are the principal developer's obligations under the MHIA in so far as they relate to this sector.

Infrastructure Agreements are also to be entered into by the principal developer with the Department of Main Roads and Queensland Transport. Infrastructure requirements of those State Government Departments will be imposed as conditions of relevant development approvals relating to this sector.

9.4 Program for Infrastructure Provisions

The principal developer will provide all the infrastructure referred to in clause 9.1 at times to satisfy the requirements of the MHIA which provides for the infrastructure to be constructed to meet the rate of development in the sector. Initial infrastructure works are anticipated to be constructed by 31st October 1999. The staging of the roadworks where approved by Council will be as described in clause 9.1.1 and the MHIA.

Except as described elsewhere in this clause, no other works depend on the provision of this infrastructure.

Council is to use its best endeavours, including its powers of resumption if lawful, to obtain all necessary rights to permit the construction of water and sewerage infrastructure if such infrastructure is constructed on land external to the DCP area over which Council does not have such rights.

9.5 Water and Sewerage Demands

The water and sewerage demands are based on the provision of public facilities such as toilet facilities, drinking fountains, taps and irrigation systems.

In accordance with the MHIA, no demand will be assigned to this park area for water supply and sewerage services.

10.0 Relaxation Power

Council may relax the requirements contained in this sector plan or the planning scheme if the Council or its delegated officer forms the view that the relaxation sought:-

- .1 is minor in nature;
- .2 is unlikely to unduly affect the amenity of adjoining or adjacent properties having due regard to the character of the area and the nature of land use in the vicinity;

- .3 is unlikely to place additional demands of any significance on infrastructure;
- .4 is unlikely to give rise to any additional traffic hazard or parking requirement; and
- .5 is in accordance with the relevant intents and performance criteria contained in the precinct plan.

11.0 Definitions

If a term used in this sector plan is defined by the DCP or the Infrastructure Agreement then that term or expression has the meaning given to it by the DCP or the Infrastructure Agreement unless the context otherwise requires.

ANNEXURE A

PROPOSED METES AND BOUNDS DESCRIPTION OF THE SECTOR

METES & BOUNDS

TOWN PARK

FROM THE POINT OF COMMENCEMENT BEING ON AMG COORDINATES
EASTING – 501382.922 METRES, NORTHING – 6987455.178 METRES, THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 107°00'00"
FOR A DISTANCE OF 69.706 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 99°00'00"
FOR A DISTANCE OF 128.678 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 144°00'00"
FOR A DISTANCE OF 63.08 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 99°00'00"
FOR A DISTANCE OF 95.045 METRES (MORE OR LESS), THENCE
IN A NORTH EASTERLY DIRECTION AT A BEARING OF 54°00'00"
FOR A DISTANCE OF 44.553 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 99°00'00"
FOR A DISTANCE OF 10.959 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 135°04'35"
FOR A DISTANCE OF 27.181 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 99°00'00"
FOR A DISTANCE OF 126.698 METRES (MORE OR LESS), THENCE
IN A NORTH EASTERLY DIRECTION AT A BEARING OF 69°00'00"
FOR A DISTANCE OF 16.729 METRES (MORE OR LESS), THENCE
IN A NORTH EASTERLY DIRECTION AT A BEARING OF 39°00'00"
FOR A DISTANCE OF 29.924 METRES (MORE OR LESS), THENCE
IN A NORTH EASTERLY DIRECTION AT A BEARING OF 9°00'00"
FOR A DISTANCE OF 38.646 METRES (MORE OR LESS), THENCE

IN A NORTH EASTERLY DIRECTION AT A BEARING OF 54°00'05"
FOR A DISTANCE OF 11.313 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 99°00'10"
FOR A DISTANCE OF 11.653 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 113°00'00"
FOR A DISTANCE OF 14.109 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 142°00'00"
FOR A DISTANCE OF 12.269 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 189°00'00"
FOR A DISTANCE OF 25.33 METRES (MORE OR LESS), THENCE
IN A SOUTHERLY DIRECTION AT A BEARING OF 177°45'00"
FOR A DISTANCE OF 27.577 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 166°30'00"
FOR A DISTANCE OF 27.576 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 155°15'05"
FOR A DISTANCE OF 27.577 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 144°00'00"
FOR A DISTANCE OF 91.881 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 259°48'55"
FOR A DISTANCE OF 38.384 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 254°51'30"
FOR A DISTANCE OF 4.32 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 244°56'45"
FOR A DISTANCE OF 4.32 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 235°02'00"
FOR A DISTANCE OF 4.32 METRES (MORE OR LESS), THENCE

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IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 225°07'15"
FOR A DISTANCE OF 4.32 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 215°12'30"
FOR A DISTANCE OF 4.32 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 210°15'05"
FOR A DISTANCE OF 32.766 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 144°00'00"
FOR A DISTANCE OF 31.602 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 234°00'00"
FOR A DISTANCE OF 37.943 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 252°31'00"
FOR A DISTANCE OF 20.168 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 286°46'25"
FOR A DISTANCE OF 9.056 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 313°41'55"
FOR A DISTANCE OF 15.117 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 302°50'15"
FOR A DISTANCE OF 30.894 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 354°59'10"
FOR A DISTANCE OF 36.371 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 293°31'10"
FOR A DISTANCE OF 13.329 METRES (MORE OR LESS), THENCE
IN A NORTH EASTERLY DIRECTION AT A BEARING OF 11°59'20"
FOR A DISTANCE OF 11.615 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 102°00'00"
FOR A DISTANCE OF 4.346 METRES (MORE OR LESS), THENCE

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IN A NORTH EASTERLY DIRECTION AT A BEARING OF 12°00'00"
FOR A DISTANCE OF 1.54 METRES (MORE OR LESS), THENCE
IN A SOUTH EASTERLY DIRECTION AT A BEARING OF 102°01'05"
FOR A DISTANCE OF 8.242 METRES (MORE OR LESS), THENCE
IN A NORTH EASTERLY DIRECTION AT A BEARING OF 12°01'00"
FOR A DISTANCE OF 3.369 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 296°35'15"
FOR A DISTANCE OF 4.579 METRES (MORE OR LESS), THENCE
IN A NORTH EASTERLY DIRECTION AT A BEARING OF 27°02'00"
FOR A DISTANCE OF 0.615 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 296°37'10"
FOR A DISTANCE OF 23.412 METRES (MORE OR LESS), THENCE
IN A NORTHERLY DIRECTION AT A BEARING OF 0°00'00"
FOR A DISTANCE OF 3 METRES (MORE OR LESS), THENCE
IN A WESTERLY DIRECTION AT A BEARING OF 270°00'00"
FOR A DISTANCE OF 59 METRES (MORE OR LESS), THENCE
IN A SOUTHERLY DIRECTION AT A BEARING OF 180°00'00"
FOR A DISTANCE OF 3.625 METRES (MORE OR LESS), THENCE
IN A WESTERLY DIRECTION AT A BEARING OF 269°38'00"
FOR A DISTANCE OF 1.656 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 230°00'00"
FOR A DISTANCE OF 4.498 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 191°59'50"
FOR A DISTANCE OF 14.429 METRES (MORE OR LESS), THENCE
IN A WESTERLY DIRECTION AT A BEARING OF 270°00'00"
FOR A DISTANCE OF 12.697 METRES (MORE OR LESS), THENCE

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IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 192°00'00"
FOR A DISTANCE OF 5.623 METRES (MORE OR LESS), THENCE
IN A WESTERLY DIRECTION AT A BEARING OF 270°00'00"
FOR A DISTANCE OF 8.845 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 189°00'00"
FOR A DISTANCE OF 12.193 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 279°00'10"
FOR A DISTANCE OF 3.5 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 189°00'00"
FOR A DISTANCE OF 5 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 279°00'10"
FOR A DISTANCE OF 69.298 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 324°00'00"
FOR A DISTANCE OF 9.504 METRES (MORE OR LESS), THENCE
IN A NORTH EASTERLY DIRECTION AT A BEARING OF 9°00'00"
FOR A DISTANCE OF 21.213 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 324°00'00"
FOR A DISTANCE OF 50.36 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 279°00'00"
FOR A DISTANCE OF 50.722 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 234°00'00"
FOR A DISTANCE OF 50.36 METRES (MORE OR LESS), THENCE
IN A SOUTH WESTERLY DIRECTION AT A BEARING OF 189°00'00"
FOR A DISTANCE OF 21.213 METRES (MORE OR LESS), THENCE
IN A NORTH WESTERLY DIRECTION AT A BEARING OF 279°00'00"
FOR A DISTANCE OF 61.114 METRES (MORE OR LESS), THENCE

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IN A NORTH WESTERLY DIRECTION AT A BEARING OF 324°00'00"
 FOR A DISTANCE OF 76.254 METRES (MORE OR LESS), THENCE
 IN A NORTH WESTERLY DIRECTION AT A BEARING OF 320°33'10"
 FOR A DISTANCE OF 19.507 METRES (MORE OR LESS), THENCE
 IN A NORTH WESTERLY DIRECTION AT A BEARING OF 313°55'45"
 FOR A DISTANCE OF 20.499 METRES (MORE OR LESS), THENCE
 IN A NORTH WESTERLY DIRECTION AT A BEARING OF 307°12'50"
 FOR A DISTANCE OF 20.499 METRES (MORE OR LESS), THENCE
 IN A NORTH WESTERLY DIRECTION AT A BEARING OF 300°30'00"
 FOR A DISTANCE OF 20.499 METRES (MORE OR LESS), THENCE
 IN A NORTH WESTERLY DIRECTION AT A BEARING OF 293°47'10"
 FOR A DISTANCE OF 20.499 METRES (MORE OR LESS), THENCE
 IN A NORTH WESTERLY DIRECTION AT A BEARING OF 287°04'15"
 FOR A DISTANCE OF 16.573 METRES (MORE OR LESS), THENCE
 IN A NORTH WESTERLY DIRECTION AT A BEARING OF 280°08'35"
 FOR A DISTANCE OF 33.921 METRES (MORE OR LESS), THENCE
 IN A NORTH WESTERLY DIRECTION AT A BEARING OF 277°00'00"
 FOR A DISTANCE OF 1.33 METRES (MORE OR LESS), THENCE
 IN A NORTH EASTERLY DIRECTION AT A BEARING OF 17°00'00"
 FOR A DISTANCE OF 109.903 METRES (MORE OR LESS),
 TO THE POINT OF COMMENCEMENT AND CONTAINING AN AREA OF
 10.3621 HECTARES (MORE OR LESS).

We, Pike Miris McKnoulty Pty Ltd A.C.N. 010 370 448 hereby certify that the Metes and Bounds description contained herein has been prepared by the company and the AMG connection used for the commencement point has been determined by field survey.



 Licensed Surveyor/Director

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ANNEXURE B

PLANT LIST

North Lakes

**Annexure B: Plant List -
Town Park Sector**

Botanical Name	Common Name
Trees	
<i>Acacia aulacocarpa</i>	Hickory Wattle
<i>Acacia fimbriata</i>	Brisbane Wattle
<i>Acacia macraedenia</i>	Zig Zag Wattle
<i>Acacia melanoxylon</i>	Blackwood
<i>Acacia podalyrifolia</i>	Queensland Silver Wattle
<i>Acmena smithii</i>	Creek Lilly Pilly
<i>Agathis robusta</i>	Kauri Pine
<i>Allocasuarina littoralis</i>	Black She Oak
<i>Allocasuarina torulosa</i>	Forest She Oak
<i>Alphitonia excelsa</i>	Red Ash
<i>Angophora costata</i>	Smooth Barked Apple
<i>Araucaria cunninghamii</i>	Hoop Pine
<i>Backhousia citriodora</i>	Lemon Scented Myrtle
<i>Backhousia myrtifolia</i>	Carrol
<i>Banksia integrifolia</i>	Coast Banksia
<i>Barklya syringifolia</i>	Crown of Golf Tree
<i>Brachychiton rupestre</i>	Bottle Tree
<i>Buckinghamia celsissima</i>	Ivory Curl Flower
<i>Callistemon salignus</i>	Pink Tips
<i>Callistemon viminalis</i>	Weeping Bottlebrush
<i>Callitris coumularis</i>	Bribie Island Pine
<i>Castanospemum australe</i>	Black Bean
<i>Casuarina cunningghiana</i>	River She Oak
<i>Casuarina glauca</i>	Swamp She Oak
<i>Cupaniopsis anacardioides</i>	Tuckeroo
<i>Cupaniopsis serrata</i>	Rusty Tuckeroo
<i>Delonix regia</i>	Poinciana
<i>Diploglottis cunninghamii</i>	Native Tamarind
<i>Elaeocarpus reticulatus</i>	<i>Ficus microcarpa</i>
<i>Eucalyptus grandis</i>	Flooded Gum
<i>Eucalyptus intermedia</i>	Pink Bloodwood
<i>Eucalyptus maculata</i>	Spotted Gum
<i>Eucalyptus microcorys</i>	Tallowwood
<i>Eucalyptus propinqua</i>	Grey Gum
<i>Eucalyptus ptychocarpa</i>	Swamp Bloodwood
<i>Eucalyptus resinifera</i>	Red Stingybark
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Eucalyptus signata</i>	Scribbly Gum
<i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Eucalyptus tessellaris</i>	Moreton Bay Ash
<i>Euodia elleryana</i>	Pink Eudora
<i>Ficus benjamina</i>	Weeping Fig
<i>Ficus hillii</i>	Hills Fig
<i>Ficus lyrata</i>	Fig
<i>Ficus macrophylla</i>	Moreton Bay Fig
<i>Ficus obliqua</i>	Small-leaved Fig
<i>Flindersia australis</i>	Crows Ash
<i>Flindersia pimenteliana</i>	Flindersia
<i>Flindersia schottiana</i>	Bumpy Ash
<i>Grevillea baileyana</i>	White oak
<i>Grevillea robusta</i>	Silky Oak
<i>Harpullia penula</i>	Tulipwood
<i>Hibiscus tiliaceus</i>	Cotton-Tree
<i>Hymenoporum flavum</i>	Native Fraxiponia
<i>Jacaranda mimosifolia</i>	Jacaranda
<i>Livistona decipiens</i>	Weeping Cabbage Palm
<i>Lophostemon confertus</i>	Brush Box
<i>Lophostemon suaveolens</i>	Swamp Box
<i>Maeadamia integrifolia</i>	Queensland-Net
<i>Melaleuca linarifolia</i>	Snow in Summer

North Lakes

**Annexure B: Plant List -
Town Park Sector**

Botanical Name	Common Name
<i>Melaleuca leucadendron</i>	Fineleafed Paperbark
<i>Melaleuca quinquenervia</i>	Broadleafed Paperbark
<i>Podocarpus elatus</i>	Brown Pine
<i>Syncarpia glomulifera</i>	Turpentine
<i>Syzygium australe</i>	Scrub Cherry
<i>Syzygium francisii</i>	Giant Water Gum
<i>Syzygium jambos</i>	Rose Apple
<i>Syzygium leuhamii</i>	Small Leaved Lilly Pilly
<i>Syzygium paniculatum</i>	Dwarf Magenta Cherry
<i>Toona australis</i>	Red Cedar
<i>Tristanlopsis laurina</i>	Water Gum
<i>Waterhousia floribunda</i>	Weeping Myrtle
<i>Xanthostemon chrysanthus</i>	Golden Penda
Shrubs	
<i>Alcascia brisbanensis</i>	Cunjewol
<i>Baeckea virgata</i>	Twiggy Myrtle
<i>Baeckea virgata dwarf</i>	Dwarf Baeckea
<i>Banksia Birthday Candles</i>	Dwarf Banksia
<i>Banksia ericifolia</i>	Heath Banksia
<i>Banksia integrifolia</i>	Coastal Banksia
<i>Banksia robur</i>	Swamp Banksia
<i>Banksia spinulosa var collina</i>	Hairpin Banksia
<i>Callistemon Dawson River</i>	Dawson River
<i>Callistemon Little John</i>	Little John
<i>Callistemon Ned Kelly</i>	Ned Kelly
<i>Callistemon pachyphyllus</i>	Bottlebrush
<i>Grevillea "Coconut Ice"</i>	Coconut Ice
<i>Grevillea "Majestic"</i>	Majestic
<i>Grevillea "Robyn Gordon"</i>	Robyn Gordon
<i>Grevillea "Superb"</i>	Superb
<i>Grevillea banksii</i>	Red Silky Oak
<i>Grevillea Honey Gem</i>	Honey Gem
<i>Grevillea Ned Kelly</i>	Ned Kelly
<i>Hovea acutifolia</i>	Pointed Leaf Hovea
<i>Leptospermum flavescens</i>	Tantoon Tea Tree
<i>Leptospermum petersonii</i>	Lemon Scented Tea Tree
<i>Leptospermum Pink Cascade</i>	Pink Cascade
<i>Melaleuca linariifolia Snowflake</i>	Dwarf Tea Tree
<i>Melaleuca nodosa</i>	Ball Honey Myrtle
<i>Melastoma affine</i>	Pink Lasslandra
<i>Pittosporum revolutum</i>	Brisbane Laurel
<i>Pultenaea villosa</i>	Hairy Bush Pea
<i>Syzygium Blaze</i>	Dwarf Lilly Pilly
<i>Syzygium Elite</i>	Compact Lilly Pilly
<i>Syzygium Tiny Trev</i>	Dwarf Lilly Pilly
<i>Tibouchina Jules</i>	Dwarf Lasslandra
<i>Tibouchina urvilliana</i>	Lasslandra
<i>Westringea fruticosa</i>	Wynyabbe Gem
<i>Xanthostemon johnsonii</i>	Forest Grass Tree
<i>Xanthostemon latifolia</i>	Grass Tree
Groundcovers	
<i>Anigozanthus species</i>	Kangaroo Paws
<i>Austromyrtus dulcis</i>	Midyim Berry
<i>Crinum pendunculatum</i>	Swamp Lily
<i>Cymbopogon refractus</i>	Barbed Wire Grass
<i>Dianella caerulea</i>	Flax-Lily
<i>Dianella revoluta</i>	Flax-Lily
<i>Diets grandiflora</i>	Japanese Iris
<i>Evolvulus pilosus</i>	Blue Sapphire

North Lakes

**Annexure B: Plant List -
Town Park Sector**

Botanical Name	Common Name
Grevillea Bronze Rambler	Bronze Rambler
Grevillea Royal Mantle	Royal Mantle
Hardenbergia violacea	Purple Coral Pea
Holichrysum ramosissimum	Yellow Buttons
Hibbertia dentata	Toothed Guinea Flower
Hibbertia scandens	Snake Vine
Kennedia rubicunda	Dusky Coral Pea
Lomandra hystrix	Thinleaved Mat Rush
Lomandra longifolia	Mat Rush
Lomandra multiflora	Long Leaved Mat Rush
Myoporum ellipticum	Creeping Boobiella
Myoporum parvifolium	Myoporum
Pultenea villosa	Hairy Bush Pea
Zierra Carpet Star	Carpet Star
Grasses	
C-1 Bermuda Grass	Hybrid Couch
C-3 Bermuda Grass	Hybrid Couch
Cynodon dactylon	Green Couch
Dactyloctenium australe	Durban Sweet Smother Grass
Danthonia induta	Wallaby Grass
Digitaria didactyla	Blue Couch
Greenlees Park	Hybrid Couch
Pennisetum alopecuroides	Swamp Foxtail
Poa australis	Native Poa
Themeda australia	Kangaroo Grass
Tifgreen 328	Hybrid
Windsor Green	Hybrid Couch
Wintergreen	Hybrid Couch
Sedges/Rushes/etc.	
Baumea articulata	Jointed Twigrush
Baumea rubiginosa	Red Twigrush
Bolboschoenus fluviatilis	Marsh Clubrush
Carex paludosa	Blue Rush
Cyperus eragrostis	Native Umbrella Sedge
Cyperus exaltatus	Cyperus
Cyperus papyrus 'Dwarf'	Dwarf Papyrus
Eleocharis acuta	Common Spike Rush
Eleocharis equisetina	Spike Rush
Iris specios	Water Iris
Isoplepis nodosa	Rush
Juncus usitatus	Common Rush
Monochoria cyanea	Monochoria
Nymphaea caerulea	Cape Waterlily
Nymphaea gigantea	Water Lily
Nymphaea violacea	Native Waterlily
Ottelia ovalifolia	Swamp Lily
Philydrum lanuginosum	Frogsmouth
Phragmites australis	Common Reed
Rotala rotundifolia	Pink Rotala
Schoenoplectus mucronatus	Rush
Schoenoplectus validus	River Clubrush

ANNEXURE C

SUPPLEMENTARY TABLE OF DEVELOPMENT (OPEN SPACE ELEMENT) FOR THIS SECTOR

Supplementary Table of Development (Open Space Element) for Town Park Sector

<p>Purposes for which premises may be erected or used without the consent of Council (Permitted Development)</p> <p>COLUMN A</p>	<p>Purposes for which premises may be erected or used without the consent of Council subject to conditions (Permitted Development subject to conditions)</p> <p>COLUMN B</p>	<p>Purposes for which premises may be erected or used only with the consent of Council (Permissible Development)</p> <p>COLUMN C</p>	<p>Purposes for which premises may not be erected or used (Prohibited Development)</p> <p>COLUMN D</p>
<p>Park Local utilities</p>	<p>Any one or more of the following purposes on land nominated for that purpose or purposes on an approved sector plan.</p> <p>Educational establishment Outdoor recreation</p> <p>Any purpose in this column not nominated for land by the sector plan becomes for that land a permissible development</p>	<p>For land in a sector any purpose not listed in Column A, D or included in Column B but not nominated for that land in an approved sector plan</p>	<p>Accommodation units Adult product shop Air strip Amusement premises Animal husbandry Apartments Aquaculture Associated unit Bulk garden supplies Car park Car wash Caravan Park Casino Cattery Cemetery Commercial services Communication station Community dwelling Concrete batching plant Contractor's depot Convention centre Correctional institution Crematorium Dairy Detached house Display home Domestic storage and recreation structures Duplex dwelling Entertainment library Extractive industry Family day care centre Fuel depot Funeral parlor General industry Hardware centre Hazardous industry Heavy vehicle parking</p>

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
			Heavy vehicle sales Helicopter landing site Home occupation Hospital Host farm Hotel Institution Junk yard Kennels Licenced club Lot feeding Mini-Brewery Motel Motor sport or shooting Office Outdoor Sales Passenger terminal Piggery Place of worship Poultry farm Retail nursery Retail showroom Retirement village Rural industry Service industry Service station Shop Shopping centre Simulated conflict Stable Stock sales yard Technology industry Townhouse units Transport terminal Transportable home village Turf farming Vehicle hire depot Vehicle sales yard Veterinary clinic Veterinary hospital Warehouse

The provisions of the Supplementary Table of Development are subject to section 2.4.9 of the DCP.