MANGO HILL INFRASTRUCTURE **DEVELOPMENT CONTROL PLAN**

Precinct Plan No. 010

for

Major Community Facilities 'B' Precinct

North Lakes Development

20 March 2002

(Approved by Council, under delegation, on 20/3/2002 (MP02/0815))

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1 Introduction

The Mango Hill Infrastructure Development Control Plan (DCP) provides for the creation of a precinct within any part of the DCP area chosen by the principal developer. The principal developer may then prepare a precinct plan and lodge it with Council for approval in accordance with the relevant provisions of the DCP.

The purpose of a precinct plan, as provided for in the DCP, is to show in indicative terms more detail for a planning area within one land use element of the DCP Structure Plan or across a number of elements. This planning area is created to allow for a more detailed interpretation of a part of the structure plan.

The principal developer has created a precinct to be known for planning purposes as the *Major Community Facilities 'B' Precinct*. This document constitutes the precinct plan for the Major Community Facilities 'B' Precinct.

The location of the precinct within the DCP area is shown on **Figure 1**. The area of the precinct is approximately 0.4 hectare although, consistent with DCP requirements, the areas and boundaries shown on the plan are only notional.

Where a discrepancy arises between the performance criteria of this precinct plan and the requirements of the DCP or Mango Hill Infrastructure Agreement, the requirements of the DCP or Infrastructure Agreement will prevail.

2 Structure Plan Context

The precinct is located in the south-eastern part of the DCP area. It is situated in the south-east corner of the Major Community Facilities land use element and is bounded on its eastern and southern sides by Anzac Avenue and the Town Centre Frame respectively. Immediately to the north of the precinct lies the Major Community Facilities 'A' Precinct (Precinct Plan No. 009), which is being developed by Education Queensland for the North Lakes College.

The location of the precinct within the Structure Plan is shown on **Figure 2**.

3 General Desired Environmental Outcomes

In relation to the land use element of Major Community Facilities, the DCP includes the following general desired environmental outcomes:

DCP, Cl.8.1.1:

"(a) To encourage the provision of an appropriate range of community

facilities in convenient locations and in step with residents' needs, integrated with the overall development of the DCP area

(b) To maximise the use and community benefits of community facilities through the provision of multi-purpose premises, the co-location of uses and establishing high levels of accessibility

4 Planning Intent

The DCP provides a number of specific desired environmental outcomes, which are relevant to this sector. They are:

DCP, Cl. 8.1.2:

- "(a) To integrate community facilities with the public transport system, the road network and the open space network.
- (b) To ensure, within the context of a growing population and changing demography, that an appropriate range of community facilities and services are provided within convenient reach of, and which remain highly accessible to residents of, the DCP area and nearby urban areas.
- To ensure that capital and physical resources are utilised effectively and (c) efficiently in meeting the needs for community facilities.
- (d)To co-ordinate the planning and development of integrated community facilities, drawing upon the benefits of co-location and multiple use of shared facilities."

5 **Development Intent**

5.1 **Development Context**

Figure 3 shows the urban design concept for the Major Community Facilities 'B' Precinct in relation to its wider development context.

The location of the precinct in relation to Anzac Avenue, the Town Centre Frame and the Major Community Facilities 'A' Precinct, warrants a strong integration between the design and siting of development and landscaping of both the proposed internal road frontage and the external road frontage (Anzac Avenue). The elevated nature of the precinct, relative to much of the Town Centre Frame and other parts of the DCP area, also warrant a strong landscaped influence on the development within the precinct.

5.2 Concept Overview

The Major Community Facilities 'B' Precinct may be developed as a public utility installation (eg. a small, modular electricity sub-station). This facility will initially gain vehicular access off Anzac Avenue, subject to the approval of the Department of Main Roads, with access ultimately gained via the internal road network.

Figure 4, Precinct Plan Map, allows for a development concept comprising one or a number of low-rise buildings set on a landscaped lot. A landscaped buffer zone will extend around but within the external boundary of the precinct. If the precinct is developed as a public utility installation, an external transformer and associated equipment may be located adjacent to each of the buildings and screened from external view by landscaping and/or screening devices.

The precinct plan shows the proposed land use, together with structuring elements in sufficient detail to allow the preparation of a more detailed sector plan. The areas within the precinct intended for development, landscaping and access, are indicative only and subject to variation following detailed design studies.

The sector plan will provide more detail on the precise location of buildings, plant and equipment, access and vehicle standing areas, and landscaping.

5.3 Development Principles

The key principles which have determined the urban design structure for the precinct plan are explained below:

5.3.1 Land Use Context of Precinct

The precinct will be surrounded by community uses in the Major Community Facilities 'A' Precinct and commercial uses and other mixed uses in adjacent Town Centre Frame Precincts. This mix of activities on nearby land will dictate that any development of the precinct be sensitive to the overall development character of the town centre frame and the major community facilities.

5.3.2 Situation of the Precinct

The situation of the precinct, in relation to other parts of the DCP area, is such that it will likely be visible from a number of vantage points within the DCP area, particularly from the residential areas on the northern edges of Lake Eden, and from the Major Community Facilities 'A' Precinct which is being developed as the North Lakes College to the north of the precinct.

The precinct is situated in a prominent location along the Anzac

Avenue frontage of the DCP area. The topography of the precinct is such that the land slopes away from Anzac Avenue towards the north. The Anzac Avenue frontage presents a key aspect of the North Lakes development as a whole. Development of the precinct must not detract from this aspect, and should enhance it primarily in terms of small scape buildings which are subordinate to landscape treatments.

5.3.3 Internal and External Townscapes

Development of the precinct will contribute to the streetscape character of the internal road network. The form, materials and colours of buildings and other structures will be integrated with the precinct's landscaping and adjacent or intended street landscaping to enhance, and not detract from, the townscape of the town centre frame and the major community facilities land use elements.

Development of the precinct also will be sensitive to the external townscape of Anzac Avenue and the aspects and views into the DCP area from this major road.

6 Precinct Plan

6.1 Introduction

Figure 4 provides a more detailed interpretation of the land use planning and intent for a part of the North Lakes Structure Plan.

6.2 Land Use

The sector plan stemming from this precinct plan will establish the specific land use rights for the precinct. The general land use intention for the precinct is use for public utility installations.

Other uses which could be made of the land will include those uses referred to in the Supplementary Table of Development in the DCP as modified by a subsequent sector plan.

6.3 Transport & Access

The precinct is situated in the south-eastern corner of the DCP ara adjacent to the Major Community Facilities land use element, as shown on the DCP Structure Plan. Subject to the approval of the Department of Main Roads, the precinct will gain interim access directly off Anzac Avenue. It will ultimately be accessed from its western frontage to the internal road network.

The proposed access to the precinct from Anzac Avenue is shown on

Figure 4. Access to development within the precinct is to be provided with sufficient sight lines and vehicle turning areas to avoid potential conflicts with traffic using this major road.

No provision for pedestrian or bicycle movements through the precinct is to be made, owing to considerations of public safety and crime prevention.

6.4 Landscape Concept

The landscape concept for the precinct addresses the following:

- (i) the need for an effective landscaped screen to the precinct so that potential visual impacts of development can be minimised from the commencement of operation;
- the need to present an attractive development within a primarily (ii) native landscaped setting, to the frontages of Anzac Avenue and the internal road;
- the need for landscaping of both the precinct and the adjacent streets (iii) to be consistent with the over-riding character of the Town Centre Frame and the Major Community Facilities 'A' land use elements; and
- (iv) the strategy of establishing tiers in the vegetation, by the use of taller elements in the form of canopy trees combined with massed ground covers and small shrubs, while the middle storey remains relatively clear of vegetation.

The over-riding intention, through the landscape concept, is to ensure that development in the precinct does not obtrude into the townscape of this part of the DCP area.

6.5 **Engineering Services**

6.5.1 Sewerage

Sewerage infrastructure will be provided by a gravity sewer connected to the TMI trunk gravity sewer. The gravity sewer will ultimately drain further to the north to Pump Station PS180, the generalised location of which is shown on **Figure 8**.

Due to the low level of utilisation, a septic sullage system or portable chemical toilet facility within the sector will meet on-site sewerage needs.

6.5.2 **Water Supply**

A trunk water main has been constructed along Anzac Avenue and this will be utilised to service the precinct. The water connection will be designed in accordance with Council's Design Manual and Policy WS W13.

Until such time as the sector is connected with the internal road network and the associated infrastructure services, a 25mm connection to the water main along Anzac Avenue may be provided. If that interim connection cannot be provided, a water tank within the sector will supply water needs on site until such time as the internal road and associated underground services are constructed, and the sector connected to them.

6.5.3 Energy & Communications

Electricity supply will be readily available within the precinct. It will be provided by Energex or another appropriate supplier of electricity. The primary supply to the DCP area is ultimately proposed to be augmented by a major high voltage line located along the North-South Arterial Road and via Anzac Avenue to the public utility which may be located in the precinct.

Communications and cable services will be installed underground. The network will be installed prior to the commencement of the use of the precinct.

Communication towers are not proposed to be located within this precinct.

6.5.4 Stormwater Management

The precinct will be serviced by an underground pipe system designed to take a 1 in 5 years storm. Overland flow will be accommodated in roadways, pathways or open space linkages within adjacent areas connecting to the linear park.

Until such time as the precinct is connected to the internal road network and the stormwater discharges into the road network, stormwater will discharge from the precinct into the adjacent vacant land currently owned by the principal developer. The absorptive surface area within the precinct is to be maximised, in order to minimise run-off from the precinct.

7 Design Intents & Performance Criteria

7.1 Major Community Facilities Land Use Element

The general design intents and performance criteria for various design elements address the design and siting measures outline in section 8.4 of the DCP. The precinct plan provides the basis for the sector plan measures.

Compliance with the objectives and performance criteria contained in the precinct plan will achieve an acceptable level of performance in the planning, design and development of the Major Community Facilities 'B' Precinct.

7.2 **Building Set Backs**

Objective

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

Performance Indicator

The building set backs are to ensure that buildings, plant and equipment are sufficiently set back from the road frontages to:

- permit safe and convenient access from the principal road frontage of Anzac Avenue; and
- achieve effective landscaped screens of the development when (ii) viewed from any road frontage.

7.3 **Site Coverage**

Objective

To ensure that development in the precinct is in keeping with the character and intensity of development in the town centre frame and the major community facilities land use elements.

Performance Indicator

For development in the precinct, the site coverage may be up to 40% of the total site area, provided that appropriate landscaping is provided in accordance with section 5.4(d) of the DCP.

7.4 **Design of Buildings & Other Structures**

Objective

To promote designs of buildings and other structures that minimise undesirable visual impacts and contribute towards the overall urban character of the major community facilities.

Performance Indicators

The design of buildings and other structures in the precinct is to:

- incorporate roofs which complement the existing roof forms in the (i) town centre frame and major community facilities areas (eg. Sales and Information Centre, North Lakes College);
- (ii) present a form consistent with, and contributing to, the character and architecture of the town centre frame;
- not detract from the streetscape or townscape of the town centre (iii) frame by reason of height, discordant architecture and overt architectural expressions of an industrial nature; and

(iv) incorporate eaves, hoods, screens or other design measures to provide articulation to the facades and to relieve the potentially adverse visual effects of 'public utilities architecture'.

7.5 Landscaping & Townscaping

Objective

To ensure that landscape and townscape outcomes are of a high standard, commensurate with the town centre frame location.

Performance Indicators

Development within the precinct will:

- (i) provide adequate landscaped buffers and screens to the major road frontage with Anzac Avenue and to the minor road frontage with the internal road that will screen the visual impact of development;
- (ii) ensure that any buildings, plant and equipment, and masts, towers or structures, are sufficiently screened from view from both Anzac Avenue and the DCP area to complement, rather than detract from, the town centre frame character; and
- (iii) ensure that site landscaping, while effectively reducing the potential adverse visual impact of development in the precinct, also permits casual surveillance of facilities within the precinct.

7.6 Car Parking, Service Areas & Loading Docks

Objective

To provide safe and efficient car parking, building services and circulation systems for development in the precinct.

Performance Indicators

Development in the precinct will provide car parking areas, turn-around areas and building services that:

- (i) ensure car parking areas are predominantly screened from pedestrian thoroughfares, street frontages and other public spaces, while allowing for some casual surveillance opportunities of such internal car parking and building areas;
- (ii) ensure loading docks, set-down areas and hard-standing areas are effectively screened to mitigate the potential impacts of unsightly appearance, noise and headlight glare; and
- (iii) provide appropriate lighting for safe, after-hours use.

7.7 Signage, Colours & Materials

Objective

To provide adequate, informative and effective signage for development without detracting from the streetscape character of the major community facilities, town centre frame and Anzac Avenue.

To ensure that development in the precinct adopts a range of materials and colours which complement rather than detract from the streetscape of the major community facilities, town centre frame and Anzac Avenue.

Performance Indicators

- (1) Development in the precinct will provide signage which is small-scale, non-illuminated and representative of the corporate identity of the principal users of land only within the precinct.
- (2) Development will adopt a range of materials and colours which:
 - ensure that the materials and colours used for external walls and surfaces of buildings in the precinct are compatible with the overall character of the major community facilities and the town centre frame:
 - (ii) ensure that recessive colours are adopted for all building elements, structures, plant and equipment such that the built form is subservient to the site landscaping; and
 - (iii) does not include highly reflective materials.

7.8 Environmental Management

Objective

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

Performance Indicators

For development in the precinct, environmental management measures are to:

- (i) ensure that environmental management, including mechanisms and landscaping, contribute to, rather than detract from, the visual amenity of the major community facilities and the town centre frame; and
- (ii) ensure that the operations of development do not present an unacceptable level of risk for residents and other occupiers of nearby land.

Further objectives and measures are outlined in Section 8.0, Environmental Management.

8 Environmental Management Objectives

8.1 Stormwater Discharge

Objective

To ensure that stormwater infrastructure, constructed within the catchment of Tributary C, is designed to meet agreed discharge standards for specific stormwater pollutants and that peak flow regimes are at pre-development levels.

Performance Indicators

- (1) Water discharged must meet the requirements of Environmental Protection Policy (EPP) Water, and in particular, must be designed to achieve the following Annual Mean Concentrations at Kinsellas Road:
 - Total Phosphorous 0.1 mg/lTotal Nitrogen 0.75 mg/l
 - Suspended Solids 50 mg/l
- (2) The design parameters for peak flows must not exceed the values in the Stormwater Management Plan for Tributary C as approved by Council.

8.2 Lighting

Objectives

To ensure that lighting associated with development does not create a nuisance, particularly at residential properties.

Performance Indicators

- (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 AS42821997 Control of the obtrusive effects of outdoor lighting.

8.3 Noise

Objectives

To ensure that noise levels emitting from the transformers do not create a nuisance, particularly to adjoining properties.

Performance Indicators

(1) The noise levels emitting from the transformers will comply with the EPA noise limit criteria both day and night.

8.4 Air Quality

Objective

To minimise the effects of construction activities on air quality.

Performance Indicators

(1) Adopt effective air pollution mitigation measures to comply with the Environmental Protection Act 1994, Environmental Protection

Policy (Air) and other relevant legislation from time to time in relation to dust, smoke, fumes and gases.

Construction activities are to comply with Council Policy LP32. (2)

8.5 **Electromagnetic Fields**

Objective

To minimise the emission of magnetic fields from the substation and maintain the levels of emission within recommended exposure guidelines.

Performance Indicators

(1) The electromagnetic field levels are expected to have an upper limit of 4mG around the substation site boundary. The only exception to this upper limit will be the underground cables passing under or running parallel to the site boundary alignment on roads or easements. In this case readings of up to 25mG can be expected within one metre of the cables. In both cases these levels will drop off rapidly with distance.

8.6 **Stormwater Management**

Objective

To manage stormwater flows within and from the precinct so as not to cause a nuisance or annoyance to any person.

To permit the discharge of stormwater from catchments upstream of the precinct, based on development within the upstream catchment existing at the time of preparation of a relevant stormwater management plan for the precinct.

Performance Indicators

- (1) Implementation of management systems which seek to control the quality of surface water in compliance with:
 - (i) the Environmental Protection Act 1994 and the Environmental Protection Policy (Water) and other relevant legislation;
 - (ii) the planning scheme, local laws, the Design Manual and policies except where Clause 2.6 of the Mango Hill Infrastructure Agreement applies;
 - (iii) the Mango Hill Infrastructure Agreement;
 - the performance objectives of the Saltwater Creek (iv) Catchment Management Plan; and
 - the Stormwater Management Plan for Tributary C; (v)
- Control of volumes and flows from the precinct for all storm (2) events so as not to cause nuisance or annoyance to any person.
- (3) Adequate provision during construction to ensure that the landform is stabilised and erosion is controlled in accordance with an erosion

- and sediment control strategy endorsed by Council.
- (4) Identify point sources of pollution in the catchment and minimise their impact until they can be eliminated.

8.7 **Public Safety & Risk**

Objective

To ensure that public safety is not unnecessarily compromised by the construction or operation of development within the precinct.

Performance Indicators

- Adequate safety barriers, or fences, are provided around the (1) perimeter of the precinct to ensure that unauthorised access is not obtained and pedestrian movements are excluded.
- Adequate measures are in place for the safe handling, storage and (2) use of hazardous substances, materials or equipment.
- Adequate measures are in place to retain, collect and ultimately (3) remove in safety such wastes, fire retardants or any other material or substance which might be spilled, used or released to the environment accidentally in the construction or operation of development within the precinct.
- Adherence to a Public Safety and Risk Management Plan endorsed (4) by the Council and the Environmental Protection Agency at all times during the construction and operations phases of development in the precinct.

9 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 precinct includes internal and external infrastructure provisions 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

- No roads external to the precinct are required to be (1) constructed in conjunction with development of the precinct.
- Interim access to the precinct is to be obtained from Anzac (2) Avenue in accordance with the requirements of the Department of Main Roads.

(3) The internal road that will ultimately provide access to the precinct will be constructed when required to access the surrounding town centre frame.

9.1.2 Water

- (1) If not already constructed, construct a water supply network within the DCP area (including those sections of the mains shown on **Figure 7**), necessary to service the anticipated demand within this precinct.
- (2) Make contribution towards water headworks and bulk water supply in accordance with the MHIA.

9.1.3 Sewerage

If not already constructed, construct a sewerage system to service the precinct and make contributions towards sewerage headworks in accordance with the MHIA and unless otherwise agreed with Council:

- (1) if required, construct RM1 as shown on **Figure 8** from pumpstation PS180 to Murrumba Downs;
- (2) if required, construct pump station PS180 shown on **Figure 8**: and
- (3) if required, construct the trunk main TM1 as shown on Figure 8.
- (4) until such time that a reticulated sewerage system is available to this precinct, and due to the low level of utilisation, a septic/sullage system or portable chemical or composting toilet facility within the precinct will meet onsite sewerage needs.

9.1.4 **Park**

The requirements for park provision throughout the DCP area are provided for in the MHIA. No area within this precinct will be dedicated as park.

9.1.5 Stormwater

- The principal developer must comply with the provisions of (1) the Stormwater Management Plan for Tributary C as approved by Council and construct stormwater management works so far as they relate to this precinct. The provisions of the Stormwater Management Plan override Clause 45(a) of the planning scheme.
- Stormwater management works so far as they relate to the (2) precinct are to be provided in accordance with the MHIA, Council's Design Manual and the Stormwater Management Plan for Tributary C, including the construction of all drainage and landscaping works in Tributary C between the precinct and the Road J to B shown in Figure 6.

- 3) In addition, the principal developer must construct stormwater drainage systems and stormwater management systems as required by the MHIA and the Environmental Protection (Water) Policy.
- Until such time as the sector is connected to the internal 4) road network and the stormwater discharges into the road network, stormwater will discharge from the sector into the adjacent Major Community Facilities 'A' Sector (North Lakes College). The absorptive surface area within the sector is to be maximised, in order to minimise run-off from the sector.

9.1.6 **Telecommunications**

An underground communications conduit will be installed to the sector.

9.2 **Infrastructure Affected by Development**

- Without the provision of additional infrastructure, the development (1) of this precinct may place demands on the following infrastructure:
 - roads external to the DCP area and the precinct; (i)
 - water supply infrastructure; (ii)
 - sewerage infrastructure; (iii)
 - stormwater; (iv)
 - (v) parks;
 - (vi) electricity supply; and
 - communications systems. (vii)
- (2) The infrastructure obligations of the principal developer under the MHIA, are to be satisfied in order to mitigate the adverse affects of development of the precinct on such infrastructure.

9.3 **Approval of State Government Infrastructure**

There are no approvals required for State Government infrastructure, other than the approval of the Department of Main Roads for the interim vehicular access from the precinct to Anzac Avenue. Such approval is to be obtained prior to the commencement of the development and use of the precinct.

9.4 How the Required Infrastructure relates to the Infrastructure **Agreement**

- (1) The MHIA describes the infrastructure which must be provided by the principal developer as part of its 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 precinct.
- Infrastructure Agreements have been entered into by the principal (2)

developer with the Department of Main Roads and Queensland Transport. Any infrastructure requirements of those State Government departments relating to this precinct will be provided in accordance with the existing agreements.

9.5 **Program for Infrastructure Provisions**

- (1) The principal developer will provide all the infrastructure referred to in clause 9.1 at times to satisfy the requirements of the MHIA which provides for the infrastructure to be constructed to meet the rate of development in the precinct. Water and phone connections and the levelling of the pad site within the sector are anticipated to be constructed by August 2002.
- Except as described elsewhere in this clause, no other works (2) depend on the provision of this infrastructure.
- (3) Council is to use its best endeavours, including its powers of resumption if lawful, to obtain all necessary rights to permit the construction of water and sewerage infrastructure if such infrastructure is constructed on land external to the DCP area over which Council does not have such rights.

9.6 **Estimated Water and Sewerage Demands**

As required by the Infrastructure Agreement, the principal developer states as follows:-

- (i) For the purpose of assessing water supply capacity, the estimated number of Equivalent Tenements for this precinct is 4;
- (ii) For the purpose of assessing sewerage capacity, the estimated number of Equivalent Persons for this precinct is 3.