

ENGINEERING SERVICES REPORT

ON

PROPOSED SUBDIVISION

LOT 112 DP 1073781

LYONS ROAD, SAWTELL

**Geoff Slattery and Partners Pty Ltd
192 Pacific Highway
COFFS HARBOUR NSW 2450**

JUNE 2010

SERVICES

1. INTRODUCTION

This traffic impact assessment is prepared for use in a Part 3A Project Application to NSW Department of Planning for a residential subdivision at Lot 112 DP 1073781 Lyons Road, Sawtell.

The development is covered by planning documents of Coffs Harbour City Council for residential development and use.

2. PROJECT DETAILS

The site is described as Lot 112 DP 1073781, Lyons Road, Sawtell.

Residential development on the site is proposed as:

151 Torrens title allotments

40 Medium density / strata allotments.

Refer to layout on drawings in Appendix A.

The development is included in Council's Development Control Plan "North Bonville".

3. WATER SUPPLY

3.1 Existing Services

Council has currently constructed a 200mm diameter trunk water main in Lyons Road, with a branch trunk main 150mm diameter into Bambara Drive.

The 150mm main is constructed to the boundary of the proposed development.

3.2 Proposed Development Services

Refer to detail plan in Appendix A for layout details.

Reticulation proposed is for:

- Continuation of the 150mm main on Bambara Drive to the southern end,
- Provide branch services at each proposed cross street,
- Complete a ring main system to all development blocks to enable supply from alternate directions.

As part of the street reticulation system it is proposed to install street hydrant systems at locations to satisfy fire fighting requirements.

3.3 Coffs Harbour City Council Development Control Plan

The Coffs Harbour City Council DCP "North Bonville" covers this development.

Provision has been made in this DCP for the proposed development water supply.

See Appendix B for part copy of DCP.

3.4 Coffs Harbour City Council Development Servicing Plan

The Coffs Harbour City Council Development Servicing Plan "Water Supply" is a citywide plan and includes this development.

As part of the plan contributions are collected from all new developments to cover costs of headworks and trunk reticulation mains. Council's DSP policy is to provide a standard of service that is acceptable for water supply (refer Appendix C for part copy of DSP).

Upgrades as required by this development for trunk mains and headworks are covered by the Developer Servicing Plan.

3.5 Water Supply Conclusion

Water supply is available to the site in sufficient volume and pressure and can be reticulated to all proposed lots.

4. SEWER SUPPLY

4.1 Existing Services

There is currently constructed through the site a 300mm diameter trunk gravity main. This main is available for connection.

The trunk main gravitates to Council pump station Number 22 located in Trond Close.

4.2 Proposed Development Services

Refer to detail plan in Appendix D for layout details.

All of the development can reticulate sewer by the following:

- All lots can be sewerred by gravity mains and connect to the trunk main (except as below),
- In the south west of the site there are 17 allotments that will not gravitate to the system. For these lots it is proposed to install a low pressure system which utilises a small household pump at each lot and a common rising main to a discharge manhole.

4.3 Coffs Harbour City Council Development Control Plan

The Coffs Harbour City Council DCP "North Bonville" covers this development.

Provision has been made in this DCP for the proposed development sewer connection.

See Appendix B for part copy of DCP.

4.4 Coffs Harbour City Council Development Servicing Plan

The Coffs Harbour City Council Development Servicing Plan "Waste Water Treatment and Carrier System" is a citywide plan and includes this development.

As part of the plan contributions are collected from all developments to cover costs of treatment plants, pump stations, and trunk collection mains. Refer Appendix E for part copy of DSP.

Upgrades as required by this development for pump stations, rising mains, and trunk mains are covered by the Developer Servicing Plan.

4.5 Sewer Conclusion

Sewer reticulation connection is available to the site with adequate capacity in the downstream system for the demand.

5. GAS

No reticulated gas supply is available in the Coffs Harbour City area. Consequently no provision has been made for gas supply to the development.

6. ELECTRICAL SUPPLY

6.1 Electrical Supply

There is currently high voltage distribution mains located in Lyons Road and controlled by power authority, Country Energy. Reticulation mains for the existing development are taken from this HV distribution.

Provision has been made in Bambara Drive for underground power connection to this proposed development.

6.2 Proposed Development Service

Electrical power is proposed to be continued from Bambara Drive to service the proposed development.

All power reticulation is to be underground services. Actual layout of power and any upgrade requirements to existing is only available by application to Country Energy after the issue of Development Consent.

7. TELECOM SERVICES

All details of existing services and design details of new developments are only available by application to Telstra after issue of Development Consent.

As now required by Federal Government legislation it is proposed to install pits and conduits throughout the development for installation of cabling by Telstra, and also cabling to suit the high speed network by the National Broadband Network.

Actual layout of Telstra cables and connection to existing facilities is only available by application to Telstra after the issue of Development Consent.

8. WASTE DISPOSAL

The proposed development is part of the North Bonville Development Control Plan Area.

Progressive development of this area will be serviced by Coffs Harbour City Council garbage collection service. This service provides collection for all household waste in a three bin service of recyclables, green and kitchen waste, and non recyclable garbage.

9. SERVICING INFRASTRUCTURE STAGING

Services of water supply, sewer supply, electrical supply, and Telecom can be effectively staged, to enable the orderly construction of works to achieve:

- Extensions of services for supply,
- Completion of various services cross connections,
- Extension of roads to provide effective traffic management.

Allotment staging with services is shown in detail plan in Appendix F.

10. CONSULTATION WITH SERVICE AGENCIES

Coffs Harbour Water controls services of water and sewer for the city area.

Meetings have been held with representatives of Coffs Harbour Water to clarify the connection locations and proposed service demand.

Construction of existing development in Bambara Drive also required liaison with Coffs Harbour Water for construction of the existing trunk water main and sewer to which this development connects.

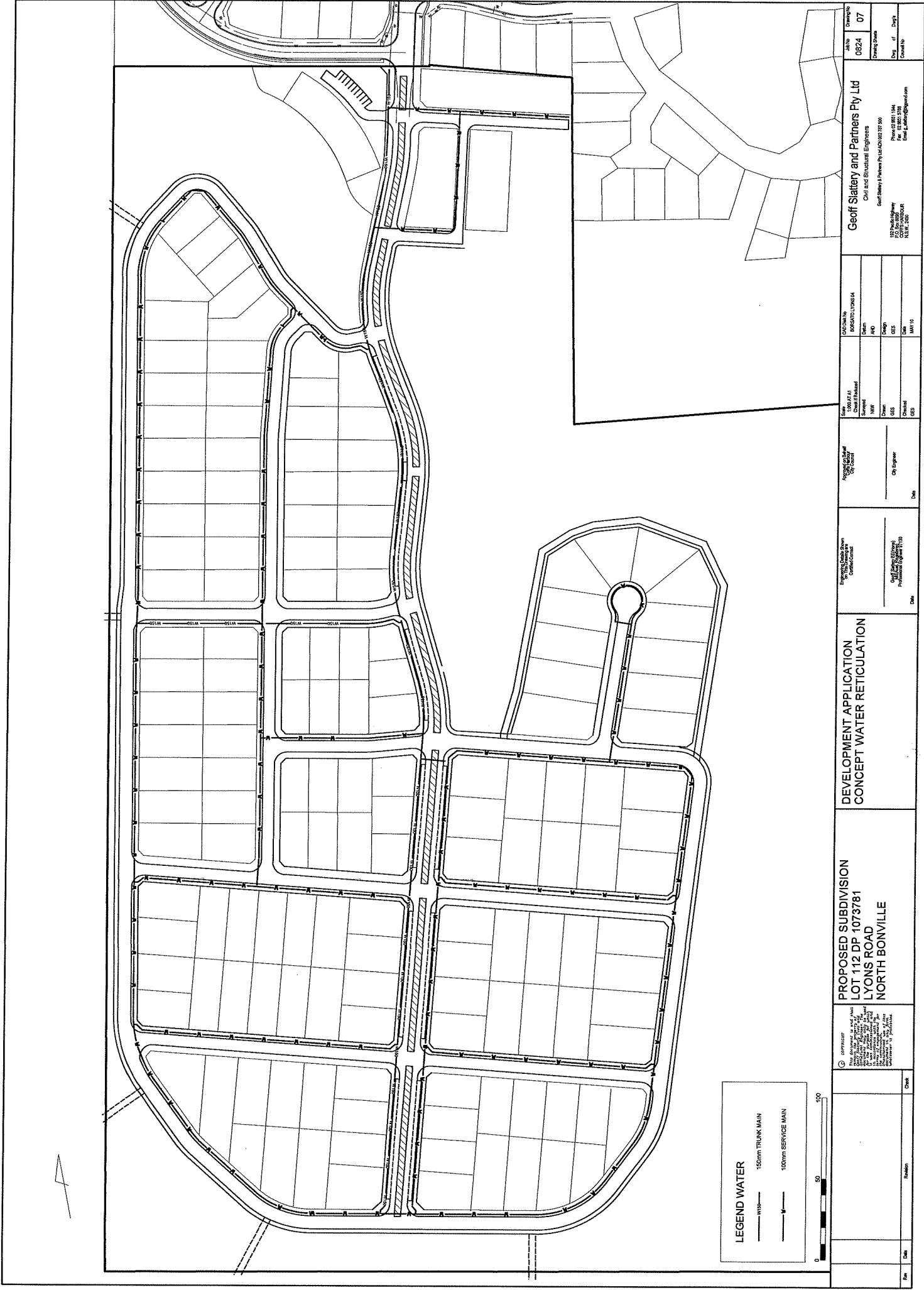
Country Energy controls the supply of electrical services for the city area.

Preliminary discussions only have been held with Country Energy on supply. Connection details and supply facilities (such as HV transformers) are all subject to application after the issue of Development Consent.

Telstra controls the telecom reticulation (through various agencies) for developments. No details will be provided by Telstra until after the issue of Development Consent. However during the construction of previous works in Bambara Drive Telstra were made aware of the future extensions required.

APPENDIX A

WATER LAYOUT PLAN



PROPOSED SUBDIVISION LOT 112 DP 1073781 LYONS ROAD NORTH BONVILLE		DEVELOPMENT APPLICATION CONCEPT WATER RETICULATION		Geoff Slattery and Partners Pty Ltd Civil and Structural Engineers Geoff Slattery & Partners Pty Ltd ACN 002 787 560 125 Pacific Highway PO BOX 5700 CROFTS BEACH NSW 1585		Job No 0824	Drawn By 07
3. SITE PLAN This document is not to be used for any other purpose than the one for which it was prepared. It is the responsibility of the user to ensure that the information contained herein is accurate and up to date. The user must ensure that the information is used in accordance with the relevant legislation and standards.		Engineering Certificate Professional Engineer No 119		Scale AS 1500:2011 1:1000		Date 10/01/2018	
Project Engineer Chris Slattery		Design Chris Slattery		Check Chris Slattery		Date 10/01/2018	
Project Engineer Chris Slattery		Design Chris Slattery		Check Chris Slattery		Date 10/01/2018	

APPENDIX B

**PART COPY
COFFS HARBOUR CITY COUNCIL
DEVELOPMENT CONTROL PLAN
SERVICES**

PART 2 - PLANNING STRATEGY

MASTERPLAN

Objective

To provide an overall plan for the area that enables the integration of existing and proposed development.

Strategy

- ♦ A lot yield of approximately 395 lots with a potential for a minimum of 464 dwellings.
- ♦ Coordinate development of the area in accordance with the Masterplan (refer to Map 2).

HOUSING STRATEGY

Objective

To provide for a variety of housing types and other compatible land uses, protection of residential amenity and a sense of community.

Strategy

- ♦ Permit dwelling houses, dual occupancy and multi-unit housing.
- ♦ Seek to maximise the dwelling yield in the study area.
- ♦ Allow for the provision of a "General Store" adjacent to the neighbourhood park.

SERVICING STRATEGY

Objective

To provide a secure, potable water supply and to provide for collection, treatment and disposal of sewage wastes generated by development in a way that meets the environmental, health and operational expectations of the community.

Strategy

- ♦ Water will be supplied to North Bonville by extending and constructing the existing water main. The area is to be serviced by the Toormina Reservoir.
- ♦ A portion of the study area is currently serviced by a sewerage pump station which pumps back to the Sawtell Catchment Plant. Several smaller pump stations and gravity sewers will have to be constructed by developers to service the remainder of the study area.
- ♦ Stormwater/urban drainage systems shall be designed so as to reduce problems associated with urban runoff such as potential erosion and sedimentation.

TRAFFIC AND TRANSPORT STRATEGY

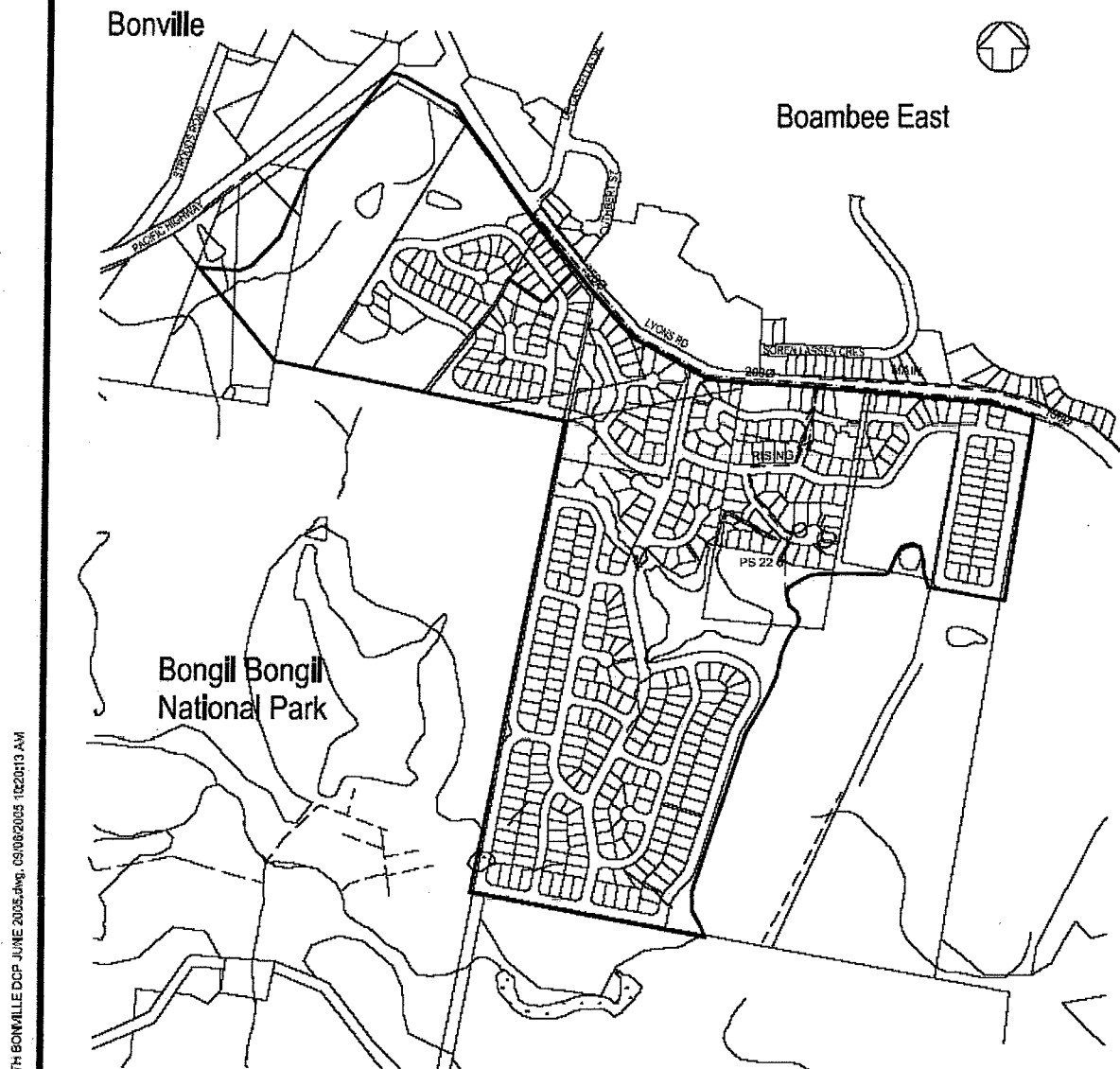
Objective

To provide for safe, convenient and efficient movement of people.

Strategy

- ♦ Establish a road hierarchy that restricts direct access to approved intersections only onto Lyons Road.
- ♦ Establish a bus route and designated shelters.
- ♦ Provide pedestrian/cycle links for access to schools, shops, parks and community facilities outside of North Bonville.

NORTH BONVILLE



CONTROL PLANS NORTH BONVILLE DCP JUNE 2005.dwg, 05/08/2005 10:20:13 AM

MAP 3
WATER SERVICES & SEWER STRATEGY

APPENDIX C

**PART COPY COFFS HARBOUR CITY COUNCIL
DEVELOPER SERVICING PLAN
WATER SUPPLY**

5 Standards of Service

The Levels of Service (LOS) are the water supply targets that CHCC aims to achieve. They are not intended as a formal customer contract.

System design and operations are based on providing the standards of service shown below.

- ☐ Treated water to 1996 NHMRC/ARMCANZ Australian Drinking Water Guidelines 100% of the time
- ☐ Minimum water pressure of 12 meters at the property boundary when supplying the peak instantaneous demand
- ☐ Nil unplanned interruptions greater than 6 hours
- ☐ Nil programmed interruptions greater than 4 hours
- ☐ Unrestricted peak water demand of 2.3 kilolitres per ET per day

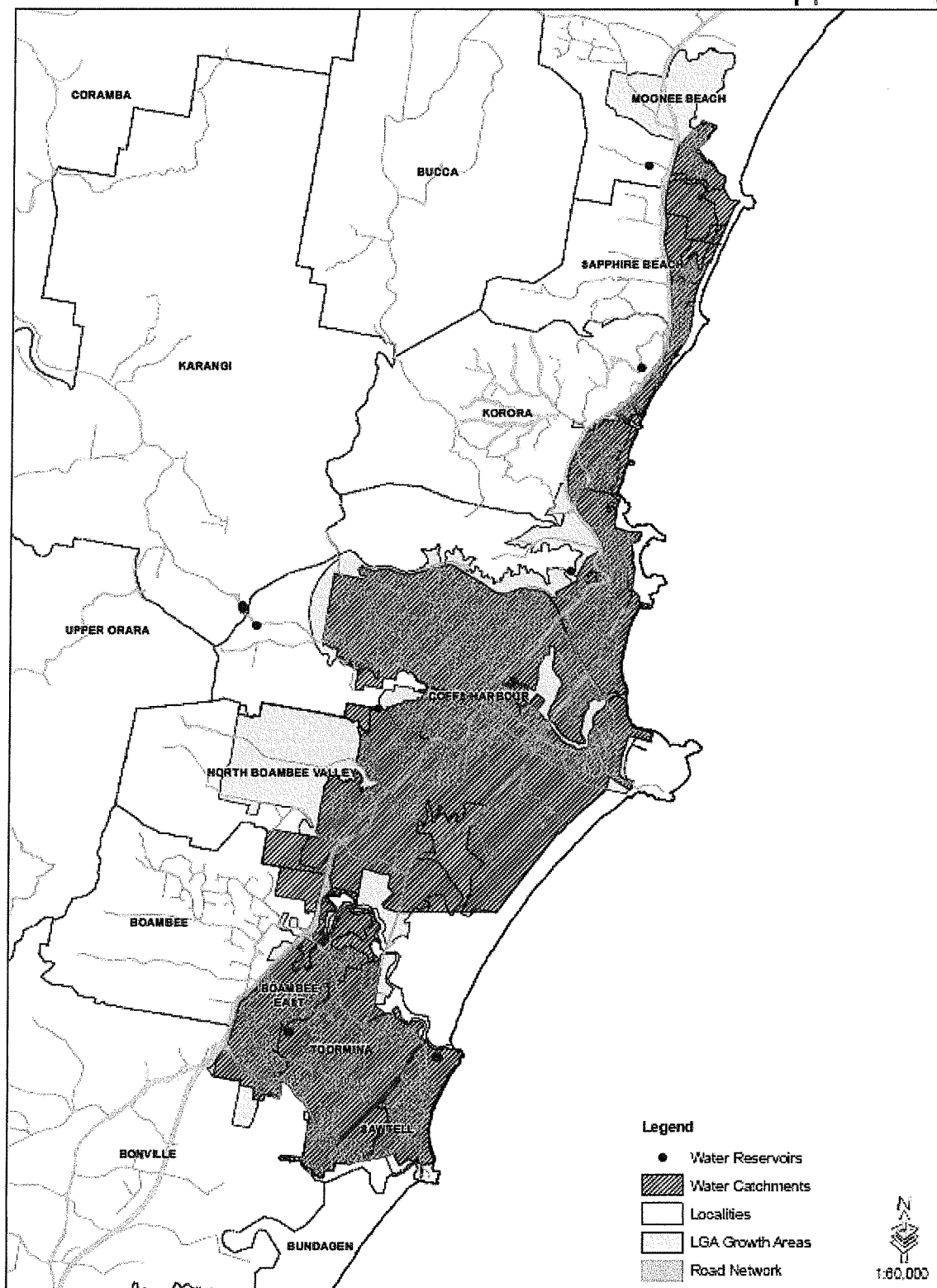
The bulk water supply from the Regional Water Supply and Karangi Dam were designed to provide a secure yield. The secure yield is considered to be the annual demand which can be supplied from the headworks over a period of records used in the analysis and satisfying the following conditions:

- ☐ Unrestricted water demand of 230 kilolitres per ET per annum
- ☐ Water restrictions should not be applied more than 5% of the time
- ☐ Water restrictions should not be imposed more often than once every 10 years on average
- ☐ The system should be able to supply 80% of the normal demand (i.e. 20% reduction in consumption) through a repeat of the worst drought on record

The key considerations for the procedures were that:

- ☐ It is neither practical, economic nor environmentally responsible, to provide "restriction free" water supply systems
- ☐ A trade off is necessary between the security of supply provided (i.e. the relative lack of restrictions) and the associated capital and operating costs





Water Supply Areas
Figure 2: Coffs Harbour South Serviced Areas

APPENDIX D

SEWER LAYOUT PLAN

APPENDIX E

**PART COPY COFFS HARBOUR CITY COUNCIL
DEVELOPER SERVICING PLAN
WASTEWATER TREATMENT AND CARRIER SYSTEM**

5 Standards of Service

The Levels of Service (LOS) are the wastewater targets that CHCC aims to achieve. They are not intended as a formal customer contract.

System design and operation are based on providing the following standards of service:

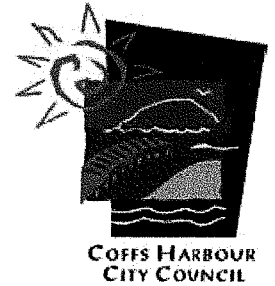
- ☐ Sewage effluent meeting National Water Quality Guidelines for Sewerage Systems, Use of Reclaimed Water, Nov 2000 – Table 3 Food Crops (Direct Contact with Reclaimed Water)
- ☐ All sewer chokes removed and service restored within 4 hours
- ☐ Sewage overflows less than 1 per pump station per year
- ☐ Sewer odour complaints less than 2 per treatment plant and pump station per year - 240 litres per day
- ☐ Dry weather flow generated by 1 ET - 576 litres per day

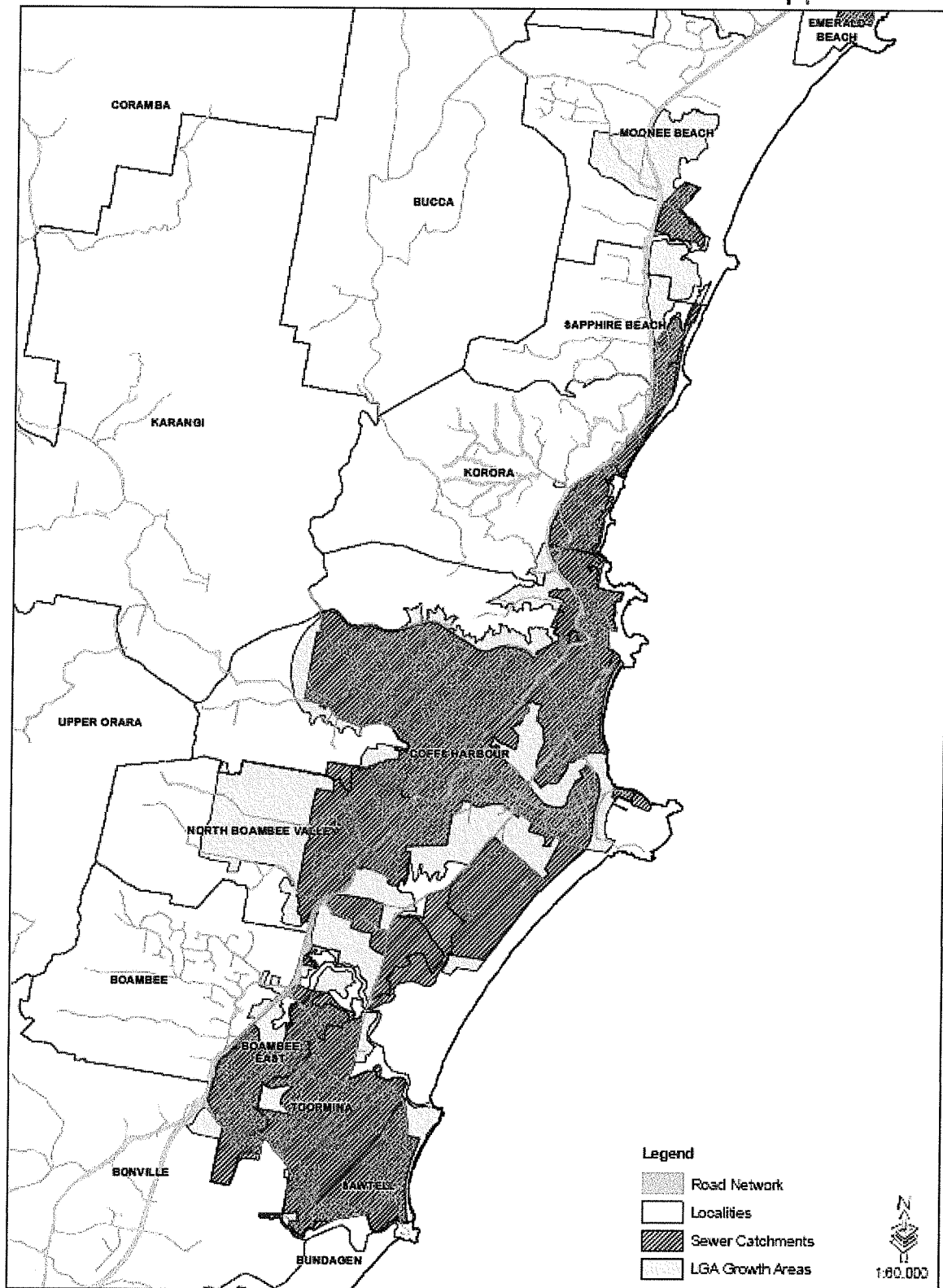


6 Design Parameters

Investigation and design of wastewater system components is based on the following:

- ☐ Manual of Practice: Sewer Design (1984) and the Manual of Practice: Sewage Pumping Station Design (1986). These Manuals were prepared by NSW PublicWorks and are now managed by the Department of Land and Water Conservation
- ☐ WS-SPEC Water Service Specification
- ☐ Design parameters as nominated in the Coffs Harbour Sewerage Strategy Environmental Impact Statement (CEENA, 2000)





Waste Water Areas

Figure 2: Coffs Harbour Catchment Serviced Area

APPENDIX F

STAGING DETAILS

