Ballina Road Contribution Plan

Version 2
October 2002
Adopted: 24 October 2002

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EXECUTIVE SUMMARY

This Contributions Plan enables Ballina Shire Council to levy s.94 developer contributions for the provision of additional road capacity to service increased traffic loading as a result of urban growth and/or development demands. It also permits Council to partially recoup past expenditures in the road network made in anticipation of development throughout the entire Ballina Shire.

In consideration of the Ballina Shire Urban Land Release Strategy, the Census 2001 data and development proposals that have recently emerged, it is predicted that the population will reach about 57,500 people in 2021 and about 74,000 in 2033. This compares with the 37,200 population for 2001, and represents an additional population of 20,300 people (a 55% increase to 2021) or 34,700 people (a 95% increase) to 2033. At current growth rates, Council's land release strategy accommodates urban expansion for a number of years to come at a linear land release rate to provide in excess of 300 dwellings per annum. This predicted population increase represents a conservative assumption and because the growth rate can be expected to vary considerably over time, this Plan will be reviewed on a regular basis.

Summary of Work Schedule

As a consequence of the projected development, and having regard to the level of road facilities currently available and the expected distribution of growth in Ballina, by the year 2022 it will be necessary to provide substantial additional road capacity/space with an estimated cost of about $43M.

Ballina Road Network Study 2000 proposes, over an eight year period, the construction of 15 individual road improvement projects, which will be funded as outlined in Table 1.1 below. Due to a the updated population growth information provided by the Census 2001 data, the timeframe for these works projects has been extended over an 20 year period.

Table 1.1 Works Schedule

Capital Works	*Costs* *$*	*Source of Funds*		
		Development *$*	*Council* *$*	*RTA* *$*
Rural	2.89 M	1.93 M	0.96 M	0
Urban	40M	24.72 M	8.39M	7.0 M
TOTAL	42.89 M	26.65 M	9.35 M	7.0 M

The pertinent features of the works schedule are:

- The capital works program totals about $43M, representing an average expenditure of about $2.2 M per year.
- Discounting that proportion of the contribution required to cover interest on loans, development contributions will total about $27 M (60% of the

full program cost), an average of $1.3 M per annum over the twenty year horizon of this plan

- Council's contribution is money Council would spend on roads anyway.

Summary of Contribution Rates

This Plan proposes road developer contributions that are based on land use and locality and are calculated in accordance with the traffic generating principles in Section 7. Household contributions for each locality within the shire are summarised in Table 2.1 below.

Table 2.1 BRCP Household Contributions

Sector	*Locality*	*Contribution $*
1	Ballina Island	$1,165
2	East Ballina & Skennars Head	$2,310
3	Lennox Head	$1,811
4	North Ballina & West Ballina	$1,456
5	Cumbalum Ridge	$1,327
6	Alstonville	$703
7	Wollongbar	$532
8	Wardell	$546
9 & 10	Rural	$502

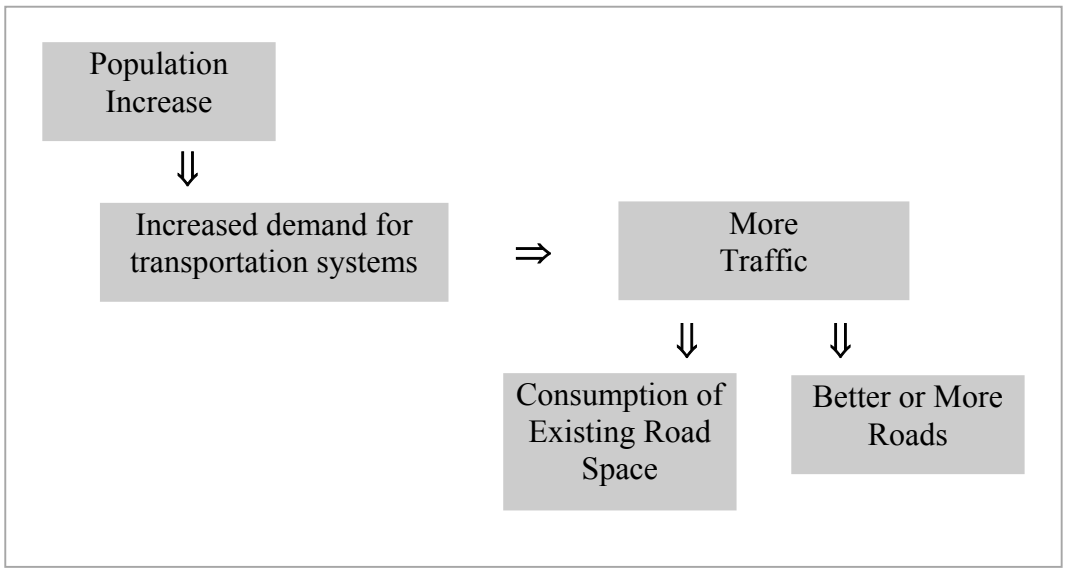
It should be noted that a separate levy may also be imposed on activities which generate heavy haulage (extractive materials) traffic (see Section 6.3).

1. INTRODUCTION

1.1 Need for Plan

As set out schematically in Illustration 1.1, population growth is known through experience to generate additional traffic, creating the need for improved roads or sometimes more roads. The actual volume and characteristics of traffic demand is directly related to land-use. Field surveys and manuals on the subject, amongst them the New South Wales Roads and Traffic Authority (RTA) *Guide to Traffic Generating Developments* (Issue 2.0 - December 1993), demonstrate that the increase in traffic is dependent on the type of development. The actual increases vary considerably with the extreme being the increase in traffic generation due to new shopping centres, fast food stores and the like.

Illustration 1.1 Nexus



Extra traffic can impact upon:

* traffic facility efficiency
* amenity
* safety
* pavement life; and
* public finances

Traffic facility efficiency is traditionally concerned with the performance of major roads, however, in high growth areas like Ballina Shire, the effect may extend to local roads which were never designed nor envisaged to be significant traffic corridors. Safety is arguably the most important consideration, however amenity can also be a concern of residents fronting collector and arterial roads. Remedies to these issues may be provided through construction works that provide for augmentation, replication, and diversion of road infrastructure.

Traffic impacts accumulate over time and a contributions policy serves to, at least partially, overcome financing issues created by incremental

development/decision making processes. Often it can be shown that the impact of a small single development is negligible and therefore seemingly insignificant. However, in time the cumulative impact of several developments may cause significant funding dilemmas for a service provider, especially where threshold capacities can be exceeded.

Development traffic may also significantly reduce the expected life of a road. Such impacts are well advanced in literature. For example, it has been known since the 1950's (Yoder 1959) that the life of a pavement is proportional to the load being applied and varies directly with the logarithm of the number of load applications. That is, the heavier the load and the more frequent a load is applied, the quicker a road fails. It is this principle that forms the basis of Council's *Heavy Haulage policy* as spelt out in its *Heavy Haulage Contribution Plan.*

The timely and affordable provision of infrastructure requires extensive land use forecasts and financial planning. Contributions plans coordinate both these aspects to provide a valuable project management tool which transparently describes the developer pricing policies being adopted and the outcomes and services that are being sought and are to be funded by future development.

Council has a policy of upgrading its road network system to address the demands of population growth and land development and previously these works have been funded by Council using public finances.

Pursuant to the New South Wales EP&A Act (1979) and Regulation (1994), this Plan will enable the Council to require developments to contribute towards the provision, extension or augmentation of the road network that may be needed as a consequence of growth.

1.2 Scope of Plan

This Section 94 Plan is known as ***Ballina Road Contributions Plan (BRCP) Version 1.0***. It applies to the whole of the Ballina Local Government Area (LGA) as shown in Illustration 1.2 and sets levies for all traffic generating developments within the LGA. The plan is based on the principle that a development should contribute in proportion to the extent to which it uses capacity in the existing or future transport system. As described in Sections 2.2 and 4.1, a detailed Network Study and traffic model (prepared by Eppell Olsen & Partners, Transportation & Traffic Engineering & Planning Consultants) were used to identify the additional demand for road infrastructure generated by developments.

Using the results from the Network Study and traffic model, this Plan undertakes to do the following:

- to ensure that an adequate level of public road infrastructure is provided throughout the Ballina LGA;

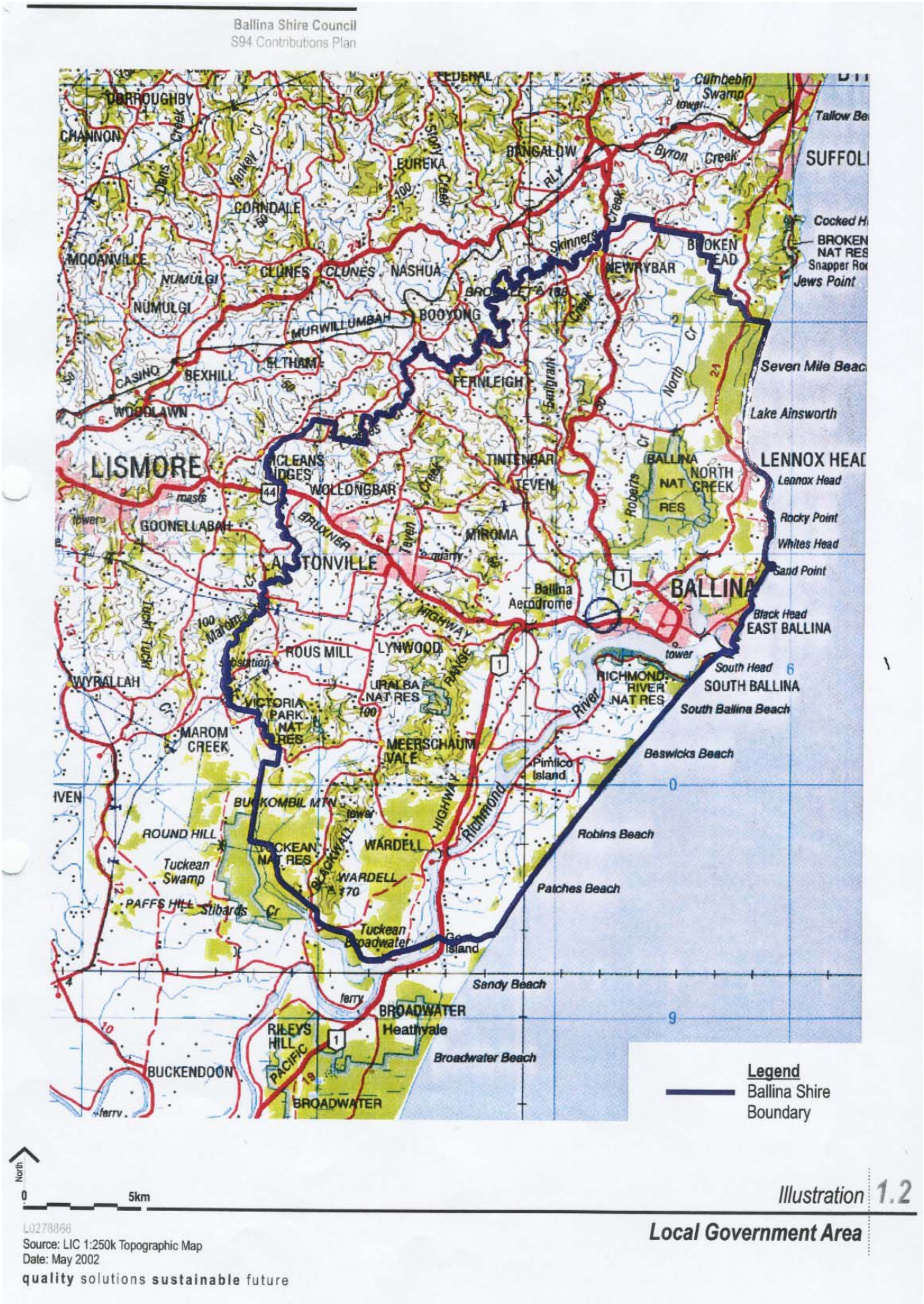
- to enable the Council to recoup funds which it has spent in the provision of public road works in anticipation of likely future development;

- to ensure that the existing community is not burdened by the provision of public roads required as a result of future development; and

- to provide a comprehensive strategy for the assessment, collection, expenditure, accounting and review of development contributions on an equitable basis throughout the Ballina Shire.

This Plan deliberately does not seek to impose any s.94 contributions to fund backlog road works required to service existing development. Nor does it seek to recover contributions relating to traffic demands attributed to developments that lie outside the Ballina LGA.

Illustration 1.2 Local Government Area



2. BACKGROUND

2.1 Ballina Urban Land Release Strategy

The Ballina Urban Land Release Strategy 2000 (ULRS-2000) provides a land use planning framework based on the growth rate demands placed upon the Shire. In doing so, ULRS-2000 considers the Shire as four planning localities, namely:

- The "Ballina Precinct" comprising Ballina Island, West Ballina and Cumbalum;
- The "Coastal Corridor" of East Ballina and Lennox Head;
- The "Plateau Villages" of Alstonville and Wollongbar; and
- Wardell.

As required by clause 38(3) of the North Coast Regional Environmental Plan, ULRS-2000 has been agreed to by Department of Urban Affairs (now Planning NSW). ULRS-2000 is expected to be updated sometime after the 2001 census data for Ballina has been reviewed.

Since the preparation of ULRS-2000, Council has approved development of the Cumbalum Ridge Estate and is considering the rezoning of land adjacent to Teven Road and Emigrant Creek in West Ballina (known as Ballina Waters Estate). Council has also postponed any further consideration of establishing a third village on the Alstonville Plateau.

In consideration of the Ballina Shire Urban Land Release Strategy, the Census 2001 data and development proposals that have recently emerged, it is predicted that the population will reach about 57,500 people in 2021 and about 74,000 in 2033. This compares with the 37,200 population for 2001, and represents an additional population of 20,300 people (a 55% increase to 2021) or 34,700 people (a 95% increase) to 2033. At current growth rates, Council's land release strategy accommodates urban expansion for a number of years to come at a linear land release rate to provide in excess of 300 dwellings per annum. This predicted population increase represents a conservative assumption and because the growth rate can be expected to vary considerably over time, this Plan will be reviewed on a regular basis.

The Network Study provides a road network required to meet a Shire population of 57,500. The Network Study assumes this population will be reached by the year 2010. However the Census 2001 data indicates that this population will not be reached until the year 2021 and therefore the works schedule provided by The Network Study has been adjusted to allow for the revised growth rates. The updated population projections are indicated in Illustration 2.1.

2.2 Network Study 2000 (BRNS-2000)

This Contribution Plan is based on *Ballina Road Network Study, 2000 (BRNS-2000)* and the *Preliminary Draft Ballina Section 94 Plan* prepared by Eppell Olsen and Partners (EOP).

BRNS-2000 comprises four volumes:

- Road Hierarchy
- Network Analysis
- Model Development
- Network Analysis Appendix A – Model Results

In summary, the BRNS-2000 document:

- Divides the LGA into ten sectors. Each sector represents a discrete precinct that has been found from traffic surveys and traffic analysis to exhibit specific traffic movement patterns. Another sector, encompassing these traffic sources that lie outside the LGA is also included in the analysis;
- provides a detailed analysis of the existing road networks (shown in Illustration 2.2) and traffic demands;
- projects future traffic demands for the year 2010 and 2033 from population growth rates, demographics and development trends determined with reference to ULRS-2000 and Australian Bureau of Statistics census data;
- analyses options for developing the Shire's road network to satisfy the projected traffic demands;
- recommends a preferred strategy for upgrading the road network as shown in Illustration 2.3; and
- provides a computerised model of the network to allow the volumes and distributions of traffic numbers to be projected for each of ten discrete localities identified within the shire.

To allow for the possible development of a third village on the Alstonville Plateau, the network study developed by Eppell Olsen & Partners divided the rural parts of the LGA into two sectors, namely "Rural - North of Bruxner Highway" and "Rural - South of Bruxner Highway". Given Council's 2001 decision to postpone any further consideration of a third village for ten years, this Plan has consolidated the rural parts of the LGA into one sector.

Illustration 2.1 Ballina Population Growth Forecasts

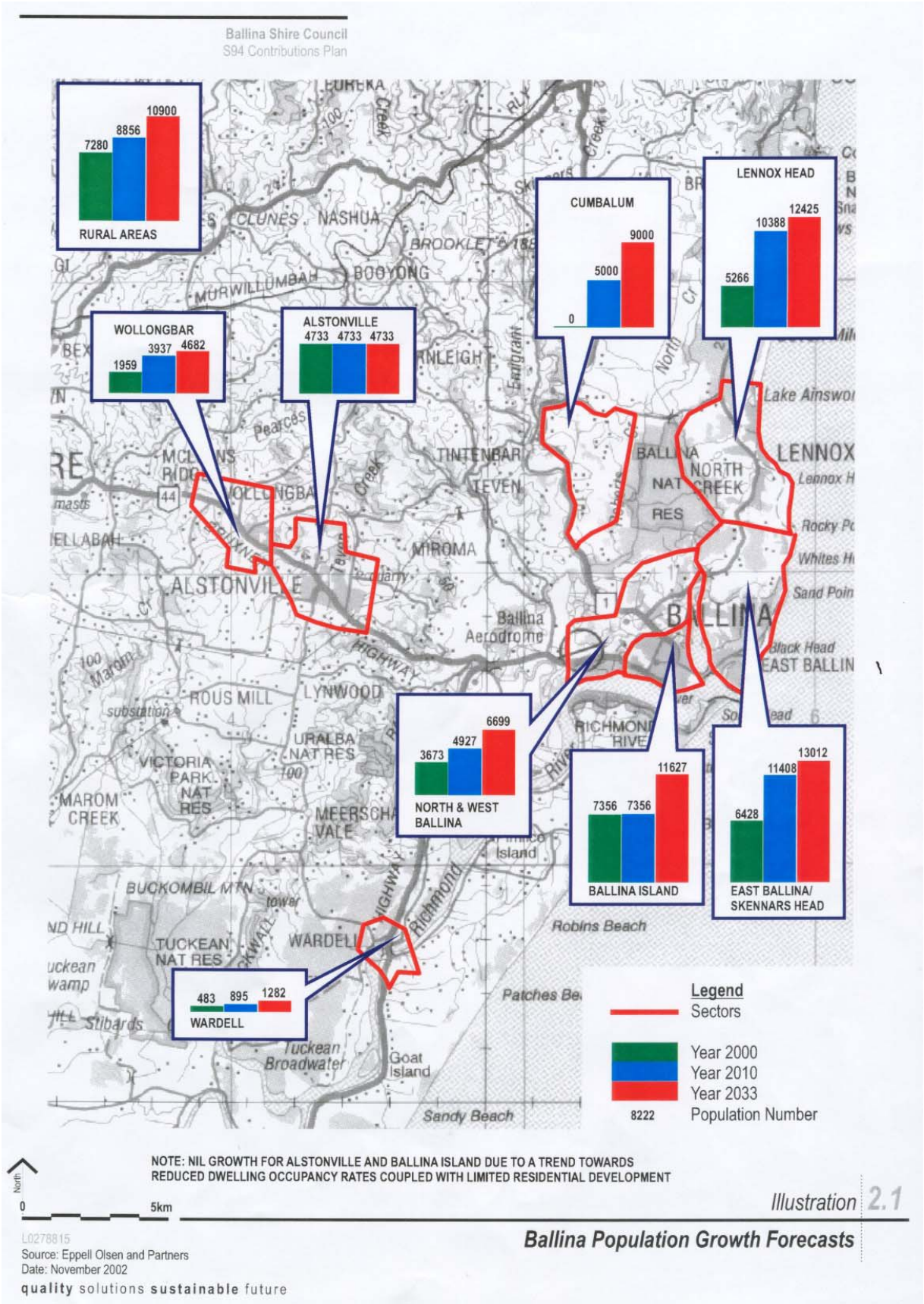


Illustration 2.2 Existing Ballina Road Hierarchy

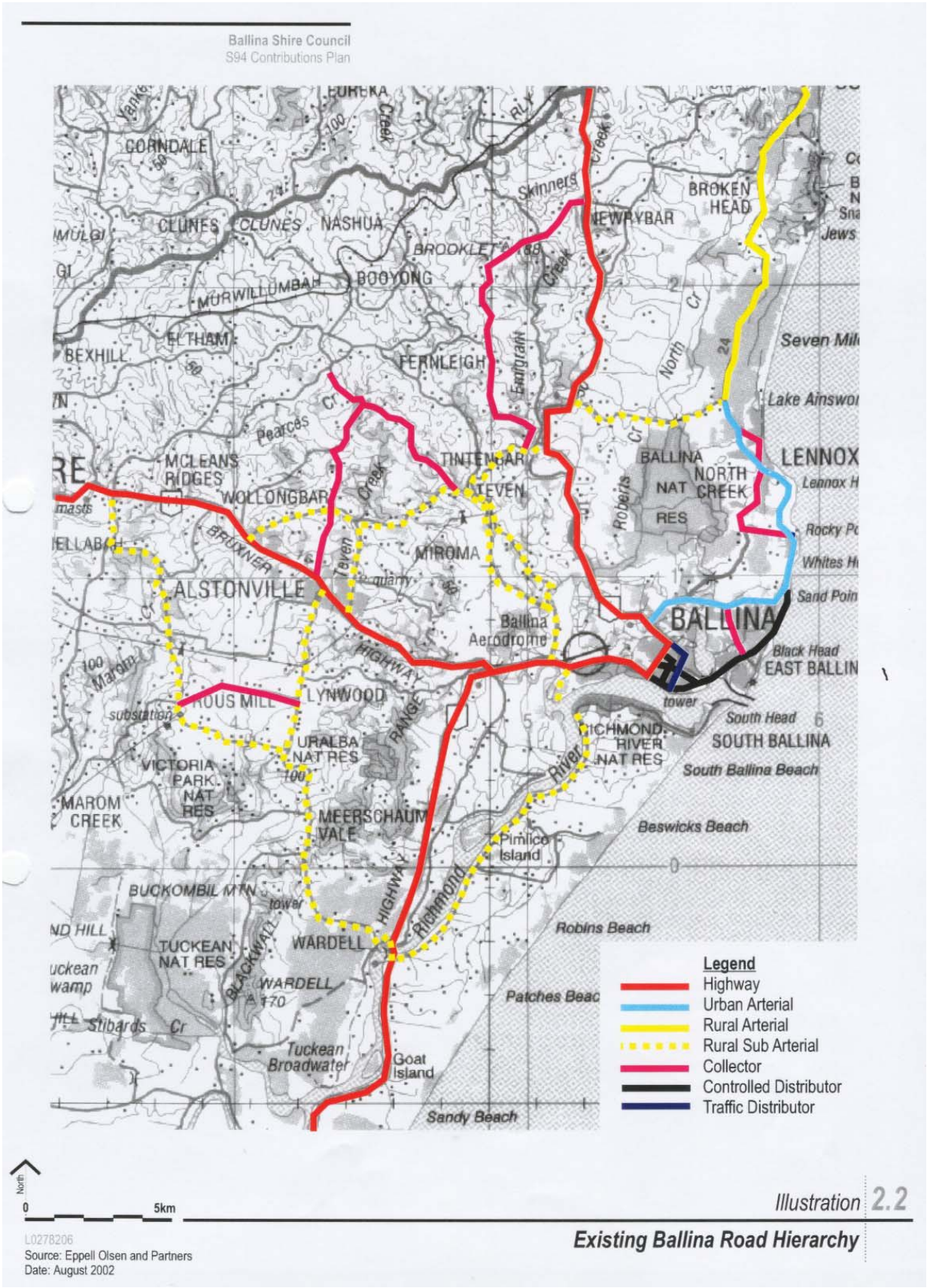
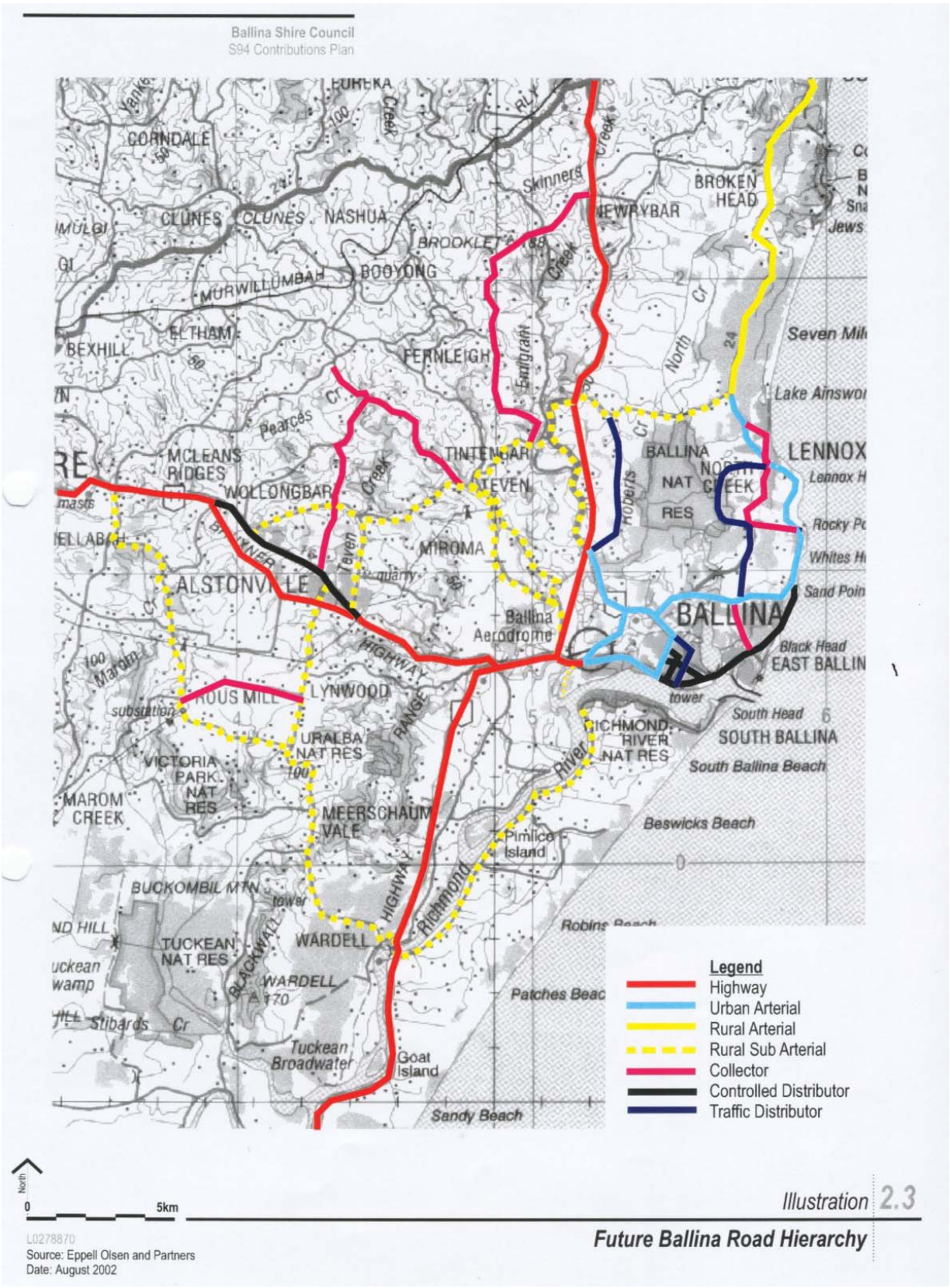


Illustration 2.3 Future Ballina Road Hierarchy



3. LEVY AREA

This Contribution Plan levies all traffic generating developments within the Ballina LGA (Illustration 1.2). In this Plan, the assessment of contributions is based on a differential costing process as opposed to a global averaging approach. Global averaging involves averaging the total cost over all the developments. Differential costing assesses each development on the likely usage of road space (and thus cost) by the development. Whilst both approaches seek to recover the same total cost, the differential process has a number of advantages:

- It better reflects the interrelationship between road capacity and the developments that create demand for new road capacity;
- It promotes more efficient resource allocation, and a more realistic level of demand for developed land;
- It may potentially provide for more efficient land settlement by discouraging the early development of land that is costly to service; and
- It does not confuse equal pricing with equity.

In assessing the contributions, the Plan uses a differential pricing system based on nine sectors (localities), and the specific land uses that might occur within these sectors. The contributions vary across the Shire depending on the value and amount of road space consumed by development in a particular area, and of course, the type of development involved. The sectors are identified in Section 3.1. Table 7.1 indicates the typical amounts of traffic generated by various the types of development that might take place within these sectors.

A heavy haulage levy may also be imposed on specific activities that generate heavy haulage traffic anywhere in the Shire.

3.1 Sectors

The definition of the discrete sectors is best related to infrastructure provision rather than being tied to particular developments. However, when a catchment forms a part of a larger urban area, there are boundary issues arising between adjacent catchments. Further, there are often requirements to discriminate between sub sections of a sector when a large area is covered. It is proposed therefore that:

- Sector boundaries conform to a physical barrier (river, rail line, etc); or
- The sector comprises a complete urban area; and in either case
- Sub sections be separated by physical separators such that variation between adjacent sub sectors can be tied to infrastructure (eg an interchange for highway access).

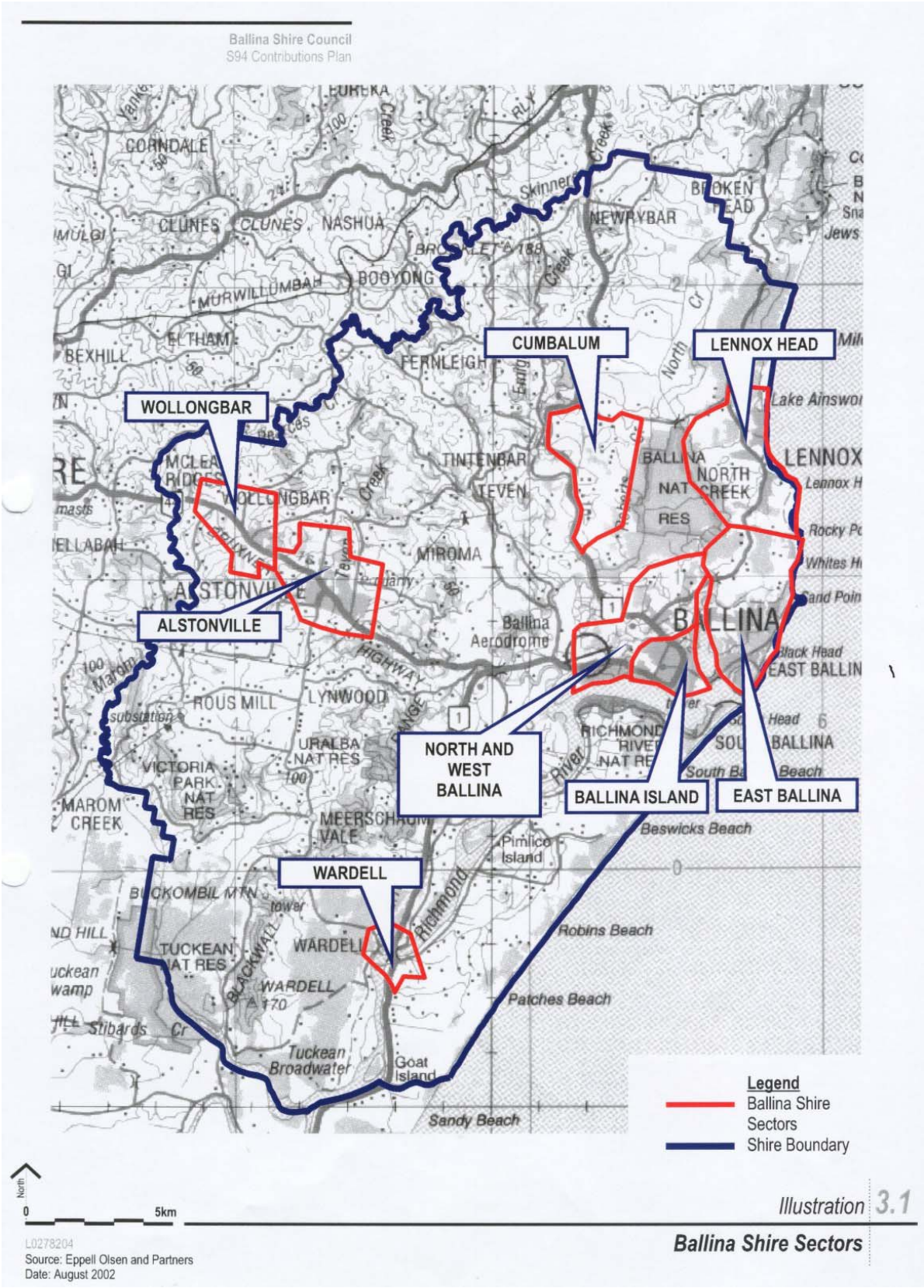
As described in Section 2.2 of this Plan, it is proposed that the Shire will be divided into nine sectors for the assessment of contribution rates. The nine sectors are as follows:

- Ballina Island;
- East Ballina & Skennars Head;
- Lennox Head;
- North & West Ballina;
- Cumbalum Ridge;
- Wollongbar;
- Alstonville;
- Wardell; and
- Rural.

The above sectors are shown on Illustration 3.1.

Another "sector", broadly representing development areas that lie outside the Ballina Local Government Area, is also a source of some traffic within Ballina's road network and has been included in the traffic modelling study. However because it does not fall with Ballina LGA, contributions will not be recovered for developments that occur within that sector.

Illustration 3.1 Ballina Shire Sectors



4. NEXUS

The existing road network within the Ballina LGA is generally adequate to cater for existing traffic demands and generally conforms with widely adopted design standards promulgated by Austroads, the recognised Australian authority in relation to road design. Council engaged Eppell Olsen and Partners (EOP) to examine the impact of future development on Council's road network, identify the scope of new works required and to equitably assign the cost of developing the future road network between its users.

EOP used advanced computer simulation techniques to predict the likely impact of traffic on the Ballina LGA road network. The outcome of this mathematical model is the best prediction Council can obtain of the volume and distribution of traffic growth in the years to come.

The population growth estimates used by EOP in modelling the network and identifying the scope of the required road upgrading works to service the respective sectors are summarised in Illustration 2.1.

EOP found that the Ballina LGA road network will experience considerable traffic growth, especially around Ballina and Lennox Head as anticipated urban development occurs. Most major urban road corridors will be required to carry more traffic and some of these corridors will be overloaded unless additional capacity is provided. In some areas new road corridors will need to be established to service new development.

Schedule 1 to this Plan, together with the BRNS-2000 describe in some detail the scale of works needed to provide adequate roads to urban release areas. No new rural road links are required however some rural roads require widening and/or re-alignment to improve capacity and road safety generally. No rural road has been identified to be greater than two lanes however the plan allows for overtaking lanes to be provided on Tintenbar Road.

To more equitably assign the burden of those works, Council has adopted a policy of levying s.94 contributions on developments to cover the cost of the necessary upgrading works. The estimated cost of those works is outlined in Section 5.1 of this document and the basis for calculating the s.94 contributions to be levied is described in Sections 6 and 7.

5. WORKS AND COSTS COVERED BY THIS PLAN

5.1 New Works

Table 5.1 details the new construction works proposed by this Plan in response to the growth needs of the Shire. The works comprise 14 items, estimated to cost around $43M. Detailed costing may be found in Schedule 1 attached to the Plan.

The Works Schedule is the result of a functional road analysis conducted by EOP. Further details may be obtained from the BRNS-2000 Report.

Table 5.1 Schedule of Required New Roadworks

New Work	*Expenditure Years*	*Capital Cost $*
Bentinck St/ Kerr St Roundabout	2003	666,154
Skennars Head Link Road (Stage 1)	2003-2013	4,151,785
Western Arterial	2004 - 2007	14,317,202
North Creek Rd/ Pacific Hwy Roundabout	2006	374,214
Tintenbar Rd Upgrade	2008 - 2014	2,324,904
Bangalow Rd/ Angels Beach Dr Roundabout	2008	220,400
Links Ave/ Angels Beach Dr Roundabout	2009	619,709
Skennars Head Link Road/Angels Beach Dr Roundabout	2012	728,523
Realign Clark Street at Kerr St/ Bangalow Rd Roundabout	2015	413,560
Realign Ross La	2015	563,710
Cumbalum Way Upgrade	2016 – 2022	8,311,001
Skennars Head Rd/ Coast Rd Roundabout	2017	617,055
Skennars Head Link Road (Stage 2)	2018-2019	7,790,749
Hill St/ Compton Dr	2018	1,764,366
TOTAL		$42,863,332

5.2 Existing Roads

Contributions in this Plan are calculated to include an allowance for the unit capacity of the existing road network that will be consumed by future development. The replacement value of the significant portions of the existing road network is assessed at about $48M (refer to Schedule 2 attached to the Plan).

Money raised by contributions to partially recoup Council's previous investment in the existing road system is re-invested into this Plan to help with the overall funding of the road network within the Ballina LGA.

5.3 Administration Costs

Management is essential if the desired outcomes of this Plan are to be achieved in a timely and affordable manner, and to meet the requirements of

the s94 Regulations. Constant supervision and management will be required over the life of the Plan.

The administration of this Plan is estimated to cost $400,000 over the next twenty years. The Plan requires the annual participation of a number of key Council staff, estimated to cost around $15,000 per annum as outlined in Table 5.2.

Table 5.2 Annual Administration Costs BRCP

Position	*Estimated Time (person weeks)*	*Amount ($)*
Senior Management	2	5,000
s94 Infrastructure Planning Engineer	4	5,500
s94 Financial Officer	3	4,500
Total		15,000

Financial reviews will be undertaken annually to determine if the projected development related income is being received and to make revisions to the cash flow analysis where necessary.

In addition, full reviews of the Plan and traffic demands are conducted every five years at an estimated cost of $25,000 per review. The first review will take place in 2005.

6. FORMULA FOR DETERMINING THE CONTRIBUTIONS

6.1 Standard Formula

Contributions in this Plan are calculated using 'trip ends' which is a basic measure of traffic generation. Travelling between two locations, a trip, has two end points, a beginning point or 'origin' and a 'destination'. The 'destination' point is also known as an 'attraction'. For example, someone leaves home to go shopping. There is one origin trip end at the house and one destination trip end at the shopping centre. On the journey home though, the shopping centre becomes the start point or origin and the house the destination. Some journeys may involve a number of 'stops' and this too is accounted for with a concept called 'diverted' trips.

Therefore if one is able to ascertain the reason why trips are made and where trips are made to and from, then one may be able to predict travel habits and consequently the patronage of transportation infrastructure.

The prediction of travel habits in Ballina LGA involved a very detailed analysis of growth, land use (residential and commercial areas), and travel habits - a 'trip matrix'. This information was assembled by EOP into a mathematical transportation model that is referred to as the *TRACKS* suite of transportation modelling programs. The suite is a land use based package that can generate travel demand from land use within the study area. The model was calibrated by EOP to reproduce the 2000 traffic loading for Ballina LGA road network and was subsequently used to predict the likely 2011 and 2033 road network traffic loadings.

To determine the unit cost of a 'trip end' for a given sector, it is then a simple matter of translating the likely prediction of where traffic is going to and from and by what route, into journey costs. In making a journey, a vehicle will occupy road space with a known unit value ($). By assigning unit values ($) to a road network, it is possible to determine the net consumption of road space by a sector's traffic and hence the total value of road space used by individual sectors. The formula below conceptually outlines the process.

$$\$Standard\ Trip\ End_{cost} = \frac{\$Total\ Road\ Capacity\ Consumed_{sector}}{Total\ Trip\ Ends_{sector}}$$

where:

$Standard Trip End $_{cost}$ = BRNS-2000 standard contribution per daily trip end

and:

$$Total\ Trip\ Ends_{sector} = \sum_{a=1}^{n} \left(Trip\ Ends_{orig.} + Trips\ Ends_{attract.} \right)_a + \ldots + \left(Trip\ Ends_{orig.} + Trip\ ends_{attract.} \right)_{a+n}$$

where:

Total Trip Ends$_{sector}$ = the sum total of all trip ends either originating or attracted to traffic generating activities (a) within the sector.

and:

$$\$Total\ Road\ Capacity\ Consumed_{sector} = \frac{\sum_{r=1}^{n} \left(\$Cap_r + \$Cap_{r+1} + \$Cap_{r+2} + ... + \$Cap_{r+n} \right)}{2}$$

where:

$Total Road Capacity Consumed $_{sector}$ = the sum total of road capacity consumed on all roads (n) by traffic either originating from or attracted to activities in the sector; and:

*$Cap*$_r$ = the capital cost to Council of the road space consumed on road "r" by traffic from the sector. (Excludes the value of State Government or Federal Government funds allocated for the provision of that road space).

The value of road space consumed by a trip is divided equally between the two trip ends or land uses (divided by 2). As set out in Schedule 2 and Schedule 3, the above calculations are repeated for each individual sector, and are quantified in Table 6.1 below.

Table 6.1 BRNS-2000 Standard Trip End Costs

Sector	*Value of Capacity Consumed by Each Sector* $	*Trip Ends Generated by Each Sector*	*$Standard Trip End* $_{cost}$ $
1 Ballina Island	3,168,331	20564	154
2 East Ballina & Skennars Head	4,502,675	13675	329
3 Lennox Head	6,280,814	24836	253
4 North & West Ballina	2,576,675	12968	199
5 Cumbalum Ridge	5,046,895	28218	179
6 Alstonville	276,791	3316	83
7 Wollongbar	473,827	8258	57
8 Wardell	136,998	2301	60
9 Rural – north	377,047	4317	87
10 Rural – south	45,367	2473	18
11 Externals	3,747,313	11928	314
Overall	26,632,733	132854	201
Overall Excluding Externals	22,885,420	120,926	189

The trip end contributions are calculated in such a way that:

- Council bears the apportioned cost of works required to serve existing development;

- Contributions are not collected for capital works that will be provided by other fundraising sources such as State Government grants; and
- Contributions are not levied in respect of facilities that will be provided by another government organisation or agency.

6.2 Interest

The cash income from contributions alone will not allow the timely construction of key elements of the road construction program without borrowing being used. Borrowing costs, *$Interest Trip End* $_{cost}$, are included in the Plan:

$$\$Interest\ Trip\ End_{cost} = \frac{\$Interest\ Cost}{Total\ New\ Trip\ Ends_{shire}}$$

where:

$Interest Cost = the interest component of borrowing

Total Trip Ends$_{shire}$ = the sum total of all trip ends either originating or attracted to traffic generating activities within the shire.

The responsibility for interest costs is to be shared by all new development, irrespective of where the loans are used. In the case of developments near established infrastructure, this component represents the holding costs of maintaining reserve capacity in anticipation of development.

The assessment of *$Interest Trip End* $_{cost}$ is estimated in Table 6.2, based on the trial operational balance set out in Table 8.1.

Table 6.2 Calculation of Interest Component

Interest on Savings	Interest on Borrowings	Total Interest Charge	Total New Trip Ends$_{shire}$	$Interest Trip End $_{Cost}$
$221,488	$3,073,005	$2,851,517	120,926	$23.58 say $24

6.3 Heavy Haulage (Extractive Material)

Developments in this category will be charged a separate levy commensurate with the additional wear and tear on Council's road network caused by heavy transport vehicles and/or frequent traffic use. This levy is in addition to the contributions in Table 6.1 which are based on consumption of road network space.

For the purpose of this Plan "heavy haulage" applies to the haulage by road of extractive material. It includes quarry products and raw materials, soil, clay, silt, sand, gravel, rock, stone, aggregate, fill and similar substances. A separate road maintenance levy is imposed by Ballina Shire Council on "heavy haulage" under its *Heavy Haulage Contribution Plan*.

6.4 Administration

The annual cost of administration ($20,000) described in Section 5.3 represents about 1.4% of the expected annual yield from contributions:

Administration Funds collected per annum = 0.014 x 6364 trip ends x $225
= $ 20,046

where $225 is the average *$Total Trip End* $_{Cost}$ + *$Interest Trip End* $_{Cost}$

7. CONTRIBUTION RATES

Traffic generating developments are required to contribute to the development of Ballina Council's road network, calculated in accordance with Sections 7.1 and 7.2 below. Development applications will be conditioned at consent to contribute the BRCP contribution, $\$Con_{BRCP}$, and if applicable the "Heavy Haulage Levy".

7.1 Calculation of Contributions

The full BRCP contributions, $\$Con_{BRCP}$, are calculated:

$$\$Con_{BRCP} = Admin \times Trip\ Ends_{development} \times \$Total\ Trip\ End_{cost} - (\$Existing)$$

where:

$\$Con_{BRCP}$ = contributions paid to Council by way of condition of consent

$\$Existing$ = value of 'existing use rights' where applicable

and:

Admin = administration allowance = 1.014

$Trip\ Ends_{development}$ = the total trip ends created or attracted to the development being assessed using generation rates in Table 7.1

$\$Total\ Trip\ End_{cost}$ = total trip end cost

The total trip end cost is given by:

$$\$Total\ Trip\ End_{cost} = Modification \times (\$Standard\ Trip\ End_{cost} + \$Interest\ Trip\ End_{cost})$$

where:

Modification = allowance for diverted trips - see Table 7.2

$\$Standard\ Trip\ End_{cost}$ = BRNS-2000 standard contribution - see Section 6.1

$\$Interest\ Trip\ End_{cost}$ = Interest cost contribution - see Section 6.2

The BRCP uses the trip end generation rates outlined in Table 7.1 below, adopted from the BRNS-2000. These generation rates are NOT to be used for the design of traffic facilities since Council adopts specific design codes for these works.

In determining the level of contributions for specific redevelopment proposals, such development will generally be entitled to a credit for any 'existing right'. Applicants may need to show how the 'existing right' reflects contributions to the funding of major works in this Plan. Vacant land will normally be recognised as having an existing right entitlement of 1 ERA.

Table 7.1 Trip Generation Rates by Land Use

No	*Land Use*	*Daily Trip Rate*	*Unit Per*
1	Detached House,	6.45	Household
2	Duplex dwelling	12.9	Duplex Dwelling
3	Dual occupancy dwelling	10.35	Dual occupancy dwelling
4	Unit Development	3.9	Unit
5	Child Minding Facility	3.7	Enrolment
6	Primary School	1.4	Enrolment
7	High School	1.4	Enrolment
8	Service station	200	Pump
9	TAFE College	1.8	Enrolment
10	Shopping Centres , 100m²	2.8 (A)	A = m² GLA
11	101m² < SC < 6,000m²	200 + 0.8 (A)	A = m² GLA
12	6,001m² < SC < 10,000m²	500 + 0.75 (A)	A = m² GLA
13	Shopping Centre > 10,001m²	3200 + 0.48 (A)	A = m² GLA
14	Garden centre not included in Shopping Centre	40	100 m² retail area
15	Hardware not included in shopping centre	80	100 m² GLA
16	Mixed Retail Showroom	40	100 m² GLA
17	Furniture Showroom	10	100 m² GLA
18	Office (Professional Centre)	16	100 m² GLA
19	Major Officers (including government)	12	100 m² GLA
20	Medical Centres & Dentists	50	100 m² GLA
21	GP Surgery	50	100 m² GLA
22	Retail Tyre Outlets	10	100 m² GLA
23	Motels	5	100 m² GLA
24	Taverns, Hotels	110	100 m² GLA
25	Restaurant	60	100 m² GLA
26	Retail Market	20	100 m² GLA
27	Recreation - Squash	40	Court
28	- Tennis	40	Court
29	- Gymnasium	50	100 m² GLA
30	Factories covered by light industry	5	100 m² GLA
31	Warehouses	4	100 m² GLA
32	Hospitality Facilities	50	100 m² GLA
33	Licensed Clubs	100	100 m² GLA
34	Motor Showrooms	5	100 m² GLA
35	General Heavy Industry	1.5	100 m² GLA
36	Mixed Industrial Park	7.0	100 m² GLA

Notes:

a) "A" denotes area of floor space in m² Gross Lease Area (GLA).
b) GLA for motor showrooms includes any external display areas.
c) For other developments, the trip rate will be determined from a traffic assessment of the peak daily trip generation.

For some developments, allowance is also made for diverted trip making, (whereby the purposes of a journey are shared by other developments) using the factors given in Table 7.2.

Table 7.2 Modification Factors for Specific Land Uses

Category of Land Use	*Contribution Modification*
Child Minding Facilities	0.60
Primary School	0.75
High School	0.80
Suburban Service Station	0.10
Local Shops to 100 m²	0.15
101 m² < Shop < 6,000 m²	0.15 to 0.55 at 6,000 m²
6,001 m² < Shop < 10,000 m²	0.55 to 0.60 at 10,000 m²
Shops > 10,001 m²	0.6
Fast Food not included in Shops	0.8
All other categories	1.0

In summary, BRCP contributions per household for each sector are outlined in Table 7.3. The contributions/ERA assumes no discounts for diverted trip making.

Table 7.3 Contributions by Sector

Sectory	*Trip Ends*	*ERA*	*Total $*	*$/ERA*	*Contribution/ ERA*
Ballina Island	20564	3188	3,168,331	994	$1,165
East Ballina and Skennars Head	13675	2120	4,502,675	2124	$2,310
Lennox Head	24836	3851	6,280,814	1631	$1,811
North and West Ballina	12968	2011	2,576,675	1282	$1,456
Cumbalum Ridge	28218	4375	5,046,895	1154	$1,327
Alstonville	3316	514	276,791	538	$703
Wollongbar	8258	1280	473,827	370	$532
Wardell	2301	357	136,998	384	$546
Rural - North of Bruxner Hwy	4317	669	377,047	340	$502
Rural - South of Bruxner Hwy	2473	383	45,367		

ERA = Equivalent Residential Allotment = 6.45 trips per day

For other land uses, ERA = $\frac{\text{Traffic Generated by Land Use}}{6.45}$

7.2 Self Containment and Disputes

This Plan assumes particular land uses and traditional containment factors consistent with a wide range of urban forms but not all situations can be pre-empted. From time to time Council may receive development applications, which do no fit with these assumptions. Council will assess these instances on the merit of the individual case.

Council's strong preference is towards a negotiated outcome, however, in the event that an agreement cannot be reached Council will commission a consultant to resolve the matter. Council will fund the dispute resolution on a 50-50 basis to a maximum amount of $5000, any further negations shall be funded by the applicant.

8. PLAN CASH FLOWS

8.1 Income

Excluding administration income and including an interest component, development contributions are expected to yield about $1.4M per annum representing a total income of about $28 M to the year 2020 (refer to the trial operating balance in Table 8.1). The trial operational balance of this Plan is estimating a deficit of $6.8M.

The trial operating balance will alter if the work schedule is extended or altered to account for growth and/or development rates and patterns are at variance with those assumed in the traffic study.

8.2 Expenditure

Council will adopt a three year 'rolling program' for development works, reviewed annually at Budget time. This program will only deal with cash reserves collected by the Plan. Some projects which provide access to development, are to be built as part of the adjoining development. Council is not obligated to fund in part or whole any of these works from cash funds in the Plan unless otherwise agreed to by Council.

An underlying consideration in projecting the cash income into the Plan is that contributions from some developments may be "in kind". Council must be in agreement with 'in kind' contributions prior to approval since 'works contributions' may jeopardise the financing of other Plan projects.

Table 8.1 Trial Operational Balance for s94 Fund

Year	Income (Excl admin and interest charge)	RTA / Other Govt Funding Sources	Council Funding Obligation	New Work Expenditure	Running Total Income Less Expenditure	Interest
2003	$1,075,179	$350,000	$312,500	$866,154	$871,525	$26,146
2004	$1,098,833	$350,000	$312,500	$700,000	$1,932,857	$57,986
2005	$1,123,007	$350,000	$312,500	$1,000,000	$2,718,364	$81,551
2006	$1,147,713	$350,000	$312,500	$4,374,214	$154,364	$4,631
2007	$1,172,963	$350,000	$312,500	$8,817,202	-$6,827,376	-$477,916
2008	$1,198,768	$350,000	$312,500	$1,020,400	-$5,986,508	-$419,056
2009	$1,225,141	$350,000	$312,500	$619,709	-$4,718,576	-$330,300
2010	$1,252,094	$350,000	$312,500	$200,000	-$3,003,982	-$210,279
2011	$1,279,640	$350,000	$312,500	$1,200,000	-$2,261,842	-$158,329
2012	$1,307,792	$350,000	$312,500	$2,304,416	-$2,595,965	-$181,718
2013	$1,336,564	$350,000	$312,500	$1,575,893	-$2,172,795	-$152,096
2014	$1,365,968	$350,000	$312,500	$724,904	-$869,231	-$60,846
2015	$1,396,019	$350,000	$312,500	$977,270	$212,018	$6,361
2016	$1,426,732	$350,000	$312,500	$2,311,000	-$9,750	-$682
2017	$1,458,120	$350,000	$312,500	$617,055	$1,493,815	$44,814
2018	$1,490,198	$350,000	$312,500	$5,659,741	-$2,013,228	-$140,926
2019	$1,522,983	$350,000	$312,500	$3,895,375	-$3,723,120	-$260,618
2020	$1,556,488	$350,000	$312,500	$2,000,000	-$3,504,131	-$245,289
2021	$1,590,731	$350,000	$312,500	$2,000,000	-$3,250,900	-$227,563
2022	$1,625,727	$350,000	$312,500	$2,000,000	-$2,962,673	-$207,387
Total	**$26,650,660**	**$7,000,000**	**$6,250,000**	**$42,863,333**		**-$2,851,517**

- Running Total = Deficit to be funded by loans.

9. PAYMENTS

9.1 Timing of Payments

Contributions are payable at the time prescribed in Table 9.1.

Table 9.1 Timing of Payments

Type of consent	*Timing*
Subdivision where no further approvals are required	prior to release of Subdivision Certificate
Development not involving subdivision but where a subsequent Construction Certificate is required	prior to release of Construction Certificate
Any other developments	prior to the endorsement of the final plan or commencement

9.2 Indexation

Council's policy is to review contribution rates to ensure that the monetary contributions reflect the costs associated with the provision of roads within the Ballina LGA. Under the terms of this policy, contributions remain fixed for a twelve month period from the date of development consent and thereafter indexed at Budget time.

Contributions may be indexed and/or amended in one of three ways:

(i) reviewed on the basis of adjustments in the Implicit Price Deflator for Private Gross Fixed Capital Expenditure for Non-dwellings Construction as published by the Australian Bureau of Census and Statistics;

(ii) revised works estimates prepared and the transport/contribution models re-run with the "re-valued" works cost in; or

(iii) set by a plan that supersedes this Plan.

In the latter instance a complete revision may be necessary as a result of changing circumstances, for example, changes in growth rates, land use or expected yields. Such changes would create a new version of the Contribution Plan.

9.3 Contributions by way of Material Public Benefit and "Credits"

9.3.1 Contributions by way of Material Public Benefit unrelated to roads

The Council may accept an offer by the applicant to make a physical contribution by way of a material public benefit as referred to in the Regulations. The offer will be considered on its merits but may only be accepted if the applicant satisfies Council that:

(i) payment of the contribution in accordance with the provisions of the Plan is unreasonable or unnecessary in the circumstances of the case; and

(ii) the material public benefit contribution will not prejudice the timing or manner of the provision of the road facilities for which the contribution is required; and

(iii) the value of the works to be undertaken are at least equal to the value of the contribution assessed in accordance with this Plan.

9.3.2 Credits

Some developments may require the construction of works identified in the Works Schedule. In these instances Council may waiver all or part of the contribution to the BRCP.

Works will be valued in accordance with the Works Schedule of this Plan provided the applicant is paying the levies nominated in this Plan.

For any development, no credit will apply in respect of works that are considered necessary to provide direct access to that development.

9.4 Deferred Payment

The Council will generally not accept deferred or periodic payment of contributions. However, Council may consider an application where:

(i) compliance with the provisions relating to when contributions are payable is unreasonable or unnecessary in the circumstances of the case; and

(ii) non-compliance with the terms of this clause will not prejudice the timing or the manner of the provision of road facilities for which the contribution was required as outlined in the Works Schedule.

The decision to accept a deferred or periodic payment is at the sole discretion of the Council.

In the event Council decides to accept the deferred or periodic payment of contributions, the applicant may be required to provide an unconditional bank guarantee by an Australian bank or recognised financial institution. The bank guarantee will prohibit the bank from seeking recourse to the applicant or having regard to any appeal, dispute, controversy, issue or other matter relating to the carrying out of the development in accordance with the consent.

In the case of developments other than for the creation of subdivision allotments or households, the appropriate rate shall be assessed using criteria outlined in Section 7.1 of this Plan.

REFERENCES

Ballina Shire Council
Heavy Haulage Contributions Plan

Tweed Shire Council (2000)
"Tweed Road Contribution Plan"

Yoder, E S (1959)
"Principles of Pavement Design"
John Wiley & Sons

SUPPORTING DOCUMENTS

Ballina Shire Council
"Urban Land Release Strategy 2000"

Eppell Olsen & Partners (2000)
Design Note

Eppell Olsen & Partners (2000)
"Ballina Road Network Study"

Schedule 1 - Estimated Costs for Required Road Works

SKENNERS HEAD LINK ROAD
Roundabout: Angels Beach Dr

Date: **6-Jun-02**

Length : **N/A** **m**

Establish Site	item		**$**	**5,000.00**
Provision for Traffic	item		**$**	**22,000.00**
Sediment Control	ha		**$**	**2,000.00**
Concrete Roundabout	item		**$**	**400,000.00**
Roadway Lighting	item		**$**	**30,000.00**
Rising Main Adjustments				
150 Ø mm	item		**$**	**10,000.00**
375 Ø mm	item		**$**	**30,000.00**
Adjustments to 200 mm Reuse			**$**	**30,000.00**
Adjustments to Water	item		**$**	**15,000.00**
Adjustments to Cycleway	item		**$**	**5,000.00**
	SUB TOTAL		**$**	**549,000.00**
	Survey and Design	**7%**	**$**	**38,430.00**
	Contingency	**15%**	**$**	**82,350.00**
	G.S.T.	**10%**	**$**	**58,7473.00**
	TOTAL		**$**	**728,523.00**

SKENNERS HEAD LINK ROAD
Angels Beach Dr to North Creek Rd

Date: **6-Jun-02**

Length :	**1,830**	**m**					
Establish Site			item			**$**	**15,000.00**
Provision for Traffic			item			**$**	**15,000.00**
Stripping		2700	m^3	$	4.00	**$**	**10,800.00**
Sediment Control			item			**$**	**22,000.00**
Acid Sulfate Control			item			**$**	**55,000.00**
Geotechnical Investigation			item			**$**	**30,000.00**
Geotextile		20000	m^2	$	4.00	**$**	**80,000.00**
Earthworks							
Excavate/haul		18150	m^3	$	15.00	**$**	**272,250.00**
Cut to Fill		9350	m^3	$	12.00	**$**	**112,200.00**
Import Sand Fill		41250	m^3	$	20.00	**$**	**825,000.00**
Stormwater Drainage							
Pipework	450 Ø	750	m	$	160.00	**$**	**120,000.00**
	600 Ø	118	m	$	200.00	**$**	**23,600.00**
	900 Ø	100	m	$	460.00	**$**	**46,000.00**
Pits - DGKIP		30	item	$	1,500.00	**$**	**45,000.00**
Headwalls		15	item	$	1,500.00	**$**	**22,500.00**
Stormwater Quality Control			item			**$**	**115,000.00**
Pavement							
300mm Thick		8200	m^3	$	50.00	**$**	**410,000.00**
Wearing Surface							
A.C.		1100	tonne	$	150.00	**$**	**165,000.00**
Kerb and Gutter							
Kerb and Gutter		1450	m	$	45.00	**$**	**65,250.00**
Roadside Furniture							
Signage, linemarking, guideposts, etc			item			**$**	**8,000.00**
Fencing		3800	m	$	7.00	**$**	**26,600.00**
Landscaping							
Batter Restabilization Rehabilitation			item			**$**	**21,500.00**

Cattle Underpass	item		**$**	**30,000.00**
Roadway Lighting				
LHSTW road intersection	item		**$**	**120,000.00**
Reinstate Tracks	item		**$**	**3,000.00**
Property Acquisition	item		**$**	**400,000.00**
Public Utilities				
Telstra	item		**$**	**50,000.00**
Country Energy	item		**$**	**20,000.00**
	SUB TOTAL		**$**	**3,128,700.00**
	Survey and Design	**7%**	**$**	**219,009.00**
	Contingency	**15%**	**$**	**469,305.00**
	G.S.T.	**10%**	**$**	**334,771.00**
	TOTAL		**$**	**4,151,785.00**

SKENNERS HEAD LINK ROAD
North Creek Rd/Proposed Hutley Dr + Roundabout

Date: **6-Jun-02**

Length :	**3300m approx**					
Establish Site		item			**$**	**30,000.00**
Provision for Traffic		item			**$**	**20,000.00**
Sediment Control		item			**$**	**35,000.00**
Acid Sulphate Control					**$**	**30,000.00**
Geotechnical Investigation		item			**$**	**40,000.00**
Stripping	8000	m³	$	4.00	**$**	**32,000.00**
Geotextile	10000	m²	$	4.00	**$**	**40,000.00**
Earthworks						
Imported Fill	40000	m³	$	20.00	**$**	**800,000.00**
Cut to Fill	20000	m³	$	12.00	**$**	**240,000.00**
Pavement						
300mm Thick	15000	m³	$	50.00	**$**	**750,000.00**
Wearing Surface						
A.C. 42000m²	1680	tonne	$	150.00	**$**	**252,000.00**
Kerb and Gutter						
Kerb and Gutter	6600	m	$	45.00	**$**	**297,000.00**
Stormwater Drainage						
Construct Box Culverts	165	m	$	1,040.00	**$**	**171,600.00**
Headwalls	12	ea	$	1,500.00	**$**	**18,000.00**
Pipework 450ø	2600	m	$	160.00	**$**	**416,000.00**
Pit	50	ea	$	1,500.00	**$**	**75,000.00**
Detention Basin	8000	m³	$	12.00	**$**	**96,000.00**
Subsoil Drainage	6600	m	$	4.50	**$**	**29,700.00**
Roundabout						
Skennars Head Rd Int		item	$	400,000.00	**$**	**400,000.00**
Landscaping						
Batter Reinstatement		item	$	10,000.00	**$**	**10,000.00**
Accoustic Treatment						
Imported Fill	58000	m³	$	18.00	**$**	**1,044,000.00**
Landscaping	3300	m	$	20.00	**$**	**66,000.00**
Signage etc						

Signage, linemarking, guideposts, etc		item	$	7,500.00	**$**	**11,000.00**
Sewer						
Relocate 375ø Rising main	670	m	$	310.00	**$**	**207,700.00**
Water						
Relocate 450ø Water main	820	m	$	370.00	**$**	**303,400.00**
Public Utilities						
Telstra (relay cable network)		Quote	$	50,000.00	**$**	**50,000.00**
Country Energy (relocate poles)		Quote	$	50,000.00	**$**	**50,000.00**
Land Resumption	6.5	ha	$	100,000.00	**$**	**650,000.00**
			SUB TOTAL		**$**	**5,514,400.00**
			Survey and Design	**7%**	**$**	**386,008.00**
			Contingency	**15%**	**$**	**827,160.00**
			G.S.T.	**10%**	**$**	**590,040.80**
			TOTAL		**$**	**7,317,608.80**

SKENNERS HEAD LINK ROAD
Silkwood Rd to Lennox Roundabout

Date: **6-Jun-02**

Length :	**375**	**m Approx.**				
Establish Site		0.50%		item		**$5,000.00**
Provision for Traffic				item		**$10,000.00**
Sediment Control				item		**$6,000.00**
Stripping			1000	m^3	$4.00	**$4,000.00**
Earthworks						
Excavation			2400	m^3	$12.00	**$28,800.00**
Cut to Fill			500	m^3	$12.00	**$6,000.00**
Pavement						
300mm Thick			1550	m3	$50.00	**$77,500.00**
Wearing Surface						
A.C. 4800m^2			200	tonne	$150.00	**$30,000.00**
Kerb and Gutter			750	m	$45.00	**$33,750.00**
Drainage						
Pipe 450Ø			400	m	$160.00	**$64,000.00**
Pits, DGKIP			15	item	$1,500.00	**$22,500.00**
Signage etc						
Signage, linemarking, guideposts, etc				item		**$5,000.00**
Landscaping				item		**$5,000.00**
Adjustments to Sewer			300	m	$180.00	**$54,000.00**
Public Utilities						
Telstra				item		**$25,000.00**
Country Energy				item		**$5,000.00**
Property Acquisition			1	ha	$130,000.00	**$130,000.00**
					SUB TOTAL	**$356,550.00**
					Survey and Design **7%**	**$24,958.50**
					Contingency **15%**	**$53,482.50**
					G.S.T. **10%**	**$38,150.85**
					TOTAL	**$473,141.85**

WESTERN ARTERIAL
Burns Point Ferry Rd to North Creek Rd

Date: **6-Jun-02**

Length : **3,250** **m**

Establish Site		item			**$**	**50,000.00**
Provision for Traffic		item			**$**	**20,000.00**
Sediment Control		item			**$**	**70,000.00**
Clearing		item			**$**	**15,000.00**
Stripping	10000	m^3	$	4.00	**$**	**40,000.00**
Geotechnical Investigation	1%	item			**$**	**110,000.00**
Earthworks						
Imported Fill (1.5 m high)	135000	m^3	$	20.00	**$**	**2,700,000.00**
Static Loading	100000	m^3	$	25.00	**$**	**2,500,000.00**
Pavement						
300mm Thick	19500	m^3	$	60.00	**$**	**1,170,000.00**
Wearing Surface						
A.C.40000 m^2	1600	tonne	$	150.00	**$**	**240,000.00**
Kerb and Gutter						
Kerb and Gutter	6510	m	$	45.00	**$**	**292,950.00**
Median Strip	6510	m	$	45.00	**$**	**292,950.00**
Stormwater Drainage						
Box Culverts 900 x 1800	300	m	$	1,350.00	**$**	**405,000.00**
Headwalls	20	item	$	1,500.00	**$**	**30,000.00**
Pipework 375Ø	600	m	$	140.00	**$**	**84,000.00**
Pipework 450Ø	2000	m	$	160.00	**$**	**320,000.00**
Pits	60	item	$	1,500.00	**$**	**90,000.00**
Subsoil Drainage	6500	m	$	4.50	**$**	**29,250.00**
Bridge	60	m	$	15,000.00	**$**	**900,000.00**
Roundabout	1	item	$	400,000.00	**$**	**400,000.00**
Roadside Furniture						
Signage, linemarking, guideposts, etc		item			**$**	**25,000.00**
Landscaping		item			**$**	**25,000.00**
Batter Restabilization, etc						
Property Acquisition	10	ha			**$**	**900,000.00**

Public Utilities				
Telstra	item		**$**	**50,000.00**
Country Energy	item		**$**	**30,000.00**
	SUB TOTAL		**$**	**10,789,150.00**
	Survey and Design	**7%**	**$**	**755,240.50**
	Contingency	**15%**	**$**	**1,618,372.50**
	G.S.T.	**10%**	**$**	**1,154,439.05**
	TOTAL		**$**	**14,317,202.05**

Adjustments to Roundabout: Angels Beach Rd & Bangalow Road

Date: **6-Jun-02**

Length : **N/A** **m**

Establish Site	item		**$**	**5,000.00**
Provision for Traffic	item		**$**	**10,000.00**
Sediment Control	ha		**$**	**2,000.00**
Concrete Pavement	item		**$**	**100,000.00**
Roadway Lighting	item		**$**	**30,000.00**
Water Main Adjustments	item		**$**	**10,000.00**
Adjustments to Cycleway	item		**$**	**5,000.00**
	SUB TOTAL		**$**	**162,000.00**
	Survey and Design	**7%**	**$**	**16,200.00**
	Contingency	**15%**	**$**	**24,300.00**
	G.S.T.	**10%**	**$**	**17,820.00**
	TOTAL		**$**	**220,320.00**

CUMBALUM WAY UPGRADE

						Date:	**6-Jun-02**
Length :	**6,300**	**m Approx.**					
Establish Site			item			**$**	**15,000.00**
Provision for Traffic			item			**$**	**20,000.00**
Sediment Control			item			**$**	**60,000.00**
Stripping		6,500	m^3	$	4.00	**$**	**26,000.00**
Acid Sulfate Control			item			**$**	**30,000.00**
Geotechnical Investigation			item			**$**	**40,000.00**
Earthworks							
Excavation/haul		90000	m^3	$	15.00	**$**	**1,350,000.00**
Cut to Fill		60000	m^3	$	12.00	**$**	**720,000.00**
Import Sand Fill		20000	m^3	$	20.00	**$**	**400,000.00**
Bridge						**$**	**180,000.00**
Stormwater Drainage							
Pipework	450Ø	1800	m	$	160.00	**$**	**288,000.00**
	600Ø	350	m	$	200.00	**$**	**70,000.00**
	900Ø	150	m	$	460.00	**$**	**69,000.00**
Pits - DGKIP		40	item	$	1,500.00	**$**	**60,000.00**
Headwalls		14	item	$	1,500.00	**$**	**21,000.00**
Stormwater Quality Control			item			**$**	**180,000.00**
Pavement							
300mm Thick		28300	m3	$	50.00	**$**	**1,415,000.00**
Wearing Surface							
A.C.		3200	tonne	$	150.00	**$**	**480,000.00**
Kerb and Gutter							
Kerb and Gutter		6000	m	$	45.00	**$**	**270,000.00**
Table Drains		4000	m	$	10.00	**$**	**40,000.00**
Roadside Furniture							
Signage, linemarking, guideposts, etc			item			**$**	**25,000.00**
Fencing		5000	m	$	7.00	**$**	**35,000.00**
Landscaping							
Batter Restabilization and Rehabilitation			item			**$**	**50,000.00**

Roadway Lighting	item			**$**	**120,000.00**
Property Acquisition	item			**$**	**400,000.00**
Public Utilities					
Telstra	item			**$**	**50,000.00**
Country Energy	item			**$**	**40,000.00**
		SUB TOTAL		**$**	**6,263,000.00**
		Survey and Design	**7%**	**$**	**438,410.00**
		Contingency	**15%**	**$**	**939,450.00**
		G.S.T.	**10%**	**$**	**670,141.00**
		TOTAL		**$**	**8,311,001.00**

HILL ST/COMPTON DR
Compton Dr Intersection
and Underpass

Date: **6-Jun-02**

Length :	**Approx. 180**	**m**					
Establish Site			item			**$**	**6,000.00**
Provision for Traffic	4%		item			**$**	**30,000.00**
Sediment Control			item			**$**	**6,000.00**
Stormwater Drainage							
Pipework 375Ø		280	m	$	140.00	**$**	**39,200.00**
Pipework 450Ø		80	m	$	160.00	**$**	**12,800.00**
DGKIP		2	item	$	3,400.00	**$**	**6,800.00**
DGKIP		9	item	$	1,360.00	**$**	**12,240.00**
Junction Pit		2	item	$	1,150.00	**$**	**2,300.00**
Adjust Junction Pit		1	item	$	900.00	**$**	**900.00**
Earthworks							
Spoil		3200	m^3	$	15.00	**$**	**48,000.00**
Footpaths							
concrete 1.35 m wide		270	m^2	$	80.00	**$**	**21,600.00**
Sub-base							
(125mm) thick		3790	m^2	$	36.50	**$**	**138,335.00**
Base							
200mm CRC		3570	m^2	$	57.00	**$**	**203,490.00**
Supply and Place Reo		3570	m^2	$	30.00	**$**	**107,100.00**
Pavement							
300mm		300	m^3	$	60.00	**$**	**18,000.00**
Wearing Surface							
Hotmix		40	tonne	$	150.00	**$**	**6,000.00**
Kerb and Gutter							
Vertical kerb		995	m	$	45.00	**$**	**44,775.00**
Mountable kerb		290	m	$	40.00	**$**	**11,600.00**
paved median		200	m^2	$	60.00	**$**	**12,000.00**
Temporary Connection			item			**$**	**11,500.00**

Roadside Furniture							
Signage and linemarking, etc		Item				**$**	**6,000.00**
Guardrails	90	m	$	100.00		**$**	**9,000.00**
Retaining Wall							
Split Block		item				**$**	**16,950.00**
Crib Wall		item				**$**	**398,000.00**
Underpass Units & Base		item				**$**	**30,000.00**
Earthworks		item				**$**	**20,000.00**
Headwalls	2	item	$	6,000.00		**$**	**12,000.00**
Adjust Sewer		Quote				**$**	**45,000.00**
Landscaping							
Batter Protection		item				**$**	**6,000.00**
Rehabilitation and planting		item				**$**	**2,000.00**
Sreet Lighting		item				**$**	**17,000.00**
Adjust Watermain	170	m	$	100.00		**$**	**17,000.00**
Public Utilities							
Telstra		Quote				**$**	**6,000.00**
Country Energy		Quote				**$**	**6,000.00**
			SUB TOTAL			**$**	**1,329,590.00**
			Survey and Design		**7%**	**$**	**93,071.30**
			Contingency		**15%**	**$**	**199,438.50**
			G.S.T.		**10%**	**$**	**142,266.13**
			TOTAL			**$**	**1,764,365.93**

ROUNDABOUT: BENTINCK ST / KERR ST

Date: **6-Jun-02**

Length : **N/A** **m**

Establish Site	item		**$**	**5,000.00**
Provision for Traffic	item		**$**	**22,000.00**
Sediment Control	ha		**$**	**5,000.00**
Concrete Roundabout	item		**$**	**400,000.00**
Roadway Lighting	item		**$**	**30,000.00**
Adjustments to services	item		**$**	**40,000.00**
	SUB TOTAL		**$**	**502,000.00**
	Survey and Design	**7%**	**$**	**35,140.00**
	Contingency	**15%**	**$**	**75,300.00**
	G.S.T.	**10%**	**$**	**53,714.00**
	TOTAL		**$**	**666,154.00**

ROUNDABOUT: ANGELS BEACH DRIVE AND LINKS AVE

Date: **6-Jun-02**

Length : **N/A** **m**

Establish Site	item		**$**	**5,000.00**
Provision for Traffic	item		**$**	**22,000.00**
Sediment Control	ha		**$**	**5,000.00**
Concrete Roundabout	item		**$**	**400,000.00**
Roadway Lighting	item		**$**	**30,000.00**
Adjustments to Cycleway	item		**$**	**5,000.00**
	SUB TOTAL		**$**	**467,000.00**
	Survey and Design	**7%**	**$**	**32,690.00**
	Contingency	**15%**	**$**	**70,050.00**
	G.S.T.	**10%**	**$**	**49,969.00**
	TOTAL		**$**	**619,709.00**

ROUNDABOUT: NORTH CREEK RD/ PACIFIC HIGHWAY

				Date:	**6-Jun-02**
Length :	**N/A**	**m**			
Establish Site		item		**$**	**5,000.00**
Provision for Traffic		item		**$**	**22,000.00**
Sediment Control		ha		**$**	**5,000.00**
Concrete Roundabout		item		**$**	**200,000.00**
Roadway Lighting		item		**$**	**30,000.00**
Adjustments to services		item		**$**	**20,000.00**
			SUB TOTAL	**$**	**282,000.00**
			Survey and Design **7%**	**$**	**19,740.00**
			Contingency **15%**	**$**	**42,300.00**
			G.S.T. **10%**	**$**	**30,174.00**
			TOTAL	**$**	**374,214.00**

REALIGN CLARK STREET

Date: 6-Jun-02

Length : N/A m

Establish Site		item				**$ 5,000.00**
Provision for Traffic		item				**$ 10,000.00**
Sediment Control		ha				**$ 5,000.00**
Pavement						
Concrete 300 m	1200	m^2	$	170.00		**$204,000.00**
Kerb and Gutter	250	m	$	45.00		**$ 11,250.00**
Median Strip	120	m	$	45.00		**$ 5,400.00**
Roadway Lighting		item				**$ 10,000.00**
Signage, etc		item				**$ 1,000.00**
Public Utilities						
Telstra		item				**$ 20,000.00**
Country Energy		item				**$ 20,000.00**
Adjustments to Water		item				**$ 15,000.00**
Adjustments to Cycleway		item				**$ 5,000.00**
Environmental Works		item				**$ 20,000.00**
			SUB TOTAL			**$311,650.00**
			Survey and Design		**7%**	**$ 21,815.50**
			Contingency		**15%**	**$ 46,747.50**
			G.S.T.		**10%**	**$ 33,346.55**
			TOTAL			**$ 413,559.55**

ROSS LA UPGRADE (west of Sanctuary Village)

						Date:		**6-Jun-02**
Length :	**400**	**m Approx.**						
Establish Site			item				**$**	**5,000.00**
Provision for Traffic			item				**$**	**10,000.00**
Sediment Control			item				**$**	**20,000.00**
Stripping		850	m^3	$	4.00		**$**	**3,400.00**
Acid Sulfate Control			item				**$**	**5,000.00**
Geotechnical Investigation			item				**$**	**10,000.00**
Earthworks								
Cut to Fill		800	m^3	$	12.00		**$**	**9,600.00**
Import Sand Fill		1000	m^3	$	20.00		**$**	**20,000.00**
Bridge Widening							**$**	**60,000.00**
Stormwater Drainage							**$**	**15,000.00**
Pavement								
300mm Thick		1200	m3	$	50.00		**$**	**60,000.00**
Wearing Surface		3600	tonne	$	6.00		**$**	**21,600.00**
Roadside Furniture								
Signage, linemarking, guideposts, etc			item				**$**	**5,000.00**
Fencing		800	m	$	7.00		**$**	**5,600.00**
Landscaping								
Batter Restablilization and Rehabilitation			item				**$**	**50,000.00**
Property Acquisition			item				**$**	**80,000.00**
Public Utilities								
Telstra			item				**$**	**50,000.00**
Relocate water main			item				**$**	**48,000.00**
				SUB TOTAL			**$**	**424,800.00**
				Survey and Design		**7%**	**$**	**29,736.00**
				Contingency		**15%**	**$**	**63,720.00**
				G.S.T.		**10%**	**$**	**45,453.60**
				TOTAL			**$**	**563,709.60**

ROUNDABOUT: SKENNARS HEAD ROAD AND COAST ROAD

			Date:		**6-Jun-02**
Establish Site	item			**$**	**5,000.00**
Provision for Traffic	item			**$**	**22,000.00**
Sediment Control	ha			**$**	**5,000.00**
Remove Existing Median	item			**$**	**3,000.00**
Concrete Roundabout	item			**$**	**400,000.00**
Roadway Lighting	item			**$**	**30,000.00**
		SUB TOTAL		**$**	**465,000.00**
		Survey and Design	**7%**	**$**	**32,550.00**
		Contingency	**15%**	**$**	**69,750.00**
		G.S.T.	**10%**	**$**	**49,755.00**
		TOTAL		**$**	**617,055.00**

TINTENBAR ROAD / RIFLE RANGE ROAD
Upgrade (widening)

Date: **6-Jun-02**

Length : **(Approx. 4500 m of passing lanes)**

Establish Site		item			**$**	**20,000.00**
Provision for Traffic		item			**$**	**50,000.00**
Sediment Control		item			**$**	**40,000.00**
Earthworks						
Cut and fill	60000	m^3	$	12.00	**$**	**720,000.00**
Pavement						
300mm Thick	8000	m^3	$	50.00	**$**	**400,000.00**
Wearing Surface						
	27000	m^3	$	6.00	**$**	**162,000.00**
Drainage		item			**$**	**100,000.00**
Roadside Furniture						
Signage, linemarking, guideposts, etc		item			**$**	**10,000.00**
Landscaping						
Batter Restabilization etc		item			**$**	**10,000.00**
Property Acquisition		item			**$**	**200,000.00**
Public Utilities						
Telstra		item			**$**	**20,000.00**
Country Energy		item			**$**	**20,000.00**

SUB TOTAL		**$**	**1,752,000.00**
Survey and Design	**7%**	**$**	**122,640.00**
Contingency	**15%**	**$**	**262,800.00**
G.S.T.	**10%**	**$**	**187,464.00**
TOTAL		**$**	**2,324,904.00**

Schedule 2 Estimated Value of Existing Road Works

TINTENBAR ROAD / RIFLE RANGE ROAD

Existing Use

Date: **6-Jun-02**

Length : **13,000** **m**

Earthworks							
Cut and fill	100,000	m^3	$	12.00		**$**	**1,200,000.00**
Pavement							
300mm Thick	31200	m^3	$	50.00		**$**	**1,560,000.00**
Wearing Surface							
	91000	m^3	$	6.00		**$**	**546,000.00**
Kerb & Gutter	1600	m	$	45.00		**$**	**72,000.00**
Drainage		item				**$**	**400,000.00**
Bridge Structures						**$**	**2,205,000.00**
Roadside Furniture							
Signage, linemarking, guideposts, etc		item				**$**	**80,000.00**
			SUB TOTAL			**$**	**5,983,000.00**
			Survey and Design		**7%**	**$**	**418,810.00**
			Contingency		**10%**	**$**	**598,300.00**
			G.S.T.		**10%**	**$**	**640,181.00**
			TOTAL			**$**	**7,640.291.00**

Schedule 2 - Estimated Value of Existing Road Infrastructure

ANGELS BEACH DRIVE (Existing Use)
Bangalow Rd to Coast Rd

							Date:	**6-Jun-02**
Length :	**4,350**	**m**						
Land purchase				item			**$**	**800,000.00**
Environmental works				item			**$**	**300,000.00**
Earthworks								
Imported Fill			70,000	m^3	$	20.00	**$**	**1,400,000.00**
Pavement								
300mm thick			13000	m^3	$	50.00	**$**	**650,000.00**
Wearing Surface								
A.C. 43000 m^2			1750	tonne	$	150.00	**$**	**262,500.00**
Kerb and Gutter								
Kerb and Gutter			150	m	$	45.00	**$**	**6,750.00**
Median Strip			300	m	$	45.00	**$**	**13,500.00**
Roundabout				item			**$**	**400,000.00**
Drainage				itme			**$**	**130,000.00**
Bridge								
Prospect Bridge			170	m	$	25,000.00	**$**	**4,250,000.00**
Small Bridge			10	m	$	15,000.00	**$**	**150,000.00**
Roadside Furniture								
Signage, linemarking, guideposts, etc				item			**$**	**20,000.00**
					SUB TOTAL		**$**	**8,382,750.00**
					Survey and Design	**7%**	**$**	**586,792.50**
					Contingency	**10%**	**$**	**838,275.00**
					G.S.T.	**10%**	**$**	**896,954.25**
					TOTAL		**$**	**10,704,771.75**

BALLINA ST (Existing Use)
Coast Rd to Byron St

Date: **6-Jun-02**

Length : **850** **m**

Earthworks						
Excavation	3000	m^3	$	12.00	**$**	**36,000.00**
Pavement						
300mm thick	2940	m^3	$	50.00	**$**	**147,000.00**
Wearing Surface						
A.C. 9800 m^2	400	tonne	$	150.00	**$**	**60,000.00**
Kerb and Gutter						
	1700	m	$	45.00	**$**	**76,500.00**
Drainage		item			**$**	**100,000.00**
Roadside Furniture						
Signage, linemarking, etc		item			**$**	**5,000.00**

SUB TOTAL		**$**	**424,500.00**
Survey and Design	**7%**	**$**	**29,715.00**
Contingency	**10%**	**$**	**42,450.00**
G.S.T.	**10%**	**$**	**45,421.50**
TOTAL		**$**	**542.086.50**

BANGALOW ROAD (Existing Use)
Fox St to Kerr St Roundabout

						Date:	**6-Jun-02**
Length :	**870**	**m**					
Earthworks							
Excavation		4300	m^3	$	12.00	**$**	**51,600.00**
Pavement							
300mm Thick		4020	m^3	$	170.00	**$**	**683,400.00**
Wearing Surface							
A.C. 13400 m^2		540	tonne	$	150.00	**$**	**81,000.00**
Kerb and Gutter							
		1740	m	$	45.00	**$**	**78,300.00**
Drainage			item			**$**	**95,000.00**
Roadside Furniture							
Signage, linemarking, etc			item			**$**	**5,000.00**

TOTAL		**$**	**994,300.00**
Survey and Design	**7%**	**$**	**69,601.00**
Contingency	**10%**	**$**	**99,430.00**
G.S.T.	**10%**	**$**	**106,390.10**
TOTAL		**$**	**1,269,721.10**

BENTINCK ST (Existing Use)
Missingham Bridge to Kerr St

							Date:	**6-Jun-02**
Length :	**1,800**	**m**						
Earthworks								
Excavation			11200	m^3	$	12.00	**$**	**134,400.00**
Pavement								
300mm thick			6220	m^3	$	50.00	**$**	**311,000.00**
Concrete 300mm			1470	m^2	$	170.00	**$**	**249,900.00**
Wearing Surface								
A.C. 20800 m^2			840	tonne	$	150.00	**$**	**126,000.00**
Kerb and Gutter								
			3200	m	$	45.00	**$**	**144,000.00**
Drainage				item			**$**	**160,000.00**
Roundabouts	(Cherry & Moon Sts)		2	item	$	400,000.00	**$**	**800,000.00**
Roadside Furniture								
Signage, linemarking, guideposts, etc				item			**$**	**9,000.00**
					SUB TOTAL		**$**	**1,934,300.00**
					Survey and Design	**7%**	**$**	**135,401.00**
					Contingency	**10%**	**$**	**193,430.00**
					G.S.T.	**10%**	**$**	**206,970.10**
					TOTAL		**$**	**2,470,101.10**

BURNS POINT FERRY RD (Existing Use)
Ballina

Date: **6-Jun-02**

Length : **950** **m**

Earthworks						
Excavation	2900	m^3	$	12.00	**$**	**34,800.00**
Pavement						
300mm thick	1140	m^3	$	50.00	**$**	**57,000.00**
Concrete 300mm	5700	m^2	$	170.00	**$**	**969,000.00**
Wearing Surface						
A.C. 3800 m^2	160	tonne	$	150.00	**$**	**24,000.00**
Kerb and Gutter						
Kerb and Gutter	950	m	$	45.00	**$**	**42,750.00**
Median Strip	30	m	$	45.00	**$**	**1,350.00**
Drainage		item			**$**	**110,000.00**
Roadside Furniture						
Signage, linemarking, guideposts, etc		item			**$**	**5,000.00**

SUB TOTAL		**$**	**1,243,900.00**
Survey and Design	**7%**	**$**	**87,073.00**
Contingency	**10%**	**$**	**124,390.00**
G.S.T.	**10%**	**$**	**133,097.30**
TOTAL		**$**	**1,588,460.30**

BYRON ST (Existing Use)
Coast Rd to Ballina St

Date: **6-Jun-02**

Length : **980** **m**

Earthworks						
Excavation	2500	m^3	$	12.00	**$**	**30,000.00**
Pavement						
300mm thick	2490	m^3	$	50.00	**$**	**124,500.00**
Wearing Surface						
A.C. 8300 m^2	340	tonne	$	150.00	**$**	**51,000.00**
Kerb and Gutter						
Kerb and Gutter	1000	m	$	45.00	**$**	**45,000.00**
Median Strip	50	m	$	45.00	**$**	**2,250.00**
Drainage		item			**$**	**110,000.00**
Roadside Furniture						
Signage, linemarking, etc		item			**$**	**5,000.00**

SUB TOTAL		**$**	**367,750.00**
Survey and Design	**7%**	**$**	**25,742.50**
Contingency	**10%**	**$**	**36,775.00**
G.S.T.	**10%**	**$**	**39,349.25**
TOTAL		**$**	**469,616.75**

CHERRY ST (Existing Use)
River St to Fox St

Date: **6-Jun-02**

Length :	**950**	**m**					
Earthworks							
Excavation	6400	m^3	$	12.00		**$**	**76,800.00**
Pavement							
300mm Thick	5630	m^3	$	50.00		**$**	**281,500.00**
Concrete 300mm	2320	m^2	$	170.00		**$**	**394,400.00**
Wearing Surface							
A.C. 18800 m^2	760	tonne	$	150.00		**$**	**114,000.00**
Kerb and Gutter							
	1900	m	$	45.00		**$**	**85,500.00**
Drainage		item				**$**	**110,000.00**
Roundabout	TO BE INCLUDED WITH BENTINCK ST COSTING						
Roadside Furniture							
Signage, linemarking, etc		item				**$**	**7,000.00**
			SUB TOTAL			**$**	**1,069,200.00**
			Survey and Design		**7%**	**$**	**74,844.00**
			Contingency		**10%**	**$**	**106,920.00**
			G.S.T.		**10%**	**$**	**114,404.40**
			TOTAL			**$**	**1,365,368.40**

FOX ST (Existing Use)
Cherry St to Kerr St

						Date:		**6-Jun-02**
Length :	**450**	**m**						
Earthworks								
Excavation		2400	m^3	$	12.00		**$**	**28,800.00**
Pavement								
300mm Thick		2300	m^3	$	50.00		**$**	**115,000.00**
Wearing Surface								
A.C. 7700m^2		310	tonne	$	150.00		**$**	**46,500.00**
Kerb and Gutter								
		900	m	$	45.00		**$**	**40,500.00**
Drainage			item				**$**	**50,000.00**
Roadside Furniture								
Signage, linemarking, etc			item				**$**	**5,000.00**
				SUB TOTAL			**$**	**285,800.00**
				Survey and Design		**7%**	**$**	**20,006.00**
				Contingency		**10%**	**$**	**28,580.00**
				G.S.T.		**10%**	**$**	**30,580.60**
				TOTAL			**$**	**364,966.60**

LINKS AVE (Existing Use)
Coast Road to Angels Beach Dr

						Date:	**6-Jun-02**
Length :	**1,480 m**						
Earthworks							
Excavation		6200	m^3	$	12.00	**$**	**74,400.00**
Pavement							
300mm Thick		5700	m^3	$	50.00	**$**	**285,000.00**
Wearing Surface							
A.C. 19000 m^2		760	tonne	$	150.00	**$**	**114,000.00**
Kerb and Gutter							
		2600	m	$	45.00	**$**	**117,000.00**
Drainage			item			**$**	**150,000.00**
Roadside Furniture							
Signage, linemarking, guideposts, etc			item			**$**	**7,000.00**
				SUB TOTAL		**$**	**747,400.00**
				Survey and Design	**7%**	**$**	**52,318.00**
				Contingency	**10%**	**$**	**74,740.00**
				G.S.T.	**10%**	**$**	**79,971.80**
				TOTAL		**$**	**954,429.80**

MOON ST (Existing Use)
Bangalow Road to River St

Date: **6-Jun-02**

Length : **1,250** **m**

Earthworks						
Excavation	13200	m^3	$	12.00	**$**	**158,400.00**
Pavement						
300mm Thick	3770	m^3	$	50.00	**$**	**188,500.00**
Concrete 300mm	2690	m^2	$	170.00	**$**	**457,300.00**
Wearing Surface						
A.C. 12600 m^2	510	tonne	$	150.00	**$**	**76,500.00**
Kerb and Gutter						
Kerb and Gutter	2450	m	$	45.00	**$**	**110,250.00**
Median Strip	280	m	$	45.00	**$**	**12,600.00**
Drainage		item			**$**	**140,000.00**
Roundabout	TO BE INCLUDED IN BENTINCK ST COSTING					
Roadside Furniture						
Signage, linemarking, etc		item			**$**	**6,000.00**

SUB TOTAL		**$**	**1,149,550.00**
Survey and Design	**7%**	**$**	**80,468.50**
Contingency	**10%**	**$**	**114,955.00**
G.S.T.	**10%**	**$**	**123,001.85**
TOTAL		**$**	**1,467,975.35**

NORTH CREEK RD (Existing Use)
Lennox Roundabout to Skenners Head Rd

Date: **6-Jun-02**

Length : **2,650 m**

Earthworks						
Excavation	9930	m^3	$	12.00	**$**	**119,160.00**
Pavement						
300mm Thick	9130	m^3	$	50.00	**$**	**456,500.00**
Wearing Surface						
A.C. 30500	1220	tonne	$	150.00	**$**	**183,000.00**
Kerb and Gutter						
	500	m	$	45.00	**$**	**22,500.00**
Drainage		item			**$**	**80,000.00**
Roadside Furniture						
Signage, linemarking, guideposts, etc		item			**$**	**7,000.00**

SUB TOTAL		**$**	**868,160.00**
Survey and Design	**7%**	**$**	**60,771.20**
Contingency	**10%**	**$**	**86,816.00**
G.S.T.	**10%**	**$**	**92,893.12**
TOTAL		**$**	**1,108,640.32**

NORTH TEVEN ROAD (Existing Use)
Pacific Hwy to Tintenbar Rd

Date: **6-Jun-02**

Length : **5,800 m**

Earthworks						
Cut and fill	59500	m^3	$	12.00	**$**	**714,000.00**
Pavement						
300mm Thick	12200	m^3	$	50.00	**$**	**610,000.00**
Wearing Surface						
	40600	m^3	$	6.00	**$**	**243,600.00**
Drainage		item			**$**	**180,000.00**
Roadside Furniture						
Signage, linemarking, guideposts, etc		item			**$**	**12,000.00**

SUB TOTAL		**$**	**1,759,600.00**
Survey and Design	**7%**	**$**	**123,172.00**
Contingency	**10%**	**$**	**175,960.00**
G.S.T.	**10%**	**$**	**188,277.20**
TOTAL		**$**	**2,247,009.20**

ROSS LANE (Existing Use)
Pacific Hwy to Byron Bay Rd

Date: **6-Jun-02**

Length : **5,700 m**

Earthworks							
Cut and fill	50000	m^3	$	12.00		**$**	**600,000.00**
Imported sand fill	20,000	m^3	$	20.00		**$**	**400,000.00**
Pavement							
300mm Thick	13700	m^3	$	50.00		**$**	**685,000.00**
Wearing Surface							
	40000	m^3	$	6.00		**$**	**240,000.00**
Drainage		item				**$**	**170,000.00**
Bridge Structure						**$**	**210,000.00**
Roadside Furniture							
Signage, linemarking, guideposts, etc		item				**$**	**40,000.00**
			SUB TOTAL			**$**	**2,345,000.00**
			Survey and Design		**7%**	**$**	**164,150.00**
			Contingency		**10%**	**$**	**234,500.00**
			G.S.T.		**10%**	**$**	**250,915.00**
			TOTAL			**$**	**2,994,565.00**

SKENNERS HEAD ROAD (Existing use)
Coast Rd to North Creek Rd

							Date:	**6-Jun-02**
Length :	**1,650**	**m**						
Earthworks								
Excavation		13000	m^3	$	12.00		**$**	**156,000.00**
Imported fill		6000	m^3	$	20.00		**$**	**120,000.00**
Pavement								
300mm Thick		4260	m^3	$	50.00		**$**	**213,000.00**
Wearing Surface								
		14200	m^3	$	6.00		**$**	**85,200.00**
Kerb and Gutter								
Kerb and Gutter		800	m	$	45.00		**$**	**36,000.00**
Median Strip		20	m	$	45.00		**$**	**900.00**
Drainage			item				**$**	**50,000.00**
Roadside furniture								
Signage, linemarking, guideposts, etc			item				**$**	**5,000.00**
					SUB TOTAL		**$**	**666,100.00**
					Survey and Design	**7%**	**$**	**46,627.00**
					Contingency	**10%**	**$**	**66,610.00**
					G.S.T.	**10%**	**$**	**71,272.70**
					TOTAL		**$**	**850,609.70**

SOUTHERN CROSS DR (Existing Use)
Pacific Hwy to Airport

Date: **6-Jun-02**

Length : **1,950 m**

Earthworks						
Excavation	8000	m^3	$	12.00	**$**	**96,000.00**
Imported sand fill	20,000	m^3	$	20.00	**$**	**400,000.00**
Pavement						
300mm Thick	6750	m^3	$	50.00	**$**	**337,500.00**
Concrete 300mm	2240	m^2	$	170.00	**$**	**380,800.00**
Wearing Surface						
A.C. 22500 m^2	900	tonne	$	150.00	**$**	**135,000.00**
Kerb and Gutter						
Kerb and Gutter	1600	m	$	45.00	**$**	**72,000.00**
Median Strip	50	m	$	45.00	**$**	**2,250.00**
Drainage		item			**$**	**120,000.00**
Roadside Furniture						
Signage, linemarking, guideposts, etc		item			**$**	**13,000.00**

SUB TOTAL		**$**	**1,556,550.00**
Survey and Design	**7%**	**$**	**108,958.50**
Contingency	**10%**	**$**	**155,655.00**
G.S.T.	**10%**	**$**	**166,550.85**
TOTAL		**$**	**1,987,714.35**

TEVEN RD (Existing Use)
Bruxner Hwy to Tintenbar Rd

						Date:		**6-Jun-02**
Length :	**4,300**	**m**						
Earthworks								
Cut and fill		10,000	m³	$	12.00		**$**	**120,000.00**
Pavement								
300 mm Thick		13500	m^3	$	50.00		**$**	**675,000.00**
Wearing Surface								
		42000	m³	$	6.00		**$**	**252,000.00**
Kerb and Gutter								
Kerb and Gutter		3000	m	$	45.00		**$**	**135,000.00**
Drainage			item				**$**	**130,000.00**
Roundabout			Item				**$**	**100,000.00**
Roadside Furniture								
Signage, linemarking, guideposts, etc			item				**$**	**16,000.00**
				SUB TOTAL			**$**	**1,428,000.00**
				Survey and Design		**7%**	**$**	**99,960.00**
				Contingency		**10%**	**$**	**142,800.00**
				G.S.T.		**10%**	**$**	**152,796.00**
				TOTAL			**$**	**1,823,556.00**

URALBA RD (Existing Use)
Wardell Rd to Pacific Hwy

						Date:		**6-Jun-02**
Length :	**7,400**	**m**						
Earthworks								
Cut and fill		35,000	m³	$	12.00		**$**	**420,000.00**
Pavement								
300mm Thick		13400	m^3	$	50.00		**$**	**670,000.00**
Wearing Surfac								
		44500	m³	$	6.00		**$**	**267,000.00**
Drainage			item				**$**	**230,000.00**
Bridge							**$**	**70,000.00**
Roadside Furniture								
Signage, linemarking, guideposts, etc			item				**$**	**8,000.00**
				TOTAL			**$**	**1,665,000.00**
				Survey and Design		**7%**	**$**	**116,550.00**
				Contingency		**10%**	**$**	**166,500.00**
				G.S.T.		**10%**	**$**	**178,155.00**
				TOTAL			**$**	**2,126,205.00**

WARDELL RD (Existing Use)
Pacific Hwy to Alstonville

						Date:		**6-Jun-02**
Length :	**15,300**	**m**						
Earthworks								
Cut and fill		80000	m^3	$	17.00		**$**	**1,360,000.00**
Pavement								
300mm Thick		37000	m^3	$	60.00		**$**	**2,220,000.00**
Wearing Surface								
		107000	m^3	$	6.00		**$**	**642,000.00**
Drainage			item				**$**	**460,000.00**
Bridge							**$**	**60,000.00**
Roadside Furniture								
Signage, linemarking, guideposts, etc			item				**$**	**45,000.00**
				SUB TOTAL			**$**	**4,787,000.00**
				Survey and Design		**7%**	**$**	**335,090.00**
				Contingency		**10%**	**$**	**478,700.00**
				G.S.T.		**10%**	**$**	**512,209.00**
				TOTAL			**$**	**6,112,999.00**