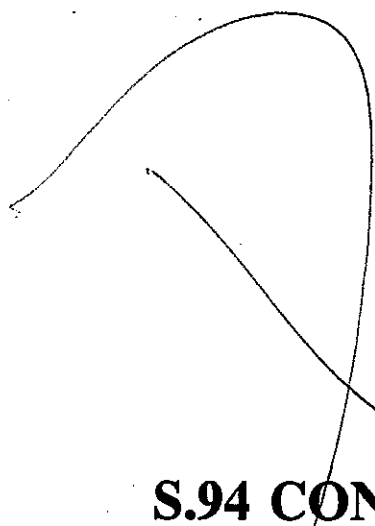


COPMANHURST SHIRE COUNCIL



S.94 CONTRIBUTION PLAN

ACCESS - ROADS AND BRIDGES

AMENDMENT NO. 1
SCHEDULE 2 TABLE 1 - Page 16
Tabulam Road added

Notified on 24 December 1992

INDEX

Part A - Introduction

1. Citation
2. Purpose
3. Aims and Objectives
4. Relationship with other Plans
5. Land to which the plan applies

Part B - Assessment of Contributions

6. Assessment of Contribution
7. Formula for Contribution
8. Apportionment
9. Discount Rates
10. Annual Adjustment

Part C - Contribution Rates

11. Upgrading Required
12. Nexus
13. Contribution

Part D - Payment of Contributions

14. Payment of Contributions
15. Timing of Contributions
16. Deferred and Periodic Payment

Part E - Accountability

17. S 94 Accounting for Contributions
18. Priority Spending
19. Contributions Register
20. Annual Statement
21. Review of Plan

Part F - Maps, Schedules, etc

- Map 1 - Land to which the Plan applies
- Schedule 1 - Contribution Rates
- Schedule 2 - Upgrading Program

SECTION 94 CONTRIBUTIONS PLAN

ACCESS - ROADS AND BRIDGES

PART A - INTRODUCTION

1. Citation

This plan may be referred to as the "Section 94 Contribution Plan for Access - Roads and Bridges".

2. Purpose

The purpose of the Plan is to enable the levying of development contributions for the upgrading of access - roads and bridges which will be required as a consequence of increased demand generated by development within the Shire of Copmanhurst.

3. Aims and Objectives

The Aims and Objectives of the Plan are:

- (a) To upgrade access - roads and bridges in order to meet the increased demand to provide adequate access throughout the Shire of Copmanhurst.
- (b) To provide a basis for levying developer contributions.
- (c) To identify the upgrading which Council intends to provide.
- (d) To establish a nexus between the anticipated development and contributions sought.
- (e) To enable the early provision of improved access.
- (f) To encourage public participation in the formulation of the plan.
- (g) To provide advice as to the amount of contribution which will be required for a particular development.
- (h) To facilitate proper financial management and accountability for expenditure of contributions received.

4. Relationship to Environmental Planning Instruments

The Plan enables the levying of developer contributions specified for land uses permissible under Copmanhurst Local Environmental Plan 1990 and Amendments.

5. Land to which the Plan applies

The Plan applies to all land within the Local Government area known as the Shire of Copmanhurst as identified in Map 1.

PART B - ASSESSMENT OF CONTRIBUTIONS

6. Assessment of Contributions

Assessment of the S94 contributions is based on the increase in demand to upgrade access resulting from the increase in population generated by development, the types of developments involved, and the heightened level of community awareness and expectation.

As a result of the high annual growth rate Council is continually receiving requests for upgrading. Such requests are particularly evident from "new settlers" who may have experienced a higher standard of access.

The amount of contribution is based on -

1. additional lots in the case of subdivision; the erection of single dwellings; additional dwellings in the case of dual and multiple occupancy; additional industrial commercial or related development.
2. The increase in traffic as a result of development consent for extractive industries.

7. Formula for Contribution

The formula for calculating the amount of contribution is based on a consideration of:

- * the additional demand created by a development.
- * the anticipated capital costs to upgrade access to meet the additional demand.
- * the application of any apportionment and/or discount factor (refer Clauses 8 and 9).

8. Apportionment

Apportionment rates are included, where appropriate, in the formulae for contributions contained in Part C.

9. Discount Rates

In some instances, Council may apply a discount factor to the contribution rates.

The purpose of this additional discount factor will vary, but may relate to factors such as Council's desire to encourage a particular type of development.

The decision as to whether to discount contribution rates will be entirely at the discretion of Council.

10. Annual Adjustment

The contribution rates contained in Schedule 1 will be adjusted annually in line with the anticipated upgrading costs based upon the recommendations of the Shire Engineer and endorsement of Council.

PART C - CONTRIBUTION RATES

11. Upgrading Required

To cater for anticipated demand to upgrade access - roads and bridges, Council is required to identify the proposed upgrading.

The details including projected costs are identified in Schedule 2.

12. Nexus

The following factors are relevant in establishing the nexus between new development and the demands being placed on Council.

- * Demand for upgraded access will increase due to the increase in population, and specific development types which require a higher level of access.
- * As a result of the high annual growth rate Council is continually receiving requests for upgrading. Such requests are particularly evident from "new settlers" who may have experienced a higher standard of access.
- * Council is required to upgrade access to meet the additional demands from the increased development.
- * It is reasonable to set a level of contribution to ensure that Council can respond within a reasonable time to meet the demand for upgrading.

13. Contribution

In assessing the S94 contribution, the following factors have been taken into account -

- * Council estimates that approximately 25% of the costs to Council (ie excluding grant funds) to upgrade access is to meet the backlog for upgrading.
- * Council estimates that approximately 75% of the costs to Council (i.e. excluding grant funds) is to meet the increased demand for upgrading.
- * The base contribution is for the increased demand from additional lots/dwellings. All other contributions are related to this base contribution.

If a contribution is levied for the creation of a lot, there is no second charge for the erection of a subsequent dwelling upon such a lot.

Contribution rates are listed in Schedule 1.

Costs

Council has sought to estimate costs for upgrading priorities for its roads system.

Council has made the following assumptions upon which Schedule 2 - Upgrading Program is based.

1. Council deems that its roads and bridges infrastructure requires an investment to meet the current backlog for access as required by the existing users. The amount of investment has been adopted as 25% of the proposed funding required to meet the upgrading.
2. Council considers that the general public expect and demand a level of service equal to a Class A - bitumen road for ultimate development of its area.
3. Council seeks to carry out the proposed upgrading when 75% of the proposed funding has been collected or received from sources other than Council.

Demand

Copmanhurst Shire is a developing rural area which will require a level of service commensurate with the expectancy of its ratepayers and rural dwellers.

Council has deemed that the minimum standard for access should be a two lane bitumen road (Class A Road).

Calculations

Council has carried out many calculations in its operation of Section 94 of the Environmental Planning and Assessment Act (see sample calculations in Appendix 1).

Two types of calculation and levy are proposed:

1. Access - Base Contribution

This is a one-off contribution paid at Development Application stage.

2. Access - Extractive Industry

This is an ongoing contribution based upon the user-pays principle.

Value of Contributions

Calculations reveal that the assessment of contributions varies from \$1 593 to \$7 831 per lot/dwelling.

Council, taking into account the variations, and effects of large contributions, especially in remote areas, has sought to establish a "reasonable" contribution and is prepared to support the necessary upgradings with additional funds.

1. Access Base Contribution

Council has set a rate of \$1 500 per lot/dwelling.

Base Contribution, C_a = \$1 500 per lot/dwelling

2. Access - Extractive Industry

Council has set a rate of 70¢/m³ for the Old Tenterfield Road. This rate is indexed to the Materials Price Index and adjusted quarterly.

3. Indexation

Contributions are to be indexed to the All Groups Consumer Price Index (Sydney) with a base year of 1992.

Council will apply the Index from January each year based on the annual Index movements as recorded up until the preceding September quarter.

PART D - PAYMENT OF CONTRIBUTIONS

14. Payment of Contributions

Contributions may be required to be settled by the following method:

- payment of a monetary contribution to Council

15. Timing of Contribution

Contributions are required to be paid as follows:

- * DA's involving subdivision - at release of the linen plan of subdivision.
- * DA's involving building work - prior to the granting of building approval.
- * DA's where no building approval is required - at the time of development consent

16. Deferred and Periodic Payment

Council will consider deferral of the payment of contributions upon application in writing. The applicant will need to advance valid reasons for the deferral of contributions, and a decision as to whether or not to grant approval will be entirely at the discretion of Council.

If the application for deferral is accepted, the following conditions will apply:

1. A bank guarantee will be required to be lodged for the full value of the contribution(s).

An alternative to deferred payments is for an applicant to request that the payments of contributions be satisfied through periodic payments. The decision as to whether to accept periodic payments will be entirely at the discretion of Council and may be subject to terms and conditions.

PART E - ACCOUNTABILITY

17. S94 Accounting for Contributions

Council will account for S94 contributions in accordance with the Local Government Accounting Code of Practice.

Council has established an identifiable account for the management of S94 contributions.

Contributions must be spent for the purpose for which they were levied in the time specified in the Works Program (Schedule 2). Interest as calculated on funds held will be held within the S94 account and expended on the purpose for which the contribution has been levied.

18. Priority Spending

Council proposes to expend S94 contributions in accordance with expenditure as detailed in Schedule 2. Priorities may be varied in accordance with the recommendations from the Shire Engineer and endorsed by Council.

19. Contributions Register

Council will maintain a register of all contributions received. The register will record:

- * the origin of each contribution by reference to the development consent to which it relates;
- * the type of contribution received, eg money, land, works "in kind";
- * the amount of the contribution and the purpose(s) for which it was levied;
- * the name of the contributions plan the contribution is being levied under;
- * the date of receipt of the contribution.

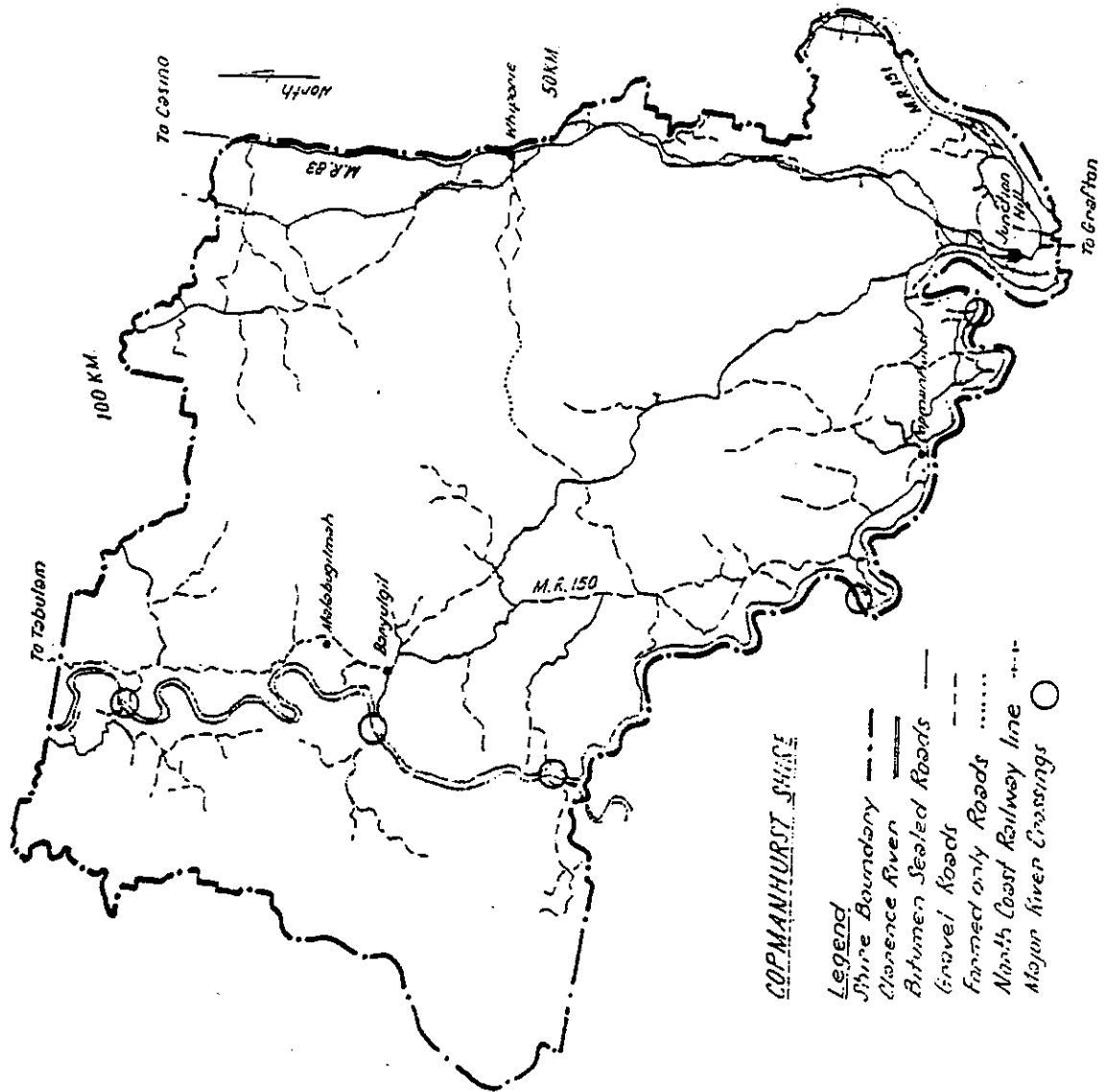
The register will be available for public inspection, free of charge, at any time during normal office hours.

20. Annual Statement

Council will produce an annual statement and reports on this plan in accordance with the requirements of the Local Government Accounting Code of Practice of contributions received which summarise, by purpose and area, details relating to contributions, in accordance with Cl 41N of the Regulation. This information will be available for public inspection, free of charge, at any time during normal office hours.

21. Review of Plan

Any material change in the plan, with the exception of the annual adjustment of contribution amounts (refer Clause 10), will require that the plan be amended in accordance with S94AB of the Environmental Planning and Assessment Act, 1979. This will require full public exhibition of the amended plan and consideration of submissions received.



Subject area bounded by heavy line ———

SHIRE OF COPMANHURST

S.94 CONTRIBUTION PLAN ACCESS - ROADS & BRIDGES

Drawn *R. Andrews* Date 24.9.92 File

MAP I

SCHEDULE 1 - CONTRIBUTION RATES

DWELLING	CONSENT REQUIRED	S.94 CONTRIB
1. Single dwellings (including those ancillary to industrial land uses)	Development	C_a
2. Additional dwellings in the case of dual and multiple occupancy	Development	C_a
3. Additional lots in the case of subdivision	Development	C_a
4. Industrial Land Uses	Development	$1.5 \times C_a$
5. Development permissible under the provisions of Copmanhurst LEP 1990 not listed elsewhere in this schedule	Development	To be determined by Council
6. Designated Development (under the provisions of the E.P. & A. Act)	Development	To be determined by Council
7. Designated Development Extractive Industries	Development	C_e

C_a = Access - Base Contribution

C_e = Access - Extractive Industry - Base Contribution (\$/m³)

SCHEDULE 2 - UPGRADING PROGRAM**TABLE 1 - CLOSER SETTLEMENT AREA****(Schedule 5 Roads - Copmanhurst Local Environmental Plan 1990)**

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
36	Red Lane	1.62km (Trenayr Road)	1	Intersection with MR 83 to Type 2 standard	75% Collected	20 000
60	School Lane	4.4km (Ramp - Forest)	1 2	Widen bitumen pavement Intersection with MR 151 to Type 2	75% Collected	45 000 15 000
82	Orchard Road (fm MR 150)	1.36km	1	To Class A - Bitumen	75% Collected	
82	Orchard Road (fm MR 83)	1.38km	1	To Class A - Bitumen	75% Collected	
84	Coaldale Road	3.47km (MR 150)	1	Replace 11 Mile Creek Bridge	75% Collected	180 000
86	Pinnacles Road	1.69km (end bitumen)	1	Replace 11 Mile Creek Bridge	75% Collected	180 000
87	Fortis Drive	1.45km (end bitumen)	1	Replace 11 Mile Creek Bridge	75% Collected	180 000
92	Moleville Rocks Road	0.50km (Moleville Rocks Reserve)	1	To Class A - Bitumen	75% Collected	42 500
94	Sanders Road	1.20km (gate)	1	To Class A - Bitumen	75% Collected	102 000
96	Greberts Road	3.32km (bridge over Whiteman Creek)	1	To Class A - Bitumen	75% Collected	237 000
100	Rogan Bridge Road	11.40km (MR 150)	1	Rogan Bridge approaches - widening	75% Collected	100 000

SCHEDULE 2 - UPGRADING PROGRAM**TABLE 1 - CLOSER SETTLEMENT AREA**

(Schedule 5 Roads - Copmanhurst Local Environmental Plan 1990)

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
101	Old Punt Lane	1.30km (river)	1	To Class A - Bitumen	75% Collected	91 000
102	McGraths Lane	1.10km (gate)	1	To Class A - Bitumen	75% Collected	77 000
103	Ellems Lane	0.95km (ramp)	1	To Class A - Bitumen	75% Collected	66 000
104	Whiteman Creek Road	3.75km (MR 150)	1	Rogan Bridge Approaches - widening	75% Collected	100 000
105	Mylneford Road	2.65km	2	Moleville Ck Bridge MR 150		70 000
107	Whiteman Creek Lane	0.16km	1	Class A - Bitumen	75% Collected	186 000
106	Mylneford Road	3.46km (gate at right)	1	Rogan Bridge Approaches - widening	75% Collected	100 000
110	Stockyard Creek Road	54.0km (MR 150)	2	Moleville Ck Bridge MR 150		70 000
111	Baillies Road	3.50km (ramp, gate on right)	1	Widen Pavement to Class A - Bitumen	75% Collected	104 000
119	Amos Lane	0.35km (gate)	1	Smiths Creek Bridge	75% Collected	150 000
120	Back Lane	1.20km (gateway)	1	Class A - Bitumen (1.5km)	75% Collected	105 000
			2	Class A - Bitumen	75% Collected	30 000
			1	Class A - Bitumen	75% Collected	84 000
			2	Intersection MR 150 - Type 1	75% Collected	15 000
MR 150	Tabulam Road	<u>AMENDMENT NO. J</u> MR 83- Summerland Way to Rocky Creek	1	Widen Pavement	75% Collected	130 000

SCHEDULE 2 - UPGRADING PROGRAM**TABLE 2 - EWINGAR/TABULAM SOUTH AREA**

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
161	Top Plains Road	10.68km (Shire boundary)				
162	Welshs Road	1.80km (gate)				
163	Plains Station Road	1.82km (gate)				
167	Ewingar Road	9.00km				
168	Bulldog Road	2.45km (ramp)				
169	Ewingar Ridge Road	3.70km (gate)	1	Replace Yates Crossing Bridge	75% Collected	350 000
170	North Ewingar Road	9.20km (Forestry boundary)				
171	Valley View Road	1.00km				
172	Grand View Road	0.80km				
173	Hunters Road	2.20km (gate)				
174	Peckhams Road	4.00km (Black Flat)				

SCHEDULE 2 - UPGRADING PROGRAM

TABLE 3 - CARRS CREEK AREA

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
1	Carrs Island Road	1.13km (end formation)	1	Carrs Creek Bridge (½ cost with Grafton City Council)	75% Collected	150 000
6	Earl Street	1.90km (MR 83)	1	Class A - Bitumen	75% Collected	162 000
3	Baker Street	0.30km (gate)				
4	Drake Street	0.40km (end bitumen)				
5	Broad Street	0.92km (rail line)				
2	Back Lane	2.70km (Pine Street)	1	Class A - Bitumen	75% Collected	122 000
7	Pine Street	1.03km (end formation)				
15	Carrs Peninsular Rd	5.0km (end bitumen)				
20	Coval Drive	0.20km				
21	Cronin Avenue	0.16km				
83	Grafton-Casino Road, Summerland Way	67.6km	1	Upgrade Pine Street intersection	75% Collected	110 000

SCHEDULE 2 - UPGRADING PROGRAM

TABLE 4 - TRENAYR AREA

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
31	Clark Road	0.32km	} 1			
11	Trenayr Road	6.85km (MR 83)				
32	Bultitude Street	0.21km			Pavement Strengthening	75% Collected

SCHEDULE 2 - UPGRADING PROGRAM**TABLE 5 - MOUNTAIN VIEW AREA**

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
30	Teejay Terrace	0.18km (from Power Station Road R.O.W.)		Nil (\$90)		
34	Boneyard Lane	0.50km	1	Class A - Bitumen	75% Collected	35 000
35	Smiths Mill Road	0.40km (rail line)	1	Class A - Bitumen	75% Collected	22 500

SCHEDULE 2 - UPGRADING PROGRAM**TABLE 6 - GREAT MARLOW AREA**

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
51	Butterfactory Lane and Gears Lane	2.84km (Riverbank Road)	1 2	Alumy Creek Bridge Class A - Bitumen	75% Collected	150 000 128 000
53	Great Marlow Road	5.28km (Parnells Road)	1	Class A - Bitumen	75% Collected	238 000
59	Parnells Lane	0.90km (Great Marlow Road)	1	Class A - Bitumen	75% Collected	76 000

SCHEDULE 2 - UPGRADING PROGRAM**TABLE 7 - SOUTHGATE/LOWER SOUTHGATE AREA**

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
57	Four Farms Lane	1.02km (end bitumen)	1	Intersection MR 151 - Type 2	75% Collected	20 000
61	Ellems Lane	1.00km (90 deg.corner)	1	Intersection with MR 151 to Type 2	75% Collected	20 000
62	Southgate Ferry Rd	1.20km (Ferry)	1	Class A - Bitumen	75% Collected	36 000
66	Warragai Creek Rd (from MR 151)	1.44km (gate)	1	Class A - Bitumen	75% Collected	101 000
67	Riverbank Road	7.0km (MR 151)	1	Class A - Bitumen	75% Collected	210 000
68	Cowlings Lane	0.72km (MR 151)	1	Class A - Bitumen	75% Collected	22 000
69	Round Mountain Road	2.36km (end bitumen - gate)	1	Class A - Bitumen	75% Collected	71 000
70	Greens Lane	1.59km (gate)	1	Class A - Bitumen	75% Collected	48 000
71	Weir Road	3.45km (end bitumen)	1	Class A - Bitumen	75% Collected	104 000
72	Experiment Farm Lane	4.00km (MR 151)	1	Alumy Creek Bridge	75% Collected	120 000
73	Blacks Home Lane	1.84km (gate)	1	Class A - Bitumen	75% Collected	129 000
74	Shorts Road	0.40km (gate)	1	Class A - Bitumen	75% Collected	28 000
151	Grafton-Lawrence Road	27.14km (gate)	1	Replace Boothbys Creek Bridge	75% Collected	70 000

SCHEDULE 2 - UPGRADING PROGRAM

TABLE 8 - COALDALE AREA

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
89	Browns Lane	0.55km (end bitumen)				
90	Lankeys Creek Road	2.45km (gate)				
142	Upper Fine Flower Road	7.39km (bridge)				
84	Coaldale Road	42.48km (MR 150)	1 2	Replace 11 Mile Creek Bridge Replace Whiteman Creek Bridge	75% Collected 75% Collected	180 000 500 000
143	Condricks Road	1.00km (gate)				
144	Lone Pine Road	3.27km (gate)				
180	Wattle Creek Road (Barretts Creek)	4.14km (gate)	1	Upgrade Mt Marsh Road Class A - Bitumen 1.0km	75% Collected	85 000

SCHEDULE 2 - UPGRADING PROGRAM

TABLE 9 - FINEFLOWER/CARNHAM AREA

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
127	Nettle Creek Road	3.50km (maintenance 50% at Council's cost)	1	Replace Rocky Creek bridge (34.05km from Main Road 83) and Rocky Creek bridge (34.24km from Main Road 83)	75% Collected	450 000
128	Hills Road	3.98km (house)				
129	Pulganbar Road	Contributed Maintenance				
150	Tabulam Road	(Gravel length 54.19 km) Rocky Creek to SR84 (Coaldale Road)				
130	Gordon Brook Road	5.02km (cross roads)				
131	Morgans Road	3.5km (gate)				
138	18 Mile Road	8.87km (gate)				
139	Carmena Road	4.86km (gate)				
140	Moorheads Road	3.06km (house)				
141	Wattle Point Road	1.16km (gate)				
135	Brooklyn Road	1.66km (steel ramp)				
136	Costellos Road	0.18km (gate)				
134	Carnham Road	30.04 (Shire boundary)				
137	Smiths Road	0.55km (gate)				

SCHEDULE 2 - UPGRADING PROGRAM

TABLE 10 - BARYULBIL/MALABUGILMAH

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
148	Lionsville Road	11.53km (creek)				
149	Farm Road	2.24km (gate)				
150	Tabulam Road	103.8km Total SR 84 to Shire Boundary	1	Replace Brindle Swamp Causeway (70.65km from Main Road 83)	75% Collected	140 000
152	Collum Collum Road	3.46km (Collum Collum gate)				
153	J Rogans Road	2.61km				
154	Deep Creek Road	2.10km (gate)				

SCHEDULE 2 - UPGRADING PROGRAM**TABLE 11 - WHIPORIE/WYAN AREA**

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
180	Mount Marsh Road (Whiporie)	10.95km (bridge)	1	Upgrade Mt Marsh Road Class A - Bitumen 1.0km	75% Collected	85 000
181	Lyons Road	4.62km (end of formation)				
183	Camira Creek Road	2.37km (gate)	1			
186	Clearfield Road	11.15km (Old Tenterfield Road)				
187	Benders Road	1.28km (gate)	1	Class A - Bitumen (17.23km total) 10km	75% Collected	700 000
182	Old Tenterfield Road	35.32km (Shire boundary)				
189	Brewers Road	5.70km (Smiths Gate)	1			
192	Wyan Creek Mill Rd	6.90km (steel ramp)				
194	Rappville Road	1.48km (Shire boundary)	1			
195	Clarks Road	0.30km (bridge, Shire boundary)				
196	Phillips Swamp Road	4.06km (gate)	1			
197	Old Tenterfield Road-Casino Rd	0.20km (bridge, Shire boundary)				
188	Kings Road	0.01km (from Baillies Rd to ramp)	1	Class A - Bitumen 2.0km from Main Road 83	75% Collected	140 000
198	Myrtle Creek to Rappville Road	8.30km (bridge, Shire boundary)				
193	Baillies Road (Kippenduff)	2.80km (timber bridge)	1			

SCHEDULE 2 - UPGRADING PROGRAM

TABLE 12 - COPMANHURST AREA

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
112	McKees Road	2.04km Contributed Maintenance	} 1			
110	Stockyard Creek Road	54.0km (Main Road 150)		Smiths Creek Bridge	75% Collected	\$150 000
113	Punchbowl Road	6.76km (gate)				
114	Heinze Road	0.63km				

SCHEDULE 2 - UPGRADING PROGRAM**TABLE 13 - KIMBIN-PIKAPENE AREA**

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
156	Coongbar Road	10.66km (bridge)	1			
155	Kimbin-Pikapene Road	10.64km (tick gate)		Upgrade Dilgigin Creek Bridge	75% Collected	200 000
157	Deadman Creek Road	2.90km (gate)				

SCHEDULE 2 - UPGRADING PROGRAM**TABLE 14 - NIL UPGRADING (\$90)**

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
52	Bultitude Lane	Contributed Maintenance		Nil (\$90)		
54	Inmans Lane	Contributed Maintenance		Nil (\$90)		
55	No Name	Contributed Maintenance		Nil (\$90)		
56	Smiths Road	Contributed Maintenance		Nil (\$90)		
58	No Name	Contributed Maintenance		Nil (\$90)		
63	Fishers Lane	1.50km (earth formation)		Nil (\$90)		
64	Boothbys Lane	1.05km Contributed Maintenance		Nil (\$90)		
65	Wharf Road	1.14km Contributed Maintenance		Nil (\$90)		

SCHEDULE 2 - UPGRADING PROGRAM

**TABLE 15 - INCREMENTAL CONTRIBUTIONS -
DESIGNATED DEVELOPMENTS**

Road No.	Road Name	Maintained Length	Priority	Proposed Upgrading	Timing	Cost to Council (\$1992)
182	Old Tenterfield Road	35.32km (Shire boundary)		Class A Bitumen 17.23km total)	75% Collected	1.206M

APPENDIX 1

1. **UPGRADING COSTS**
2. **SAMPLE CALCULATIONS**

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1. UPGRADING COSTS

1.1 Roads

The following estimated upgrading costs have been used for calculation of roads upgrading:

Road Type		Upgrading Cost/km
Existing	Proposed	1992\$
1. <i>Gravel</i>		
1.1 Single Lane	Class A Bitumen	85 000
1.2 Two Lane	Class A Bitumen	70 000
2. <i>Bitumen</i>		
2.2 Single Lane	Class A Bitumen	45 000
2.3 Two Lane	Class A Bitumen	30 000

1.2 Bridges

The estimated costs to upgrade separate bridge projects have been prepared separately due to differing site and service conditions.

2. SAMPLE CALCULATIONS

2.1 Rural Lots/Dwellings

Road No.	Road Name	Number of Lots/Dwellings		Proposed Upgrading	Cost to Upgrade (1992\$)	Cost per lot/dwelling (1992\$)
		Existing	Ultimate			
84	Coaldale Road	27	427	Replace 11 Mile Creek Bridge Replace Whiteman Creek Bridge	180 000 <u>500 000</u> 680 000	1 593
96	Greberts Road	6	24	Class A Bitumen	237 000	9 875
84	Old Tenterfield Road	23	154	Class A Bitumen	1 206 000	7 831

Council has adopted \$1 500 per lot/dwelling.

2.2 EXTRACTIVE INDUSTRIES

2.2.1 Old Tenterfield Road

2.2.1.1 DEMAND

Rural Development Demand - Lots/Dwellings)

Current Traffic	30	V.P.D.	A.A.D.T.
Ultimate Traffic	460	V.P.D.	A.A.D.T.
Estimated Traffic (20 years)	120	V.P.D.	A.A.D.T.

Extractive Industry Demand

Sand Extraction

Volume per year	=	10 000m ³
Number of Loads	=	$\frac{10\ 000 \times 2}{9}$
	=	2 222 trips per year
	=	9 V.P.D. A.A.D.T.

2.2.1.2 UPGRADING COSTS

<u>Upgrading Cost</u>	=	17.23km \$70 000/km	
	=	\$1.206M	
Road Life	=	20 years	
Cost per year	=	\$60 300 per year	
Current Traffic	=	30 V.P.D. x 352 =	10 560 p.a.
Extractive Industry Traffic	=	9 V.P.D. x 352 =	$\frac{3\ 168}{13\ 728}$ p.a.
Cost per vehicle	=	$\frac{60\ 300}{13\ 728}$	= \$4 39/vehicle p.a.
Allowing for 1 truck	=		1.5 Passenger Vehicles
Cost per truck	=		\$6.58/truck
Cost per m ³ hauled	=	$\frac{\$6.58}{9}$	= \$0.73/m ³

Council has adopted 70 cents/m³ for sand haulage on Old Tenterfield Road.