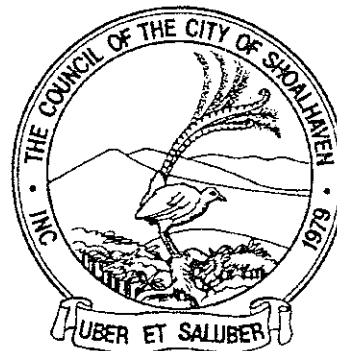


SHOALHAVEN CITY COUNCIL

CONTRIBUTIONS PLAN 1993 AMENDMENT NO. 4

File 94/1693



ADOPTED : 6 SEPTEMBER 1994
EFFECTIVE FROM : 21 SEPTEMBER 1994

1. INTRODUCTION

1.1 Background

In the process of considering a development application for an expansion of an existing sand and gravel quarry on the land subject to this plan, Council has identified the need to bring forward reconstruction of Burrier and Yaiwal Roads due to the heavy vehicle traffic generated by this development.

As this need could not previously be identified in this particular location in the formulation of the Contributions Plan 1993, it is necessary to amend the plan to cater for this specific application. It should be noted that this Contributions Plan amendment will only come into force when this specific development proceeds.

1.2 Purpose of the Plan

The objective of the plan is to recover costs by way of a section 94 contribution of the increased upgrading of the road system due to the quarrying activities.

1.3 Land to Which the plan Applies (Cl 41F(b) EP&A Regs 1980)

The plan applies to quarrying and ancillary activities of the subject land, being Lot 1, DP 714116, Lot 2 DP 776777 and Lots 1, 2, 3 and 4 DP 226584.

1.4 Development to Which this Plan Applies

This plan specifically applies to the quarrying of the subject land, and to ancillary activities.

2. ESTABLISHMENT OF NEXUS

2.1 Required Works/Infrastructure

01 ROAD 0084 : Yalwal Road

Construct Calymea Creek Bridge and upgrade and seal approaches (cost recovery);

01 ROAD 0087 : Burrier Road

Construct two new concrete bridges and upgrade gravel pavement from Yalwal Road to quarry; and

01 ROAD 0109 : Burrier and Yalwal Roads

Pavement life cycle reduction costs from quarry to West Nowra Recycling and Waste Depot access road.

2.2 Nexus (CI 41F(c), EP&A Regs 1980)

Access to the quarry is via Yalwal and Burrier Roads. It is estimated that 70% of the traffic on Burrier Road, west of Yalwal Road, is either tourist or quarry traffic. There are two current projects included in the Contributions Plan relating to these roads:

01 ROAD 0084

the recovery of Calymea Creek Bridge construction costs; and

01 ROAD 0087

the upgrading of Burrier Road.

As the current tourist/quarry traffic relates to existing developments, that portion of the cost of these projects would have to be borne by Council.

As the quarry benefits from the proposed upgrading of Burrier Road a contribution is sought.

Additional works relate to upgrading of existing timber bridges.

01 ROAD 109

The increase in heavy vehicle traffic generated by the Boral quarry will reduce the pavement life of Yalwal and Burrier Roads, requiring reconstruction to be brought forward. This represents a cost to Council equivalent to the difference between the present day value/cost of reconstruction at the end of normal and reduced pavement lives.

2.3 Apportionment of Costs (CI 41F(d) EP&A Regs 1980)

The expansion of the quarry has an impact on Council's road infrastructure in two ways:

- the reduction in the life of road pavements due to increased heavy vehicular traffic; and
- the need for road upgrading due to the increase in traffic.

There are two existing projects in Council's Contributions Plan 1993 affected by the quarry expansion:

01 ROAD 0084 : Yalwal Road

Construction of the Calymea Creek Bridge and the upgrading and sealing of the approaches (this is a cost recovery project); and

01 ROAD 0087 : Burrier Road

Upgrade of gravel pavement from Yalwal Road to quarry.

Project 01 ROAD 0087 will need to be amended to reflect the change in conditions resulting from the quarry expansion and a new project (01 ROAD 0109) will need to be created for pavement life cycle reduction costs on the Burrier and Yalwal Roads.

01 ROAD 0084

The contribution to be paid by the Quarry for this project has been calculated at \$37,108 as follows:

- Yalwal Road - construction of Calymea Creek Bridge and upgrade and seal approaches.
- Total Cost = \$463,850.
- 70% traffic = tourist 30% + quarry 40%

$$\begin{aligned} & \therefore \text{Quarry's portion of total cost} = 40\% \times \$463,850 \\ & = \$185,540 \end{aligned}$$

Expansion will mean an additional 10 trips per day (from 50 to 60 trips per day) or a 20% increase.

$$\therefore \text{Quarry's expansion contribution} = \$185,540 \times 20\% = \$37,108.$$

01 ROAD 0087

Contribution Plan 1993 identified the need to upgrade the existing gravel pavement on Burrier Road (between Yalwal Road and the Boral Quarry).

In considering the development application for an expansion of the quarry, Council has assessed the condition of two timber bridges on Burrier Road (Watts Bridge and Burrier Creek Bridge).

These bridges are included in Council's Road Strategy and, whilst not in need of immediate replacement, would need to be replaced within the life of the plan. In view of the increase in heavy vehicle traffic as a result of the quarry expansion, this section 94 contributions project is now amended to include the two bridges.

The development consent for the quarry would include a section 90 requirement that the developer seal a 100 metre section of roadway outside each residence. This would reduce the length of gravel pavement which will require strengthening by 1.15 km.

The works program for this project is to be amended as follows:

*1997 - 13% of works and Burrier Bridge;
2008 - 28% of works and Watts Bridge.*

Original estimated cost of 01 ROAD 0087 project = \$237,000 (for 7.8 km)

Boral to seal 1.15 km (section 90 requirement)
reduced road cost to Council = $6.65 \div 7.8 \times \$237,000$
= \$202,058

The contribution to this project which should be paid by the quarry developer has been estimated at \$42,408 as follows:

= upgrade pavement	= \$202,058
reconstruct Watts Bridge	= \$182,250
reconstruct Burrier Bridge	= <u>\$145,800</u>
New estimated cost of project	= <u>\$530,108</u>

Quarry's current portion of total costs = $40\% \times \$530,108 = \$212,043$
Quarry's expansion (20%) contribution = $\$212,043 \times 20\% = \$42,408$.

01 ROAD 0109 : Reduction in pavement life cycle costs

A 20% increase in heavy vehicle traffic would result in a reduction in the design life of the pavement of 13% if the life is reduced from 18 to 15 years.

The contribution by the developer to this project is estimated at \$21,403 as follows:

Burrier Road (Yalwal Road to Quarry)

- Pavement strengthening cost in 18 years time is assumed the same as for today.
- Present value of \$237,000 at 8% discount rate when spent in 18 years time = \$53,309.
- Present value of \$237,000 at 8% discount rate when spent in 15 years time = \$74,712.
- Contribution = $\$74,712 - \$53,309 = \$21,403$.

Yalwal Road (Calymea Creek to Council Tip access road)

- Assume 10 years of design life remaining without quarry expansion
... 8.3 years of design life will remain with quarry expansion.
- Reconstruction cost for 4.5 km at 6m x \$12 (hotmix overlay)
= \$324,000.
- Present value of \$324,000 at 7% discount rate in 10 years
= \$164,705.
- Present value of \$324,000 of 7% discount rate in 8.3 years
= \$184,781.
- Contribution = \$184,781 - \$164,705 = \$20,076.
- Total developer contribution for this project = \$21,403 + \$20,076
= \$41,479.

TOTAL CONTRIBUTION

From the above calculations the total contribution from the Boral Quarry expansion proposal has been estimated at \$120,99 as follows:

01 ROAD 0084	=	\$37,108	
01 ROAD 0087	=	\$42,408	
01 ROAD 0109	=	<u>\$41,479</u>	
Total	=	\$ <u>120,995</u>	OR

\$120,995 ÷ 1,000,000 tonnes = \$0.12 per tonne.

3. WORKS PROGRAM

2008 - Reconstruct Burrier and Yalwal Roads.

4. TIMING OF PAYMENT

The method of payment will be a royalty of 12 cents per tonne, indexed to the Contributions Plan 1993 index payable at 30 June on the previous year by tonnage.

Yalwal Road, Calymea - Upgrade and Seal and Bridge

01 ROAD 0084

Replacement of the existing timber bridge over Calymea Creek is required to support expected future traffic demands. In addition, the bridge approaches require upgrading and sealing to improve safety and serviceability of this section of road. The work has been undertaken in 1992 in advance and the plan reflects this by recoupment of costs.

Benefit Area

The area west of Calymea Creek Bridge whose access is across the bridge.

Construction Staging

Stage 1 - Construct concrete bridge and upgrade and seal approaches.

Burrier Road - Reconstruct Two Bridges

01 ROAD 0087

Further expansion of the Boral Quarry will place increased heavy vehicular traffic upon the existing timber bridges, Watts Bridge and Burrier Creek Bridge. Additional heavy traffic due to the Boral Quarry expansion will require these bridges to be reconstructed to concrete structures.

Benefit Area

Boral Quarry expansion at Burrier.

Construction Staging

Stage 1 - Construction of concrete bridges.

Burrier Road and Yalwal Road, Burrier/Calymea - Reduction in pavement life cycle costs

01 ROAD 0109

A 20% increase in heavy vehicle traffic would result in a reduction in the design life of the pavement of 13% if the life is reduced from 18 to 15 years. This represents a cost to Council equivalent to the difference between the present day value/cost of reconstruction at the end of normal and reduced pavement lives.

Benefit Area

Boral Quarry Expansion

Construction Staging

2008 - Reconstruct Burrier and Yalwal Roads.

**SHOALHAVEN CITY COUNCIL
CONTRIBUTION PLAN - AREA 1
FACILITY: ROADS**

1. Locality Calymea
2. Project Yalwal Road - Upgrade and Seal Approaches and Construct Calymea Creek Bridge
3. Project No. 01 Road 0084
4. Total Cost \$463,850
5. Traffic Generation and Cost Apportionment

Benefit Area	No. Equivalent Tenements		Total Traffic Generation (V.P.D)	Cost Per Benefit Area (\$)	Cost Per E.T. (\$)	Council Responsibility (\$)	Developer Contribution (\$)
	Existing	Additional					
1	70	45	30%	139,150	1,210	84,700	54,450
2	40		40%	185,540	37c/ton	148,432	37,108
Through Traffic	30% (Tourists)		30%	139,160		139,160	
				463,850		372,292	91,558

Note: 1. For traffic generation, use the traffic authority of NSW Guidelines - 6.7 vehicles/day per dwelling.

**Contributions Plan Area 1
Amendment No. 4
File No. 94/1693
Adopted: 6 September 1994
Effective from: 21 September 1994**

**SHOALHAVEN CITY COUNCIL
CONTRIBUTION PLAN - AREA 1
FACILITY: ROADS**

1. Locality Burrier
2. Project Burrier Road Upgrade Gravel Pavement from Yalwal Road to Burrier Quarry install guard rails and reconstruct 2 bridges
3. Project No. 01 Road 0087
4. Total Cost \$530,108
5. Traffic Generation and Cost Apportionment

Benefit Area	No. Equivalent Tenements		Total Traffic Generation (V.P.D)	Cost Per Benefit Area (\$)	Cost Per E.T. (\$)	Council Responsibility (\$)	Developer Contribution (\$)
	Existing	Additional					
1	54	36	30%	159,033	1,767	95,419	63,612
Boral Quarry	*Trucks & Tourists 70%		70%	371,075		328,666	42,408
				530,108		424,085	106,020

* This portion of truck and tourist traffic attributable to quarry expansion.

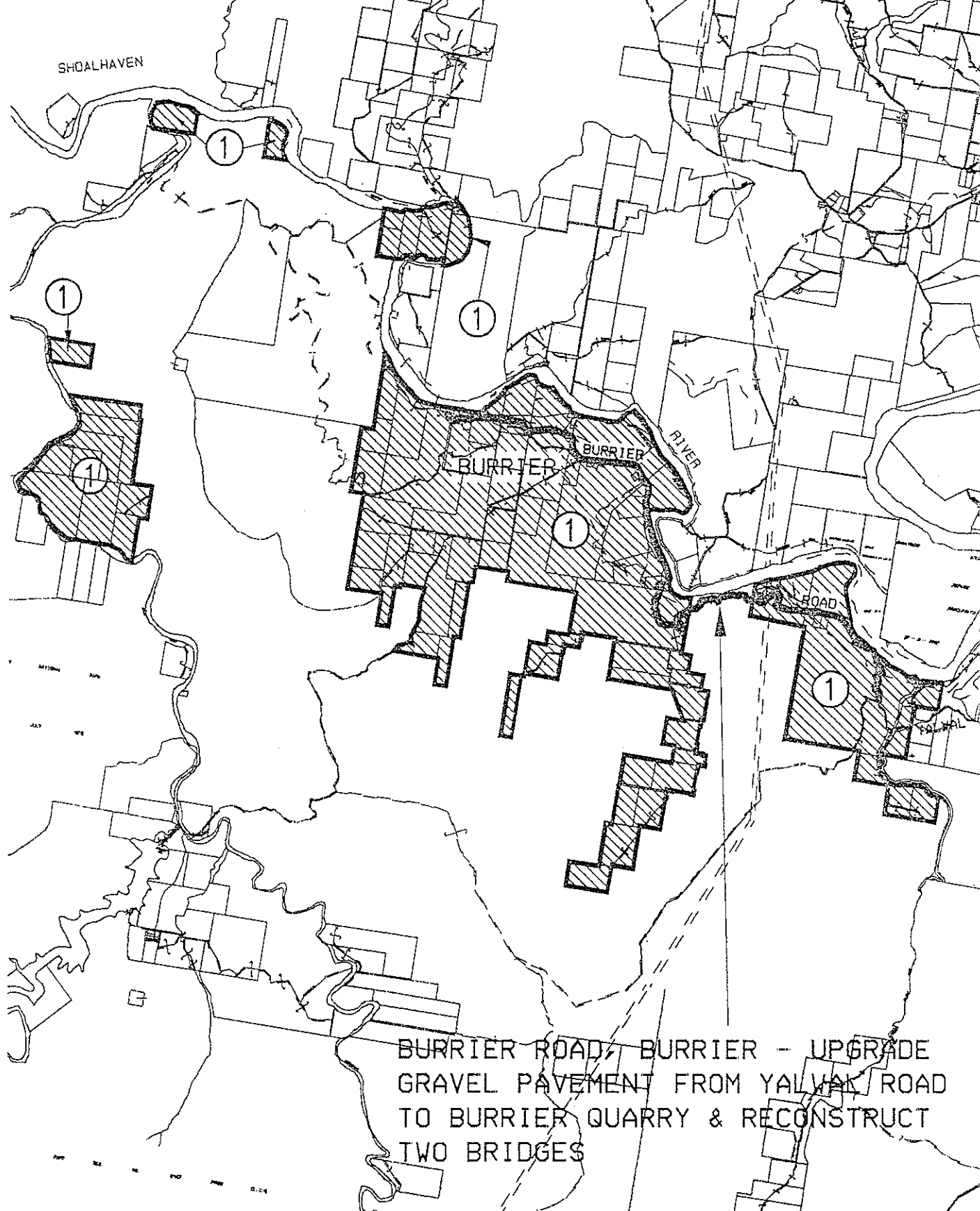
**Contributions Plan Area 1
Amendment No. 4
File No. 94/1693**

APPENDIX
SHOALHAVEN CITY COUNCIL
CONTRIBUTION PLAN - AREA 1
FACILITY: ROADS

1. Locality Calymea
2. Project Reduction in pavement life cycle costs - Burrier Road Upgrade Gravel Pavement (from Yalwal Road to Burrier Quarry) and Yalwal Road (Calymea Creek to Council Tip Access Road)
3. Project No. 01 Road 0109
4. Total Cost \$41,479
5. Traffic Generation and Cost Apportionment

Benefit Area	No. Equivalent Tenements		Total Traffic Generation (V.P.D)	Cost Per Benefit Area (\$)	Cost Per E.T. (\$)	Council Responsibility (\$)	Developer Contribution (\$)
	Existing	Additional					
1		Boral Quarry Expansion		41,479			41,479
				41,479			41,479

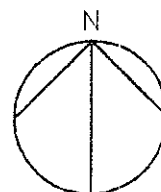
Contributions Plan Amendment No. 4
Exhibited from 11.7.94
to 11.8.94
Adopted : 6.9.94
Effective : 21.9.94
File 94/1693

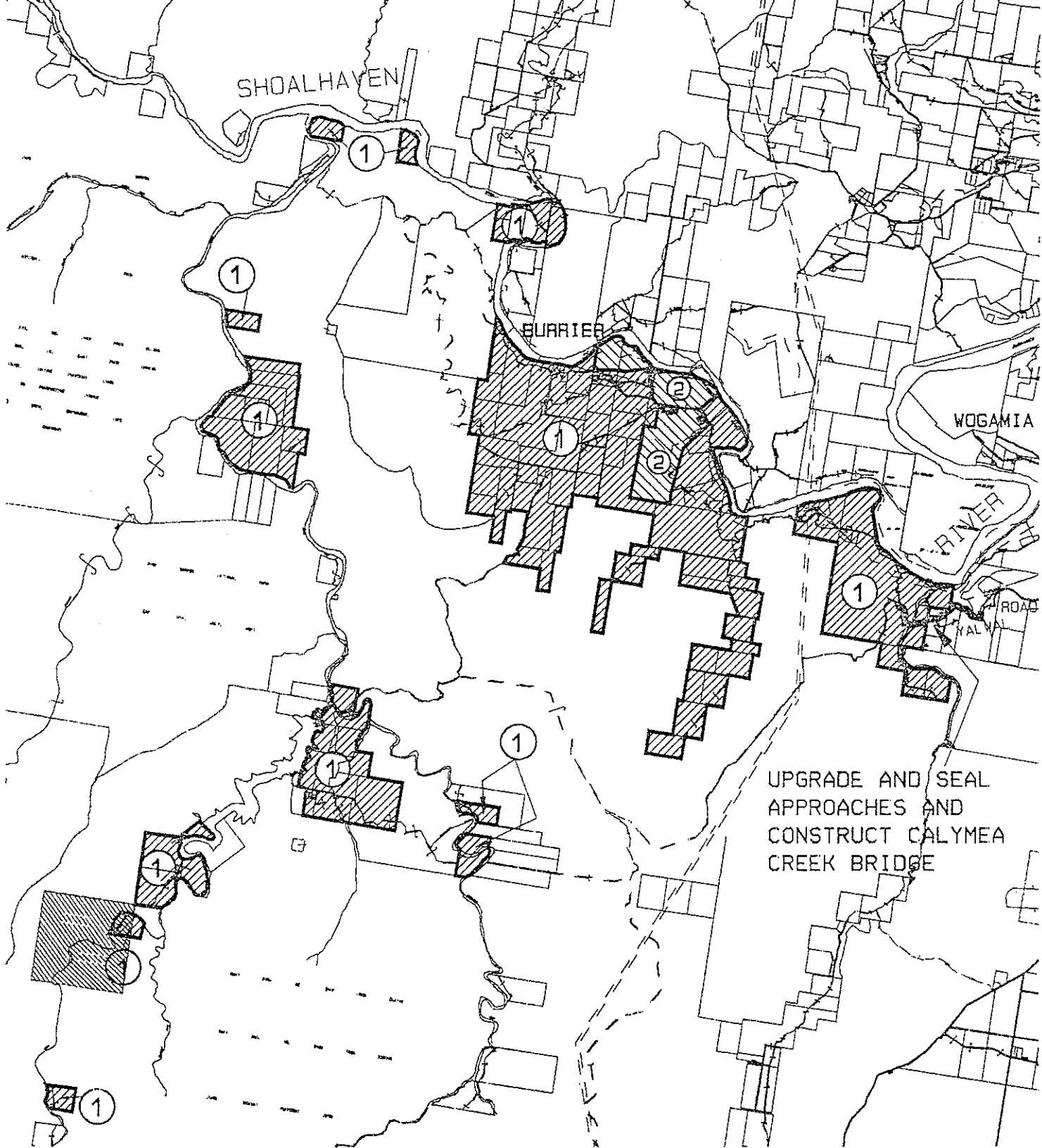


SHOALHAVEN CITY COUNCIL
CONTRIBUTION PLAN AREA 1
AMENDMENT NO. 4

FILE NO: 94/1693
ADOPTED: 6/9/1994
EFFECTIVE FROM: 21/9/1994
FACILITY: ROADS
PROJECT: BURRIER ROAD, BURRIER - UPGRADE GRAVEL PAVEMENT
FROM YALWAL ROAD TO BURRIER QUARRY
AND RECONSTRUCT TWO BRIDGES
DRAWING FILE: SECT94:AREA1 (WINDOW3-FAMEND4A & AMEND4A)

PROJECT No:
01 ROAD 0087





**SHOALHAVEN CITY COUNCIL
CONTRIBUTION PLAN AREA 1
AMENDMENT NO. 4**

FILE NO: 94/1693

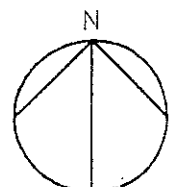
ADOPTED: 6/9/1994

EFFECTIVE FROM: 21/9/1994

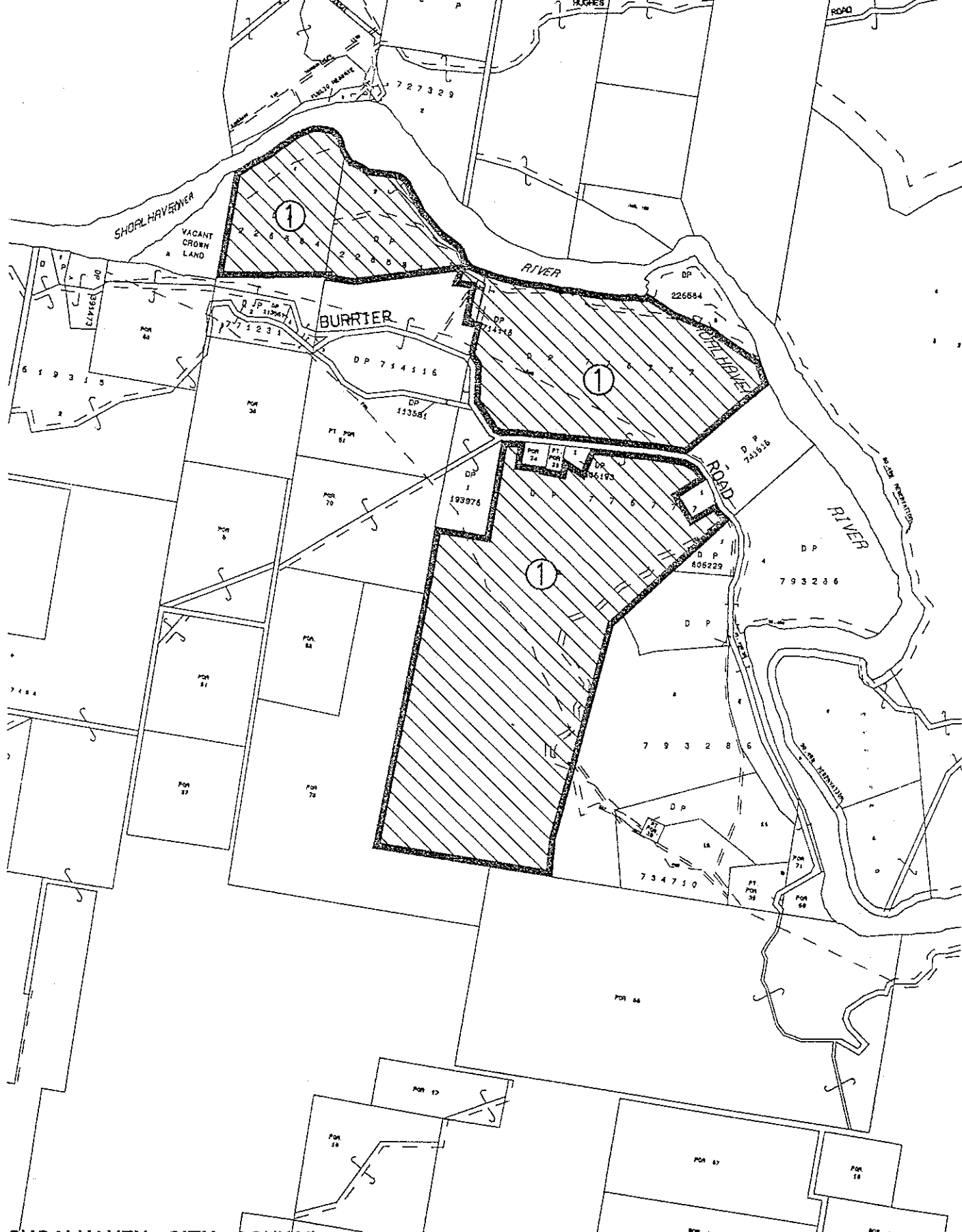
FACILITY: ROADS

PROJECT: YALWAL ROAD, CALYMEA - UPGRADE & SEAL
APPROACHES & CONSTRUCT CALYMEA CREEK BRIDGE

PROJECT No:
01 ROAD 0034



DRAWING FILE: SECT94:AREA1 (WINDOWS-FRAMEND4 & AMEND4)



SHOALHAVEN CITY COUNCIL CONTRIBUTION PLAN AREA 1 AMENDMENT NO. 4

FILE NO: 94/1693

ADOPTED: 6/9/1994

EFFECTIVE FROM: 21/9/1994

FACILITY: ROADS

PROJECT: BURRIER AND YALWAL ROADS: PAVEMENT LIFE CYCLE
REDUCTION COSTS FROM QUARRY TO COUNCIL'S

WEST NOWRA RECYCLING AND WASTE DEPOT
DRAWING FILE: SECT94:AREA1 (WINDOWS-FRAME4B & AMEND4B)

PROJECT No:
01 ROAD 0109

