

**SECTION 94
DRAINAGE
CONTRIBUTIONS PLAN
FOR
YAMBA
DRAINAGE
CATCHMENTS.**

*Adopted by Council 13 February 2002. In force from 22 February 2002.
Amended by addition of Section 3, adopted by Council 8 May and in force from 17 May 2002.*

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SECTION 94 DRAINAGE CONTRIBUTIONS PLAN FOR YAMBA DRAINAGE CATCHMENTS.

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1.0 GENERAL.

1.1 Name of this plan.

This plan is called the Maclean Shire Section 94 Contributions Plan for Yamba Drainage Catchments. This contributions plan has been prepared in accordance with the provisions of section 94 of the Environmental Planning and Assessment 1979 and Part 4 of the Environmental Planning and Assessment Regulations 1994. Each chapter applies to a different drainage catchment in Yamba.

1.2 Purpose of this plan.

The primary purpose of this plan is to satisfy the requirements of the Environmental Planning and Assessment Act and Regulation to enable Council to require a contribution towards the provision of drainage system upgrading that will be provided as a consequence of development in the area.

1.3 Land to which this plan applies.

The Section 94 Drainage Contributions Plan for Yamba Drainage Catchments applies to development on land in Yamba as shown on Map 1, Yamba CBD Drainage Catchment and Map 2, Yamba Centre Drainage Catchment.

1.4 Commencement date.

This plan was adopted by Maclean Shire Council on 13 February 2002 and comes into force on 22 February 2002.

The plan was amended by the addition of Section 3.0, Drainage Strategy Yamba Centre Drainage Catchment, adopted by Maclean Council 8 May 2002 and in force from 17 May 2002.

1.5 What is this plan's relationship to other plans and policies?

This plan forms part of a series of Section 94 Contributions Plans for various public works and facilities to be provided by Maclean Shire Council.

1.6 How does this plan operate?

In determining a development application council may impose a condition requiring the payment of a monetary contribution in accordance with the provisions of this Plan. The contribution may also be in the form of works in kind.

1.7 Timing of a contribution payment.

A contribution is payable:

- (a) for development involving building work but not involving subdivision - before the construction certificate is issued.

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- (b) for development involving subdivision, where no further approvals are required - before the release of the linen plan.
- (c) for development not involving building work - at the time of issue of notification of consent or before occupation of the building.

1.8 Deferred or Periodic Payments.

Council may accept the deferred or periodic payment of a contribution if compliance with full payment as required by this plan is unreasonable or unnecessary in the circumstances of the case. The decision to accept a deferred or periodic payment is at the discretion of council. The applicant must make a request in writing to satisfy council that:

- there are valid reasons for deferred or periodic payment.
- the community deriving benefit from the public facilities required by the proposed development will not be disadvantaged.
- the operation of the contributions plan is not prejudiced.
- the timing or manner of providing the public facility is not adversely affected.

If an application for deferred or periodic payment of a contribution is accepted by council, the following conditions will apply:

- a bank guarantee by an Australian bank for the amount of the total contribution or the amount of the outstanding contribution.
- the guarantee requires the bank to unconditionally pay the guaranteed sum to the council if the council so demands in writing, not earlier than 6 months from the provision of the guarantee or completion of the works, whichever occurs first, or a term determined by the council.
- the bank must pay the guaranteed sum without reference to the applicant or landowner or other person who provided the guarantee, and without regard to any dispute, controversy, issue or other matter relating to the development consent or the carrying out of development in accordance with the development consent.
- the bank's obligations under the guarantee are discharged when payment is made to council in accordance with the terms of the bank guarantee or when council notifies the bank in writing that the guarantee is no longer required. The bank's obligations are also discharged if the related consent lapses.
- the applicant pays interest to council on the contribution or the outstanding amount at the overdraft rate on and from the date when the contributions would have been otherwise payable in accordance with clause 2.7 of this plan.

1.9 Works in kind contributions.

Council may accept an applicants offer to make a contribution by way of a works in kind contribution for an item included on the works schedule.

Council may accept the offer of a works in kind contribution if the applicant satisfies the council that;

- payment of the contribution in accordance with the provisions of the plan is unreasonable or unnecessary in the circumstances of the case.
- the in kind contribution will not prejudice the timing or the manner of the provision of the public facility for which the contribution was required.
- the value of the works to be undertaken is at least equal to the value of the contribution assessed in accordance with the plan.

1.10. Adjustment of a contribution rate.

The contribution rate will be reviewed annually at the end of each financial year, using the Australian Weighted Average CPI obtained from the HVMF Forecast as the basis for any adjustment.

1.11 What formula is used to determine the contribution rate ?

Contribution rates for drainage works may vary in each drainage catchment in Yamba. Rates will vary depending on the apportionment of costs for the drainage works between existing and new development. Rates will also vary depending on the total increase in impervious area in each drainage catchment.

Variables for each drainage catchment;

- ◇ Total cost of drainage works for ultimate development- \$Td
- ◇ % increase in flows attributed to future development. F %
- ◇ Existing total impervious area. E im
- ◇ Future total impervious area. F im

The contribution rate is calculated by multiplying the total cost of drainage upgrading works for ultimate development by the % of the flow from the sub-catchment attributed to future development. This figure is then divided by the total increase in impervious area in the drainage catchment.

$$\text{Drainage Catchment Contribution} = \frac{\text{Total cost of works attributed to future development}}{\text{Total increase in impervious area in square metres}}$$

$$\text{Drainage Catchment Contribution} = \frac{\$Td \times F \%}{F \text{ im} - E \text{ im}} \\ \$ / \text{m}^2 \text{ in impervious area}$$

This rate is then applied for the increase in impervious area for each development site.

Eg. Yamba CBD Drainage Catchment Contribution.

Total cost of drainage works for ultimate development-	\$Td	\$1,032,00
% increase in flows attributed to future development.	F %	35%
Existing total impervious area.	E im	5.04ha
Future total impervious area.	F im	7.69 ha

$$\text{Drainage Catchment Contribution} = \frac{\$Td \times F \%}{F \text{ im} - E \text{ im}} = \frac{\$1,032,00 \times 35\%}{7.69 - 5.04\text{ha}}$$

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$$\begin{aligned} &= \frac{\$361,000}{26,500 \text{ m}^2} \\ &= \$13.62/\text{m}^2 \text{ of increased impervious area} \end{aligned}$$

Impervious areas are defined as any surface area of the development where stormwater is unable to infiltrate, and may include roofs, driveways, car parking, footpaths and entertainment areas.

Existing and proposed impervious areas shall be determined from the Development Application. Applicants shall be required to submit sufficient information with the development application to enable this assessment to be made. Council has aerial photography from 2001 that may be used to verify the existing impervious area. Where the pre development amount of impervious site area cannot be determined to Council's satisfaction, Council shall rely on aerial photography dated as close as is available to the date of commencement of this plan, or on previous approvals.

Council encourages Water Sensitive Urban Design (WSUD) principles. For the purpose of calculating drainage developer contributions, areas which use permeable materials such as Humes "bg" slabs or Rocla "Ecoloc" and "Ecotrihex" pavers shall be considered pervious (when installed in accordance with the manufacturer's specifications). Specifying permeable materials can therefore reduce drainage developer contributions.

Where permeable materials are specified in the approved plans, their use will be required as a condition of consent, and any variation of materials in these areas will require a modification to the consent under Section 96 of the *Environmental Planning & Assessment Act*.

Drainage developer contributions shall not be discounted by the installation of On-Site Detention (OSD).

1.12 What development does this plan apply to?

This Contributions Plan applies to all development requiring development consent except for single dwellings and ancillary structures.

In the case of subdivisions that create lots less than 560 square metres, a contribution will be applied based on a building envelop measuring 10 metres by 15 metres behind the building line and including an allowance for sealed vehicular access to the street.

The Contributions Plan also applies to the creation of impervious areas off site that are related to the development.

2.0 DRAINAGE STRATEGY YAMBA CBD DRAINAGE CATCHMENT.

2.1 Expected Types of Development.

The Yamba CBD Drainage Catchment covers land fronting Yamba Street zoned 3(a) Business, surrounding land zoned 2(b) Residential (Medium Density) and some land in Clarence Street zoned 2(t) Residential (Tourist) in Maclean LEP 2001.

A small 3(a) zone and a 2(t) Residential (Tourist) zone are located in Clarence Street. Existing development in the 3(a) zone in Yamba Street is generally single storey retail and commercial buildings. Expected types of development in this zone in Yamba Street include 2 and 3 storey retail/commercial development with associated car parking. Renovation and refurbishment of buildings in the 3(a) zone in Clarence Street has taken place in recent years to provide restaurant development. Further development in this locality is unlikely in the near future.

Existing development in the 2(b) zone is a mix of single dwelling houses, dual occupancies and residential flat buildings, ranging in height from 2-6 storeys. Expected development is redevelopment of existing housing stock to provide dual occupancies and residential flat buildings to a maximum height of 12 metres.

Existing development in the 2(t) zone on the eastern side of Clarence Street is residential flat development with ground level retail and commercial uses. Expected development includes upgrading of existing buildings, as heights and densities are above those now permitted. New development must conform to a maximum height of 12 metres.

2.2 Proposed Drainage Works.

The basis of the works proposed in this Contributions Plan for the CBD Drainage Catchment are based on the *Stormwater Drainage Study - Yamba CBD Catchment Final Report* (August 2001) prepared by Paterson Consultants. The study examined the drainage system for existing development in the catchment, and the drainage upgrading required for the ultimate development scenario. The supporting documents include a Background Paper on the Section 94 Drainage Contributions Plan for the Yamba CBD Drainage Catchment.

As the drainage works required for existing development provides spare capacity for future development the calculation of apportionment between existing and future development is based on the design flows from each drainage sub-catchment at the 1 in 100 year event. This results in a median increase in flows due to future development of 35%.

The drainage study indicated that, for existing development, the drainage system has general deficiencies along Yamba Street, with the major problem

being inadequate drainage capacity downstream of the Yamba Street/Harbour Street intersection.

The stormwater drainage study prepared by Paterson Consultants examined the Yamba CBD drainage system for the ultimate development scenario. The total impervious area of the catchment at the ultimate development scenario was assumed would increase to 85%.

The study used Council's estimate, based on analysis of aerial photography, that the impervious area of the existing catchment is 53%. The analysis of impervious area in the existing catchment includes existing roofs, parking areas, roads and footpaths.

The drainage upgrading works identified to meet Council's standard for ultimate development is:

1. 170m of 1800 x 900mm RCBC along Yamba Street from Wooli Street to the Clarence River,
2. 60m of 675mm diameter pipe along Yamba Street from Wooli Street to High Street,
3. 60m of 525mm diameter pipe along Yamba Street from Coldstream Street to High Street
4. 90m of 600mm diameter pipe in Wooli Street east of Yamba Street,
5. 15m of 525mm diameter pipe and 32m of 375mm diameter pipe in Harbour Street east of Yamba Street,
6. 10m of 300mm diameter pipe in Harbour Street west of Yamba Street, and
7. 10 kerb inlets.

It should be noted that, with the exception of the sections in Yamba Street from Coldstream Street to High Street and in Harbour Street west of Yamba Street, the ultimate development scenario requires additional upgrading of the drainage system. The estimated cost of additional drainage upgrading works to provide capacity for ultimate development is **\$1,032,000**.

2.3 Establishment of a Nexus.

2.3.1 Causal nexus

Peak stormwater flow and the volume of stormwater are directly related to the impervious area of a drainage catchment. This is because:

1. Stormwater flows faster across impervious areas, and thus reaches the drainage system more quickly, and
2. The volume of stormwater runoff increases as impervious areas increase because there is less area for stormwater to infiltrate into the ground.

Future development increases the impervious area, and therefore increases the peak stormwater flow and the total volume of stormwater. This requires the provision of increased capacity in the drainage network. For this Contributions Plan it is assumed that development will increase the impervious area to a maximum of 85% of the catchment area. The drainage upgrading required for the ultimate development scenario is outlined in the

2.3.2 Spatial nexus

All stormwater runoff from the Yamba CBD drainage catchment flows to the trunk drainage system in Yamba Street. The trunk drainage system requires upgrading as a result of increased flows caused by increased impervious area of future development. The specific upgrading required as a result of future development is specified in the *Stormwater Drainage Study - Yamba CBD Catchment Final Report* (August 2001) prepared by Paterson Consultants.

2.3.3 Temporal nexus

As drainage upgrading works involve considerable disruption to other infrastructure, it is proposed that all upgrading works be constructed for the ultimate development and thus provide spare capacity for future development.

The upgrading between Harbour Street and the Clarence River is to address an existing deficiency in the drainage system, while the other works identified for the existing system were related to a non-conformance with Council's standard. It is therefore proposed that the construction of drainage upgrading works be staged to reflect the increase in stormwater capacity required by the increased flows from future development. Works will be undertaken immediately to address drainage deficiency, while works to address non-conformances with the standard will be undertaken progressively as development within the catchment occurs and increases flows. The basis for timing of works is the rate of development increasing the percentage of impervious area in the catchment.

Table 1 – Timing of Upgrading Works, Yamba CBD Drainage Catchment

Proposed Work	Timing
Construct 1.8 x 0.9m RCBC from Harbour Street to Clarence River & pipes in Harbour Street east of Yamba Street	December 2002
Construct 1.8 x 0.9m RCBC from Wooli Street to Harbour Street, 300mm pipe to inlet in Harbour Street	When contributions = \$135,000 (Catchment 65% impervious)
Upgrade pipeline in Wooli Street east of Yamba Street to 600mm	When contributions = \$192,000 (Catchment 70% impervious)
Upgrade pipeline in Yamba Street from Wooli Street to High Street to 675mm	When contributions = \$248,000 (75% impervious)
Upgrade pipeline in Yamba Street from Coldstream Street to High Street to 525mm	When contributions = \$305,000 (80% impervious)

The upgrading program shall be reassessed every two (2) years to determine whether the threshold for the next stage of works has been reached. As a guideline only, each stage of upgrading may be required at two (2) to three (3) year intervals; however, the rate of redevelopment increasing impervious area will determine the exact timing.

2.4 Contribution rate for Yamba CBD Drainage Catchment.

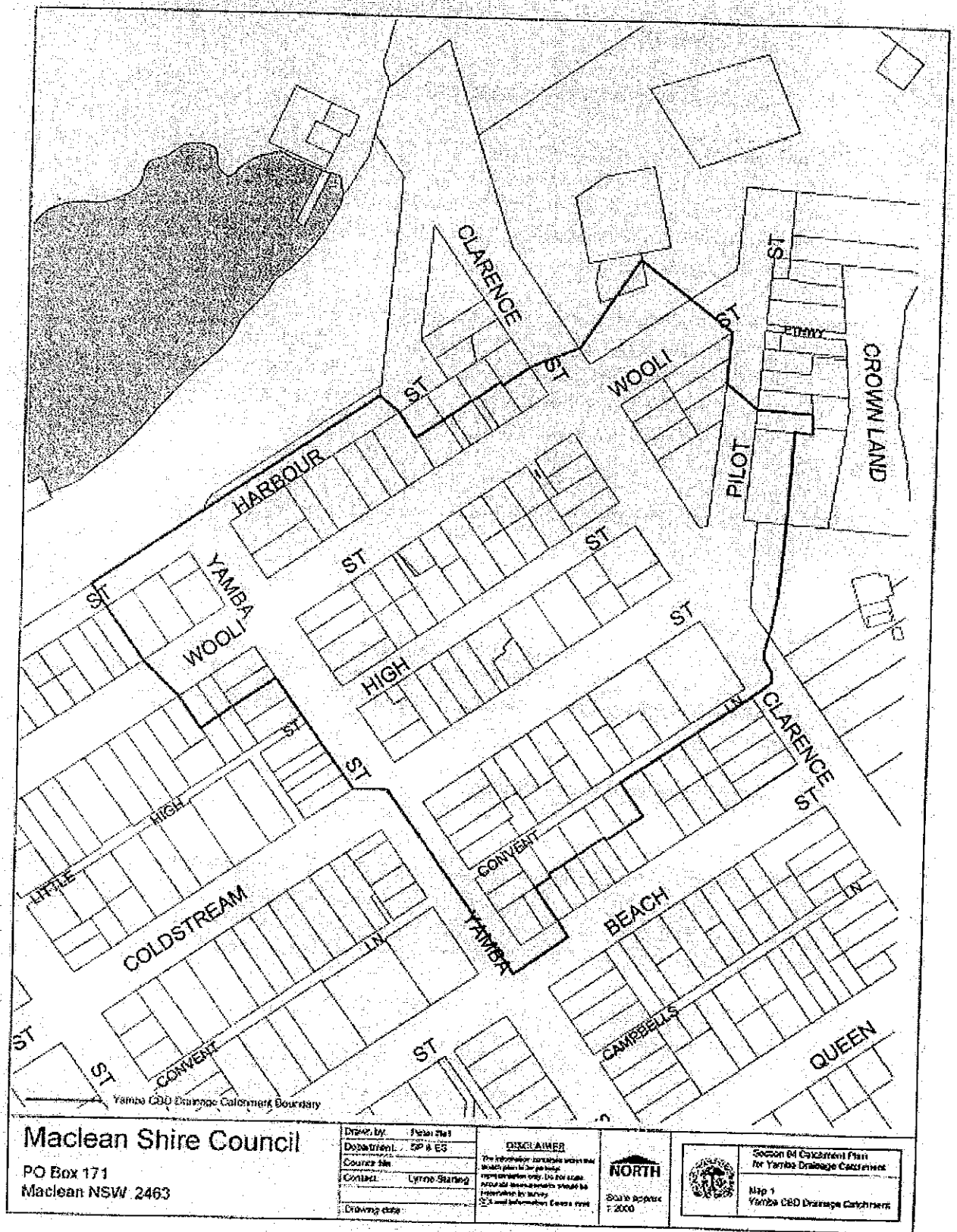
Total cost of drainage works for ultimate development-	\$Td	\$1,032,00
% increase in flows attributed to future development.	F %	35%
Existing total impervious area.	E im	5.04ha
Future total impervious area.	F im	7.69 ha

$$\begin{aligned}
 \text{Drainage Catchment Contribution} &= \frac{\$Td \times F \%}{F \text{ im} - E \text{ im}} = \frac{\$1,032,00 \times 35\%}{7.69 - 5.04\text{ha}} \\
 &= \frac{\$361,000}{26,500 \text{ m}^2} \\
 &= \$13.62/\text{m}^2 \text{ of increased impervious area}
 \end{aligned}$$

Supporting Documents

Background Paper on the Section 94 Drainage Contributions Plan for the Yamba CBD Drainage Catchment. Engineering Department. Maclean Shire Council. August 2001.

Stormwater Drainage Study - Yamba CBD Catchment Final Report (August 2001) prepared by Paterson Consultants.



MAP 1 YAMBA CBD DRAINAGE CATCHMENT

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3.0 DRAINAGE STRATEGY YAMBA CENTRE DRAINAGE CATCHMENT.

3.1 Expected types of development.

The Yamba Centre Drainage Catchment covers land bounded by Harbour Yamba, Beach and River Streets. Not all Harbour Street and Yamba Street properties are included in the catchment. See Drainage Catchment Map 2. Properties fronting Wooli and Coldstream Streets, between River and Yamba Streets are included.

Land in Coldstream Street and the landing Yamba Street, with the exception of the Catholic church is zoned 3(a) Business in Maclean LEP 2001. Development in this 3(a) zone is a mix of single and two storey commercial buildings and some single storey houses. The expected type of development in this area is 2-3 storey retail/commercial development with associated car parking. Residential development is likely above ground level. New development and refurbishment has taken place in recent years and is likely to continue. Much of the existing land is not developed to its possible potential.

The surrounding land in Wooli and Beach Streets is zoned 2(b) Residential (Medium Density) in the Maclean LEP 2001. Existing development in this area is a mix of single and two storey houses, dual occupancies and residential flat buildings. Expected development is redevelopment to create a mix of dual occupancy and residential flat development to a height of 12 metres.

3.2 Proposed drainage works.

The basis of the works proposed in this Contributions Plan for the Yamba Centre Drainage Catchment is a design for drainage upgrading undertaken by Maclean Shire Council in 1992 (plan 05-0198). Computer modelling done in 2002 has confirmed that the drainage system proposed in 1992 provides adequate capacity for the ultimate development scenario.

The drainage upgrading works identified includes installation of pipeline in five sections, three sections of which have been installed. The drainage works identified to meet Council's standard for ultimate development include:

- 124.4m of 1200mm pipeline from Wooli Street to the Clarence River (Work completed in June 1995),
- 51.2m of twin 900mm pipeline from Little High Street to Wooli Street (one pipeline installed in October 1994),
- 64.5m of twin 750mm pipeline from Little High Street to Coldstream Street (one pipeline installed in 1993),
- Provide twin 750mm pipeline from Convent Lane to Coldstream Street (one pipeline constructed in 1993),
- 68m of 750mm pipeline from Beach Street to Convent Lane (work completed in March 1996).

Upgrading works already undertaken has been calculated at 2002 rates to cost \$214,318.72. The upgrading works still required are estimated to cost \$163,000. An additional allowance of \$8,000 is made for easement acquisition. The estimated total cost of drainage works required for the Yamba Centre Drainage Catchment is \$385,318.72

The analysis of the drainage system has assumed that the total impervious area of the catchment at the ultimate development scenario would increase to 85%.

3.3 Establishment of a nexus.

3.3.1. Causal nexus.

The analysis drainage catchment for the Yamba Centre has identified that the existing drainage system is substandard and requires upgrading to provide sufficient drainage capacity for existing and future development. Council will fund upgrading of the existing drainage system to Council's adopted standard. However future development increases the impervious area, and therefore increases the peak stormwater flow and the total volume of stormwater. This requires the provision of increased capacity in the drainage network. For this Contributions Plan it is assumed that development will increase the impervious area to a maximum of 85% of the catchment area. The drainage upgrading required for the ultimate development scenario is outlined in clause 3.2 of this plan.

3.3.2. Spatial nexus.

All stormwater runoff from the Yamba Centre drainage catchment flows to the trunk drainage system. The trunk drainage system requires upgrading as a result of increased flows caused by increased impervious area of future development. The specific upgrading required as a result of future development is specified in clause 3.2 of this plan.

3.3.3. Temporal nexus.

Council has previously constructed some of the drainage upgrading works required for ultimate development. The final stage of the upgrading between Convent Lane and Little High Street will be undertaken as shown in Table 1:

Table 1 – Timing of Upgrading Works, Yamba Centre Catchment

Proposed Work	Timing
Creation of 3 metre easements over pipeline	When subject land is redeveloped; require as a condition of consent
Upgrade pipeline from Coldstream St to Little High Street – Duplicate 64.5m of 750mm pipeline	When contributions = \$48,500 (75% impervious)
Upgrade pipeline from Convent Lane to Coldstream St – Duplicate 72.4m of 600mm pipeline	When contributions = \$59,500 (80% impervious)

This upgrading program shall be reassessed every two (2) years to determine whether the threshold for the next stage of works has been reached. The rate of redevelopment increasing impervious area will determine the exact timing.

3.4. Contribution rate for Yamba Centre Drainage Catchment.

Total cost of drainage works for ultimate development	\$Td \$385,318.72
% increase in flows attributed to future development.	F % 18.3%
Existing total impervious area.	E im 3.29 ha
Future total impervious area.	F im 5.24 ha

$$\begin{aligned} \text{Drainage Catchment Contribution} &= \frac{\$Td \times F \%}{F \text{ im} - E \text{ im}} = \frac{\$385,318.72 \times 18.3\%}{5.24 - 3.29 \text{ ha}} \\ &= \frac{\$70,513}{19,500 \text{ m}^2} \\ &= \$3.62 / \text{m}^2 \text{ of increased impervious area} \end{aligned}$$

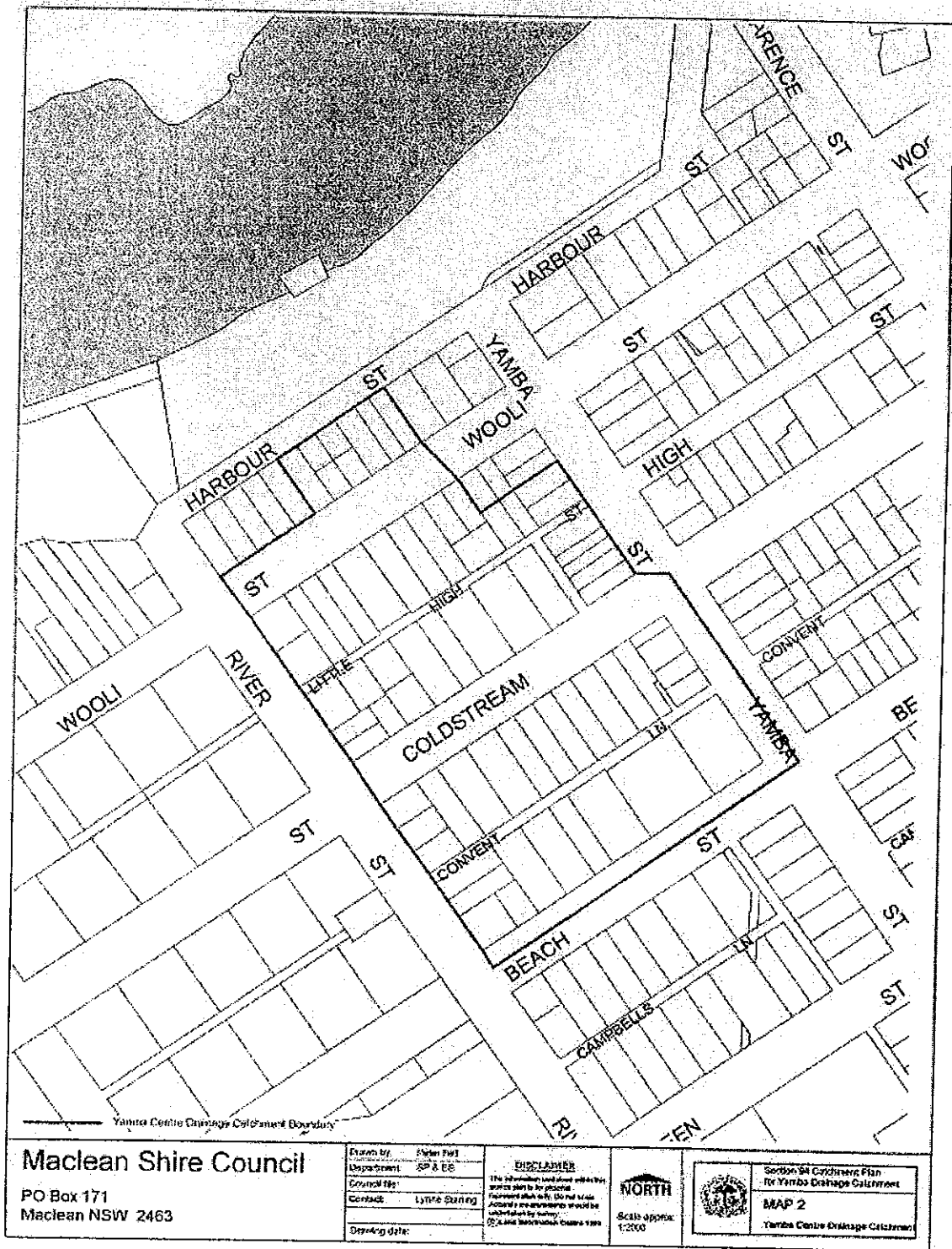
3.5 Acquisition of Easements.



Although the existing pipeline is located within private property, easements are not provided over most sections of the pipeline. At the time lots are redeveloped it is necessary that easements be created in order that Council is able access the pipeline for construction and maintenance purposes.

Creation of a 3 metre wide easement for drainage purposes in favour of Council over drainage pipelines is required as a development condition when future redevelopment takes place. Creation of easements will be in lieu of payment of Section 94 Drainage contributions. Council will meet all costs of creating the easement.

Supporting Documents

Background Paper on the Section 94 Drainage Contributions Plan for the Yamba Centre Drainage Catchment. Engineering Department. Maclean Shire Council. February 2002.



Maclean Shire Council PO Box 171 Maclean NSW 2463	Drawn by: Helen Pail Department: SP & EE	DISCLAIMER The information contained within this plan is given for general information only. It is not to be used as a basis for any legal proceedings or to be relied upon for any other purpose.	 NORTH Scale approx: 1:2000	 Section 94 Catchment Plan for Yamba Drainage Catchment MAP 2 Yamba Centre Drainage Catchment
	Council title:			
	Contact: Lynne Staring			
	Drawing date:			

MAP 2 YAMBA CENTRE DRAINAGE CATCHMENT

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