

# The BAINS DAIRY



## Contributions Plan

**Setting out contributions for future public  
infrastructure**



Version 1.4  
April 2006

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## **ABBREVIATIONS LIST**

<b>BA</b>	-	<b>Building Application</b>
<b>CP</b>	-	<b>Contributions Plan</b>
<b>DA</b>	-	<b>Development Application</b>
<b>DCP</b>	-	<b>Development Control Plan</b>
<b>EP&amp;A Act</b>	-	<b>Environmental Planning &amp; Assessment Act</b>
<b>LGA</b>	-	<b>Local Government Area</b>
<b>No.</b>	-	<b>number</b>
<b>s.94</b>	-	<b>Section 94 (of the EP&amp;A Act)</b>
<b>[1]</b>	-	<b>Bibliography reference number</b>

## **REVISION HISTORY**

<b>Version</b>	<b>Adopted</b>	<b>Commenced</b>	<b>Notes</b>
1	11/12/2000	13/12/2000	
1.1	2/10/01	3/10/01	Rates amended due to adoption of Port Macquarie - Hastings Water Supply DSP
1.2	16/6/2003	1/7/2003	Amended to provide for new development contribution ratios as a result of Council adoption of a new Development Contribution Assessment Policy
1.3	7/03/2005	16/03/2005	Amended to incorporate new policy on deferral of payment of contributions.
1.4	6/03/2006	3/04/2006	Amended to incorporate new provisions for Monitoring Review and Adjustment of Rates, Pooling of Contributions and Contributions Ratios for Residential Development.

# **PART A -**

## **SUMMARY SCHEDULES**

**Executive Summary**

**Summary of the Work Schedule**

**Summary of the Contribution Rates**

## Executive Summary

This Contributions Plan is a combined s.64 and s.94 Contributions Plan. s.64 contributions can be levied under the Water Supply Authorities Act for water and sewer infrastructure.

s.94 contributions can be levied under the EP&A Act for various types of public infrastructure, except water and sewer. The introduction of the Bains Dairy Contributions Plan enables Port Macquarie - Hastings Council to levy contributions where the development will, or is likely to, increase the local demands upon local transport (Road, Cycleway, Bus Services), and water supply infrastructure.

This Contributions Plan (CP) is a 'localised' Plan to serve the needs of the Bains Dairy community, a development area to the north-west of Wauchope. This CP addresses the needs of the Bains Dairy community given the predicted demands from the full development of Bains Dairy with the addition of the recent new zonings to allow further growth.

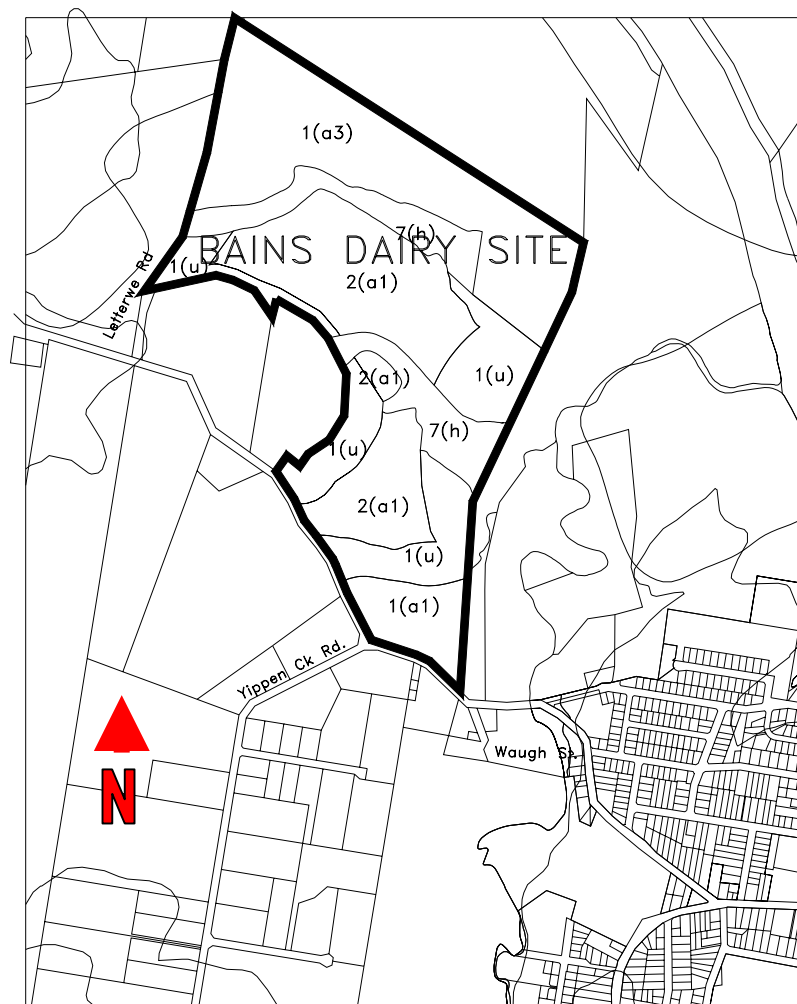


Figure A1 depicts the Bains Dairy locality and zoning as at 22/11/99.

As a consequence of the further development of Bains Dairy, it will be necessary to provide additional public infrastructure. The characteristics of the additional public infrastructure were determined by Council through;

- Needs based assessments conducted by consultants and Council staff during the rezoning investigation process for Bains Dairy.
- Consultants reviewed/completed management plans with Council staff preparing a Bains Dairy Draft Local Environmental Plan [1] that addressed the local open space and community needs, consistent with the Port Macquarie - Hastings Council's Open Space Plan of Management [3] and DUAP's Rural Settlement Guidelines [4].
- Traffic Study of Bains Dairy Area [5] [S1]
- Reticulation analysis for the water supply infrastructure.[6] [S5] The analysis utilises a computerised model of the demands placed on water supply systems
- Wauchope Community Facilities Audit by Twyford Consulting [7]

Note the items noted as [#] are detailed in Part E, bibliography, while those noted [S#] are detailed in Part E, other reference material- Supporting documents.

The additional public infrastructure will allow the needs of the new development to be met whilst also serving the needs of the existing community. The existing community's current (1999) level of service will be preserved, despite the increased loadings on roads, water supply, community services, bushfire and open space facilities. Appropriate apportionment has been calculated for each Contributions Plan item with a resultant contribution rate being calculated as applicable to each new Bains Dairy property.

## Summary of the Work Schedule

The additional public infrastructure required as a consequence of, and to serve the demand generated by the further development in Bains Dairy is summarised by [Table A1](#).

A complete Work Schedule for all the proposed additional public infrastructure is given separately itemised in the Work Schedule of each relevant Part of the Contributions Plan, that is Parts C, and D, depending on the infrastructure type.

**Table A1: Summary of the Work Schedule**

Item	Description	Total Cost (\$)	Bains Dairy s.94 CP apportionment	
			%	Cost (\$)
TRANSPORT Road Works Part C(i)	various road lengths & intersections	\$630,535	35.6	\$224,511
TRANSPORT Cycleway Part C(ii)	Along Beechwood Rd	\$148,822.74	88.8	\$132,185.62
TRANSPORT Bus Shelters Part C(iii)	2 New Bus stops & bays	\$23,000	100	\$23,000
<i>Sub-Total</i>		<i>\$802,357.74</i>		<i>\$379,696.62</i>
Water Part D	Now included in Port Macquarie - Hastings water Supply DSP			
<b>TOTAL</b>		<b>\$802,357.74</b>		<b>\$379,696.62</b>

## Summary of the Contribution Rates

The contribution amount is calculated using a multi-step formulae which firstly assesses the proportion of the additional public infrastructure costs attributable to this Contributions Plan and secondly calculates the contribution rate.

The contribution rate calculated in this Contributions Plan are summarised in [Table A2](#). The contribution levied by Council is a multiplication of the contribution rate by the number of Lots to be used in the development.



**Table A2: Summary of the Contribution Calculation for Local Contribution Rate**

Item	Total Cost (Table 1)	Existing Community proportion	Bains Dairy CP proportion	BAINS DAIRY	
				No. of lots	Contribution Rate (\$/Lot)
C(i) TRANSPORT Road works	\$630,535	\$406,025	\$224,511	250	\$898.04
C(ii) TRANSPORT Cycleway	\$148,822.74	\$16,636.54	\$132,185.62	250	\$528.74
C(iii) TRANSPORT Bus Shelters	\$23,000	\$0.00	\$23,000	250	\$92.00
<i>Sub-Total C</i>	<i>\$802,357.74</i>	<i>\$422,661.54</i>	<i>\$379,696.62</i>		<i>1,518.78</i>
D. Water	\$924,540				Contribution now included in Port Macquarie - Hastings Water DSP
<b>TOTAL</b>	<b>\$1,726,897.74</b>	<b>\$422,661.54</b>	<b>\$379,696.62</b>		<b>1,518.78</b>

The lots created within the Bains Dairy area must also contribute to the appropriate contributions plans and development servicing plans active at any particular time not covered by this plan e.g. Major Roads, District Open Space, Local Wauchope Open Space etc. These amounts are current at the date of this CP but are subject to change with time. The contribution amounts applicable, at any particular time, are available on request from Council.

Table A2 groups the infrastructure items together for the purposes of summarising. An Apportionment Table and Nexus explanation is given in the respective sections of the documents, being Parts C, and D, depending on the infrastructure type.

**END OF PART A**

# **PART B - ADMINISTRATION AND ACCOUNTING**

## **Policy Statements**

- **The Name of this Contributions Plan**
- **The Purpose of this Contributions Plan**
- **To what Area does this Plan apply?**
- **How is the future demand determined?**
- **What is the life span of this Plan?**
- **Monitoring, Review and Adjustment of Rates**
- **What is the Relationship to Other Plans and Policies?**

**How does this Plan Operate?**

**What Formula is used to Determine the Contribution?**

**Pooling of Contributions**

**Accounting Matters**

- **When are Contributions Payable?**
- **Can a Deferred Payment be made?**
- **Can Material Public Benefit or Works-In-Kind Contributions be made?**
- **Are there any Exemptions to paying s.94 contributions?**

**Policy Statements**

**The Name of this Contributions Plan**

This Contributions Plan may be referred to as the **Bains Dairy Contributions Plan, Version 1.4**.

**The Purpose of this Contributions Plan**

The primary purposes of this Contributions Plan are to satisfy the requirements of the EP&A Act and Regulations and document the s.94 and s.64 charge. Satisfying these statutory requirements and documentation will enable Port Macquarie - Hastings Council to require a contribution towards the cost of the additional public infrastructure, that will, or is likely to be, required as a consequence of the new residential development in Bains Dairy, or, that has been provided in anticipation of, or to facilitate, such development.

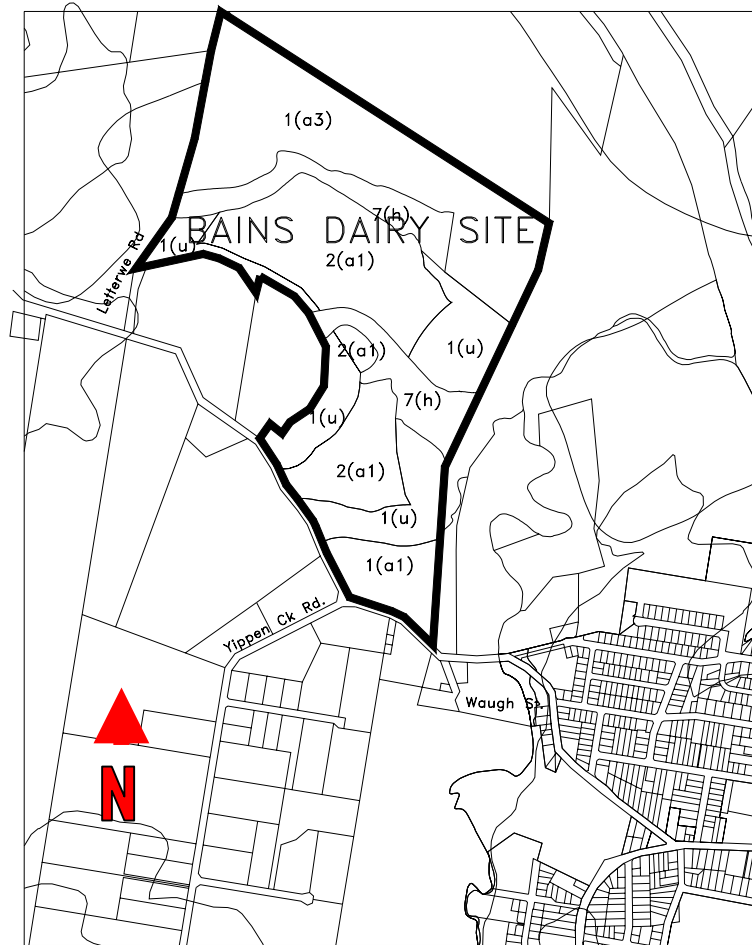
Other purposes of this Contributions Plan (CP) are to:

- ensure that the Bains Dairy area can provide an adequate level of service through infrastructure as development occurs
- enable Port Macquarie - Hastings Council, in future years, to recoup funds which it has spent on the additional public infrastructure in anticipation of the new residential development
- ensure that the existing Port Macquarie - Hastings residential community is not financially burdened by the provision of the additional public infrastructure required as a result of the new residential development
- provide a comprehensive and equitable strategy for the assessment, collection, expenditure, accounting and review of the contributions for the additional public infrastructure in Bains Dairy

**To What Area does this Plan Apply?**

This CP applies to all land bounded by the thick dark line on the map in Figure B1. The total extent of the developable area with scope for habitable allotments is some 25 ha.

Figure B1: Map of the Area to which this CP Applies



### How is the future Demand determined?

The projected growth rate and the ultimate level of development determine the future demand for infrastructure. This also requires some level of analysis of the current growth rate and also the current level of development.

Currently the Bains Dairy is basically uninhabited with the area immediately surrounding being farming land. Immediately to the west and north is a mix of rural and to the south-east rural residential and the northern fringes of residential (Wauchope).

Based on a dwelling density of 10 dwellings / ha, the number of potential lots to be developed has been determined as 250.

The population growth trends in the Wauchope area over the past 10 years has fluctuated between 0.5 - 2.3% with an average of 1.5% over that period. Based on BA approvals the demand for new dwellings has averaged around 40 dwellings per year since 1990.

## What is the Life Span of this Plan?

The life span of a contributions plan should be related to the order of accuracy of the information contained within it and the information it was based on. As the major components of the Plan are estimates of costs and estimates of release of lots, an understanding of the magnitude of the possible error in these values is required. Generally estimating costs can be performed within a known tolerance of error as long as the level of proposed works is well defined. However the number of lots to be occupied may be the most difficult to predict as it is influenced by many factors including ;

- how aesthetically pleasing the final subdivision is.
- the level of marketing undertaken ( how well availability is made known to the public)
- the actual level of demand for the product being offered
- alternate products available in the close proximity ( whether people may be tempted to purchase a similar product nearby, same Council region)
- alternate products available in a wider area ( whether people may be tempted to purchase elsewhere, in another Council region)

The longer the Life Span generally the less accurate the plan becomes as the future rate of development in a particular area is to some extent quite uncertain.

The estimates of development of lots in this plan may range from 10 to 25 lots per year. This would give the life of the plan from 10 to 25 years.

Due to this variation in the estimated takeup of the plan, the size of the development and that the land involved is under one ownership, the development staging in the plan is lot production based. This allows for matching provision of facilities close to actual demand.

## Monitoring, Review and Adjustment of Rates

Council will adjust the contributions levy in this plan on a quarterly basis. To ensure that the value of the contributions is not eroded by inflation, Council will increase the levy in accordance with the Consumer Price Index All Group Index Number for Sydney (CPI), as published by the ABS.

Where contributions have been levied under an existing consent, granted in accordance with this Plan, but not yet paid, the contribution will continue to be indexed on a quarterly basis in accordance with the above until such time as they are paid.

Contributions rates will be adjusted in accordance with the following formula

$$CR_A = \left(1 + \frac{CPI_C - CPI_O}{CPI_O}\right) \times CR_O$$

Where

CRA is the adjusted contributions rate at the time of adjustment in the Contributions Plan, or at the time of payment of the contributions, as applicable.

CRO is the original contribution rate in the contributions plan, or at the time of the development consent, as applicable.

CPIO is the original CPI rate at the time of adoption of the contributions plan, or at the time of the development consent, as applicable.

CPIC is the current CPI rate at the time of adjustment of the contributions rate in the Contributions Plan, or payment of the contributions, as applicable.

The cost of proposed works in the contribution plan will be reviewed annually if warranted, but at least every three years, to ensure the CPI adjustments reflect the 'real' cost of acquisitions and construction.

Council will also review this plan if it becomes necessary to borrow additional funds to meet the Section 94 funding component of the works program due to a shortfall in the receipt of development contributions.

## Pooling of Contributions

This plan expressly authorises monetary S94 Contributions paid for different purposes to be pooled and applied (progressively or otherwise) for those purposes. The priorities for the expenditure of the levies are shown in the works schedule.

## What is the Relationship to Other Plans and Policies?

This CP is closely related to Port Macquarie - Hastings Council's Contributions Plans for Open Space, Major Council Roads, Water and Sewer. The difference between the related Contributions Plans and the Bains Dairy Contributions Plan is that the related Plans levy contributions on a macro level, whereas the Bains Dairy CP levies contributions in relation to the immediate area. The Council policies that have a direct relationship to this CP include:

- LEP 1987 - amendment No. 79 – Bains Dairy
- Council Policy D7 - assistance to industry & development
- Open Space s.94 CP, 1996
- Major Council Roads s.94 CP, 1996
- Water and Sewer Development Servicing Plans and levying policies

It should be noted that this Contributions plan takes precedence where relevant over the macro regional plans, which include a local component. Therefore any plan which includes a component specific to Bains Dairy now must be amended to ensure that the local plan covers all items that may have been covered by a macro plan. The other plans and policies which relate to regional requirements listed above however still apply.

## How does this Plan Operate?

In determining a Development Application (DA) to subdivide the Bains Dairy property for new residential allotments, Council will impose a condition levying a contribution towards the cost of the additional public infrastructure for each new lot. That is, each new lot's contribution will be a part-payment for each of the nominated facilities covered in this plan. This includes the road works, cycleway, bus shelters, and the water supply upgrading. The contribution may be in the form of a monetary contribution, the dedication of land or the provision of material benefits in accordance with the stipulations of this Contributions Plan.

The contribution levied is based on the number of net new lots created in the subdivision. For example, the contributions due by a 14 lot subdivision would only be levied based on 13 lots, the net number of new rateable lots, as there would be a credit for the existing lot that was subdivided to create the 14 lots. However, where a site has not previously had water supply available, no allowance for existing demand is granted. The determinate for water supply availability is whether a property has previously been rated for water availability. In this case all 14 lots would be levied for water.

In terms of the additional public infrastructure, the Work Schedule is driven by the Lot Generation Rate which is related to the developers timing and or staging of works and if required will be revised biannually, or annually. This is dependent on the threshold lots reached, or significant changes in the rate of creation of lots or significant changes in the likely total number of lots to be developed.

## What Formula is Used to Determine the Contribution?

The contribution amount is calculated using the multi-step formulae below which firstly assesses the proportion of the Upgrading Work costs attributable to this CP and secondly calculates the contribution rates. The outcome of the contribution rate calculation is summarised by Table A2 in Part A with a full listing given in each of the component plans covered by this plan. The formula below calculates a rate per Equivalent Tenement (ET), which is the rate for a single house or one residential allotment with one dwelling entitlement. The rate for multi-unit and other forms of residential development are calculated as a percentage of the low-density single dwelling rate contributions as show in Table B1.

### CONTRIBUTION FORMULA

$$\text{Contribution} = \frac{(\text{TC} - \text{S}) \times \text{P}}{\text{n}}$$

Rate (per Lot or ET)

TC = Total Cost of Facilities

- S = Direct Subsidies
- P = Proportion attributable to new development
- n = Estimated number of new lots or ET's (250)
- ET = Equivalent Tenement (eg A house – single density, one lot with one dwelling entitlement)

Where:

Total Cost = sum of capital and land costs for the infrastructure which has been, or which is to be, provided

Direct Subsidies = subsidies, directly tied to and growth targeted against, the provision of the infrastructure augmentation.

**Table B1 - Contributions Ratios for Residential Development**

Description	Percentage
<b>A house</b> - single density (one lot with one dwelling entitlement) detached dwelling in Rural 1(a1),1(a3) or 1(a4) zones (eg managers residence or rural worker's dwelling) Lots > 450	100
<b>Flats, units, town houses, villas, dual occupancies, Integrated Housing</b> designed for lots less than 450m2 etc. and permanent self-contained caravan park accommodation	
• one (1) bedroom	50
• two (2) bedroom	67
• three (3) bedroom	90
• four (4) or more bedrooms	100
<b>High density (3 or more storeys)</b>	
• one (1) bedroom	50
• two (2) bedroom	67
• three (3) bedroom	90
• four (4) or more bedrooms	100
<b>Boarding houses, guest houses, hostels, B&amp;Bs etc</b>	
• not self-contained, shared facilities for cooking, laundry and bathrooms per bedroom not dormitory or bunk rooms	25



<b>Description</b>	<b>Percentage</b>
<ul style="list-style-type: none"> <li>partially self contained, shared facilities for cooking &amp; laundry but own ensuite per bedroom not dormitory or bunk rooms</li> </ul>	35
<ul style="list-style-type: none"> <li>not self-contained, shared facilities for cooking, laundry and bathrooms per bed, dormitory or bunk rooms</li> </ul>	12.5
<ul style="list-style-type: none"> <li>partially self contained, shared facilities for cooking &amp; laundry but own ensuite per bed, dormitory or bunk rooms</li> </ul>	17.5
<ul style="list-style-type: none"> <li>B&amp;Bs are currently contributions exempt for a trial period</li> </ul>	<b>Nil</b>
<b>Motel unit</b>	
<ul style="list-style-type: none"> <li>partially self contained (shared facilities for cooking &amp; laundry but own ensuite)</li> </ul>	<b>25</b>
<ul style="list-style-type: none"> <li>self contained (ensuite and kitchen) Equates to a 1 bedroom unit. For motel suites in excess of 1 bedroom, apply the percentages for high density units</li> </ul>	<b>50</b>
<b>Aged unit</b> where the development is approved under SEPP (Seniors Living) or the Applicant demonstrates to Council's satisfaction that the development will be occupied by older persons as defined in the SEPP and the maximum occupancy for any unit is 2 persons	
<ul style="list-style-type: none"> <li>self contained (ensuite &amp; kitchen) 1 bedroom</li> </ul>	<b>40</b>
<ul style="list-style-type: none"> <li>self contained 2 bedroom</li> </ul>	<b>55</b>
<ul style="list-style-type: none"> <li>self contained 3 or more bedrooms</li> </ul>	<b>75</b>
<b>Nursing Home/Hostels</b>	
<ul style="list-style-type: none"> <li>High Dependency/Residential Care Facility (per bed)</li> </ul>	<b>Nil</b>
<ul style="list-style-type: none"> <li>Low Dependency/Hostel (per bed)</li> </ul>	<b>35</b>
<b>Caravan parks and or camping sites</b>	
<ul style="list-style-type: none"> <li>transient, not permanent (not self-contained)</li> </ul>	25
<ul style="list-style-type: none"> <li>transient, not permanent (partially self-contained)</li> </ul>	35
<ul style="list-style-type: none"> <li>permanent (not self-contained)</li> </ul>	25
<ul style="list-style-type: none"> <li>permanent (partially self-contained, ensuite)</li> </ul>	35
<ul style="list-style-type: none"> <li>permanent (self-contained, ensuite &amp; kitchen)</li> </ul>	see flats, units, townhouses etc

Note: Residential Development means any use listed in this table whether or not the use is intended for temporary, short term, long term, permanent, or tourist accommodatio

## ACCOUNTING MATTERS

### When are Contributions Payable?

Where a DA is required	- prior to the release of the construction certificate, or as specified in the development consent,
Subdivision	- prior to the subdivision certificate being issued or as specified in the development consent.

### Can a Deferred Payment be made?

Council will allow the deferral of the payment of Development Contributions involving the construction of a building subject to:

- i) Lodgement of an irrevocable guarantee for the amount of the contributions plus an additional 12 month interest amount calculated at the average rate of Council's investments performance over the past 12 months plus 1%.
- ii) The maximum period for which the guarantee will be accepted is the sooner of 12 months or the issue of an occupation certificate for the development.
- iii) Guarantees will only be accepted from an institution approved by the Manager Corporate and Financial Planning.
- iv) If at the end of the period for the lodgment of the guarantee, the outstanding contributions plus the additional amount referred to in 'i' have not been paid, Council will call in the guarantee without further reference to the applicant.
- v) A prorata reduction in the amount referred to in 'i' will be allowed for payment of the outstanding contributions within 12 months or the calling in of the guarantee within 12 months.
- vi) The guarantee is to provide for Council to unconditionally call in the guarantee for the full amount at any time.

### Can Material Public Benefit or Works-In-Kind Contributions be made?

A Material Public Benefit (MPB) would generally be in the form of "Works in Kind", being the provision of a facility in lieu of payment of a contribution towards that facility. Generally "Works in Kind" bring forward the date at which the facility is provided.

It should be noted that;

1. Council may only accept an application offer to make a contribution by way of WIK contribution ( for any item included on the works schedule) or a MPB ( for an item not on the work schedule) in compliance with s94.(2C) of the EP & A Act.
2. Council may accept the offer of a WIK contribution if the applicant, or any other person entitled to act on the relevant consent, satisfies the consent authority that :
  - (a) payment of the contribution in accordance with the provision of the plan is unnecessary in the circumstances of the case.
  - (b) the in kind contribution will not prejudice the timing or the manner of the provision of the public facility for which the contribution as required.
  - (c) the value of the works to be undertaken are at least equal to the contribution assessed in accordance with this plan.

## **Are there any Exemptions to paying s.94 contributions?**

The types of development exempted from the application of this plan include:

- Non residential land uses and other uses that are not specified in table 4.2.
- Existing vacant residential lots currently rated for water and sewer (except where subdivision or an increase in population density is involved).
- A change of land use not involving the creation of additional lots, dwellings or increased population.
- Development exempted by direction of the Minister pursuant to SEPP Seniors Living
- Rural or farming enterprises, which do not result in an increase in the demand for open space facilities.
- Development exempted by Council's Development Contribution Assessment Policy.

**END OF PART B**

# PART C - Transport

## (i) ROAD WORKS

**Causal Nexus**  
**Physical Nexus**  
**Temporal Nexus**

**Cost Estimation Derivations**

**The Work Schedule**

**Apportionment**

**The Contribution Calculation**

This portion of the CP establishes the relationship (nexus) between the new residential lots and the demand for Road Works in Bains Dairy. The nexus relies upon the anticipated creation rate of the new lots and the traffic generations projected in the Bains Dairy Traffic Study . The Bains Dairy Traffic Study outlined the extent of the Road Works necessary to meet the demands of the development of Bains Dairy.

The nexus in this CP is divided into three parts, those being a causal nexus, a physical nexus and a temporal nexus. The Causal Nexus discusses the reasons why, or, the cause for the Road Works. It delves into the anticipated rate of lot creation, the apportionment of the Road Works costs and the extent to which these works will satisfy the needs of the Bains Dairy community. The Physical Nexus establishes the relationships of where, in terms of location. The Temporal Nexus indicates the timing or staging reasons for the Bains Dairy Road Works and how, in terms of a provision strategy.

## Causal Nexus

The **Causal Nexus** between the new residential lots in Bains Dairy and the proposed Road Works has been established having regard to:

the type and extent of further subdivision in the area of Bains Dairy, as established in the

- the expected increase in traffic generation as a consequence of that new residential subdivision, as established in the Bains Dairy Traffic Study
- Hastings LEP 1987 ( Amendment No 79) – Bains Dairy (LEP87-BD)
- the characteristics of the new rural residential lots and the requirements for vehicle access/egress
- the traffic capacity of the existing (1999) Bains Dairy and Wauchope road system
- the road use patterns of Local traffic
- the extent to which the Road Works will meet the needs of the Bains Dairy community

The proposed Road Works will be carried out, to meet the needs and increased usage of the Bains Dairy road system due to, or in anticipation of, the new residential lot subdivisions. A full explanation of the anticipated type and extent of subdivision in Bains Dairy can be found in the report on the Draft Local Environment Plan for Bains Dairy (DLEP-BD) .

The proposed residential lots will increase the traffic loadings on the Bains Dairy road system. ERM have considered the Bains Dairy road system under the impacts of the proposed further subdivision to devise a warranted Road Works program.

Table C.i.1 lists the Road Works program devised by ERM to adequately cater for the additional lots.

Figure C.i.1 shows the location of these Road Works.

**Table C.i.1: Estimate of Road Works Treatments**

Road or Intersection	Treatment	Estimated Cost
1. New Major Site Access	New Type C Intersection	\$225,000
2. Beechwood Rd/Yippen CkRd intersection	Upgrade to Type B	\$42,000
3. Beechwood Rd/ Waugh St intersection	Upgrade to Type B	\$42,000
4. Waugh St / James St Intersection	Upgrade to Roundabout	\$180,000
5. Beechwood Rd Waugh St – Yippen Ck Rd	Upgrade 700m to 9m**	\$229,000*
6. Beechwood Rd, Yippen Ck Rd – Dog Track entrance	Upgrade 530m to 9m**	\$137,500
<b>TOTAL</b>		<b>\$855,500</b>

\*Note includes one creek crossings

\*\*Incl. 1m sealed shoulder both sides.

## Physical Nexus

The **Physical Nexus** for the Road Works relies upon the expected traffic generation from the additional residential lots. There are seven projects in the Bains Dairy Road Works program, the major item being the upgrading of Beechwood Rd. This item can be divided into 5 sub items.

To briefly summarise, the additional traffic from the proposed lots will exceed the threshold capacity of these road links or intersections and thus warrants upgrading to a more adequate standard. In some cases, the intersections or road lengths are already exceeded in terms of threshold capacity and in these cases there is an apportionment to the existing community, or in other words, Council.

The implications of the do-nothing scenario, which would maintain existing seal widths along Beechwood Rd would be a worsening of the level of service for traffic generally from B/C currently to C/D by the year 2009. (Level of service is as defined in “Austroads-Part 2, Roadway Capacity”. In addition, facilities for pedestrians and cyclists would be inadequate and arguably unsafe. This would increase the isolation of the Bains Dairy Subdivision from other areas of Wauchope.

The details, of the physical nexus, for each for the road projects is given in more detail below.

### **1. Introduction of New Major Site Access - intersection with Beechwood Rd:**

Beechwood Road is classified as a collector Road (formerly MR 575) it provides access to Wauchope from various areas north and west of Wauchope. This road will connect the proposed subdivision area to the township. The proposed subdivision will be constructed around the existing racecourse. It is proposed to provide one point of access into the new subdivision providing a major new intersection with the Beechwood Road. The primary access will be obtained from this new intersection. This intersection and ancillary works are to be required as a condition of consent for the proposed development.

**2. Beechwood Rd/Yippen Creek Rd Rd intersection:**

Yippen Creek Road is a local road providing access to Wauchope via Beechwood Rd for property owners along its length. Currently the intersection is a type A junction. Traffic counts and traffic trends indicate that the increasing population and therefore increase in traffic volumes will require an upgrade of this intersection. At current projections the minimum standard will be a type B junction. The traffic impact Study indicates that up to 30% of upgrade costs can be attributed to the proposed subdivision. It is also noted that in the longer-term that this local road may form a new collector road connecting to the South West area of the township via Pead Street. This has been identified in the Wauchope Traffic Study October 1996 and is pending additional residential rezoning in areas to the West of Beechwood Rd.

**3. Beechwood Rd/Waugh St Intersection:**

This intersection is a secondary link junction from the rural collector road to the township. Waugh St is a residential collector Road it provides an alternative route for Beechwood Rd traffic to and from Wauchope. Currently this intersection is a type 'A' standard which requires upgrading to a type 'B' standard. Again as above up to 30% of the upgrade costs can be attributed to the proposed development.

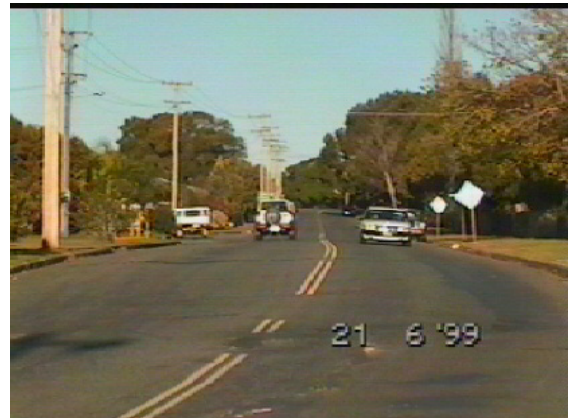


Figure C.i 2 Beechwood Rd near High St

**4. Waugh St /James St Intersection:**

This intersection currently is a four way cross intersection. It has previously been identified (ERM 1996) that this intersection be upgraded to a round about as part of the townships local area traffic management (LATM) scheme. This was identified in the Wauchope traffic Study 1996. A proportional increase in traffic volumes at this location can be attributed to the proposed development, as this is the most direct link to the town centre. As such it has been determined that 60% of costs can be attributed to proposed Development.

The estimated cost of this intersection is substantially more than that of the standard roundabout works. This is due to the peripheral upgrading to the pavement etc. required to cater for the increased impact on areas not originally constructed to provide for that level of use.

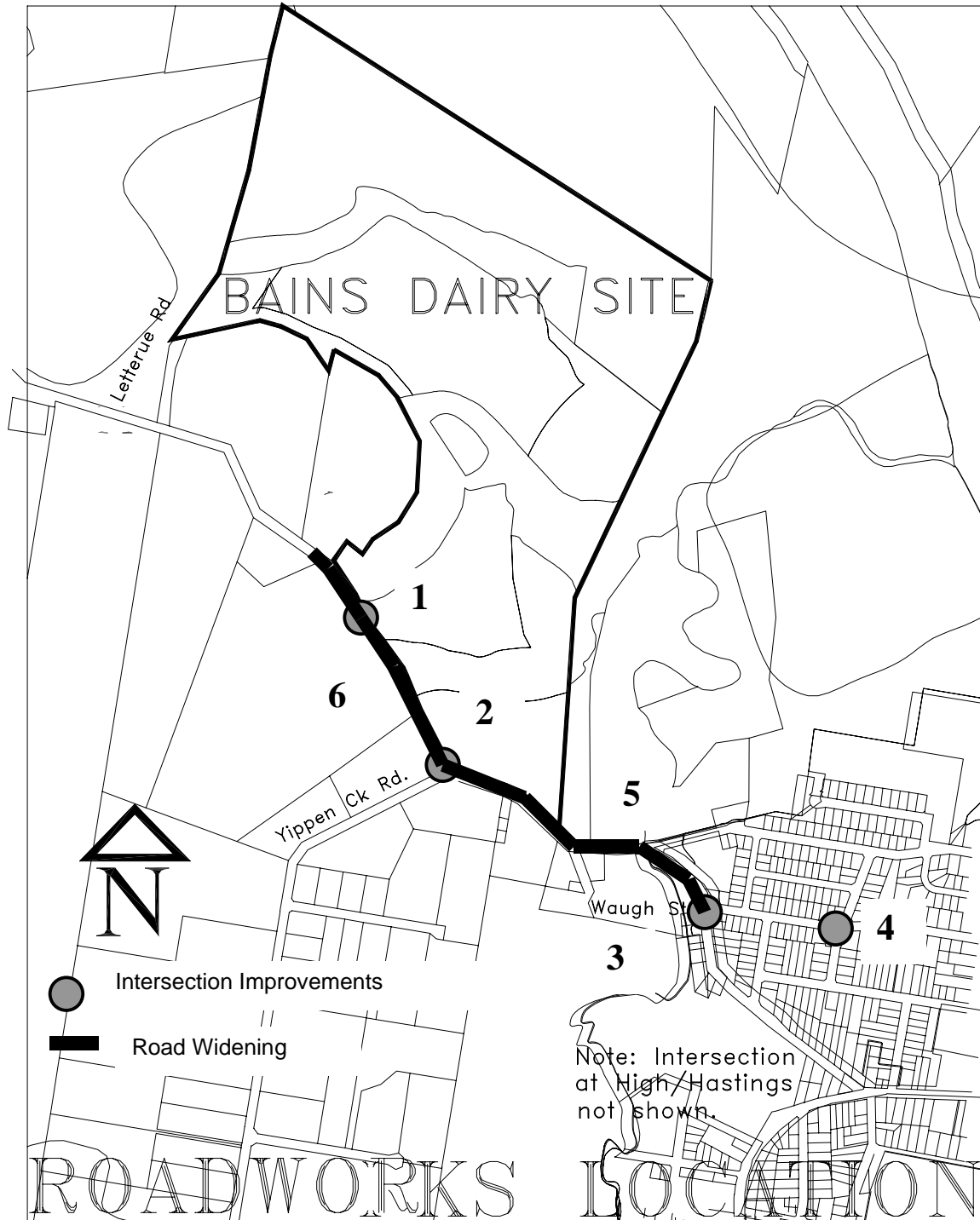


Figure C.i.1: The Location of the Road Works in Bains Dairy



**5. Beechwood Road Upgrade, Waugh St - Yippen Creek Rd:**

This section of roadway some 700m currently 6.9m has been identified as requiring reconstruction and widening to 9.0m. Reconstruction of this section includes a cycleway bridge at an estimated cost of \$48,000.

The traffic Study has determined that based on projected increases in traffic volumes 25% of costs can be attributed to the proposed development.



Figure C.i.3 Beechwood Rd at Yippen Creek

**6. Beechwood Road Upgrade, Yippen Creek Rd – Dog Track entry:**

This 530m section of roadway is currently 6.9m in width. It will be reconstructed and widened to an 9m width. The apportionment has been determined as 30% attributed to the new development.



Figure C.i.4 Beechwood Rd east of Dogtrack.

**Temporal Nexus**

The **Temporal Nexus** indicates the reasons for the staging and provision strategy chosen by Council for the implementation of the Upgrading Works. The implementation is based upon the rate of development of the Bains Dairy Release Area., the resultant increase in traffic generation and the expected contribution income.

The implementation rate is also dependent upon Council’s financial resources and the priorities and cost of each of the listed items. The priorities have been determined based on the total works schedule for the area.

The priorities are as listed in Table C.i.2.

**Table C.i.2: Priorities of the Upgrading Works**

<b>Facility Priorities</b>	<b>Comment</b>
1. Major Site Access	High Priority, required to enter new Sub division
2. Yippen Ck / Beechwood Rd Intersection	M Priority , improve safety & traffic flow at intersection
3. Waugh St / Beechwood Rd Intersection	M priority, intersection with alternate route to CBD
4. Waugh St / James St Roundabout	M priority, improve traffic flow & safety in local road network
5. Beech Wood Rd Upgrade :- Waugh St – Yippen Ck Rd	M, priority widen
6. Beechwood Rd Upgrade :- Yippen Ck Rd – Dog Track	M – L, priority, currently in reasonable condition

The resultant staging and provision strategy chosen by Council for the implementation of the Upgrading Works in Bains Dairy release area is given in Table C.i.4.

### Cost Estimate Derivation

For the purposes of this contributions plan the costs utilised for the estimates of required works are as indicated in the “Traffic Study for the Bains Dairy Area”, completed in June of 1999 for Port Macquarie - Hastings Council by ERM Mitchell McCotter. The costs are reported to have been derived from figures provided by Port Macquarie - Hastings Council for works of similar nature recently completed elsewhere in the Local Government Area.

Typical road pavement reconstruction cost are set within the range \$20 - \$30 per square metre. The costing derived by ERM has also been reviewed by Council and a factor applied to take into account site specific requirements such as land acquisition and the difficulty of the works and the terrain.

See: Table C.i.3: Road Works indicative Estimate of Costs

**Table C.i.3: Road Works indicative Estimate of Costs**

<b>Type of Traffic Facility or Works Required</b>	<b>Indicative Cost Estimate</b>
Reconstruct existing roadway 10m with K&G	\$330,000 / km
Reconstruct 6.9m and widen to 9m	\$250,000 / km
Reconstruct 6.9m and widen to 8m	\$230,000 / km
Reconstruct 6.3m and widen to 7m	\$200,000 /km
Type “B” Intersection	\$45,000
Type “C” Intersection	\$225,000
Urban Roundabout 10m	\$270,000
Urban Roundabout 8m	\$180,000
Footway / cycle way Bridge	\$40,000

## Road Work Schedule

The work schedule has been derived from the extensive report titled, "Bains Dairy Traffic Impact Report", prepared for Council by ERM, Mitchell, McCotter in June of 1999. The primary purpose of the Traffic Study was to provide the basis on which Council can formulate a Section 94 Contributions Plan. Based on traffic analysis, in, and around the subject site the results indicate the level of road works to be undertaken

**Table C.i.4: Schedule of Works - Roadworks**

<u>ROADWORKS</u>	<b>Est. Timing of Works**</b>	<b>Lot No.</b>	<b>Apport.</b>	<b>Cost Estimate</b>
1. New Major Site Access		*	*	\$225,000
4. Waugh St / James St Intersection	2004/5	100	55	\$180,000
3. Beechwood Rd/ Waugh St intersection	2004/5	100	30	\$42,000
2. Beechwood Rd/Yippen CkRd intersection	2005/6	125	30	\$42,000
5. Beechwood Rd Waugh St - Yippen Ck Rd	2006/7	150	25	\$229,000
6. Beechwood Rd, Yippen Ck Rd – Dog Track entry	2009/10	200	30	\$137,500

\* These roadworks will be required as conditions of consent for the development. Also the timing may be impacted by Councils work schedule for all other infrastructure including road works and major services.

\*\*Time estimates based on development rate of 25 lots/year.

## APPORTIONMENT

The Road Works allow the needs of the new residential lots to be met whilst also serving the needs of the existing (1999) Bains Dairy and Wauchope communities. The Road Works will benefit the new residential lots by providing a road of suitable standard to cater adequately for both their and the existing community's traffic. The benefit gained by the existing community from the Road works varies from a zero-benefit to higher levels of benefit, depending on whether the Road Work items were listed as necessary as part of the Council's upgrading works schedule.

The zero-benefit to the existing community occurs if the increase in traffic capacity on the Bains Dairy road system was not warranted by the existing (1999) population. A higher level or positive benefit to the existing community occurs if the Road Work item was partially or totally necessary without any further subdivision occurring in this area.

**Table C.i.5: The Road Works Apportionment**

Upgrade of Road or Intersection	Cost Estimate	Apportionment %			
		Bains Dairy CP		Other Sources	
		\$	%	\$	%
1. Major Site Access	\$225,000 *	0	0	0	0
2. Yippen Ck Rd/Beechwood Rd	\$42,000	30	\$12,600	70	\$29,400
3. Waugh St/Beechwood Rd	\$42,000	30	\$12,600	70	\$29,400
4. Waugh / James	\$180,000	55	\$98,400	45	\$81,600
5. Waugh – Yippen	\$181,000	25	\$45,250	75	\$135,750
5(i). Cycleway bridge	\$48,000	30	\$14,400	70	\$33,600
6. Yippen Ck – Dog Track	\$137,535	30	\$41,261	70	\$96,275
<b>TOTAL (S94 works only)</b>	<b>\$855,535</b>	<b>35.6</b>	<b>\$224,511</b>	<b>64.4</b>	<b>\$406,025</b>

\*To be provided through a condition of consent.

Payment, or contributions, for the Road Works is sought from those who gain a positive benefit. The positive benefit gained by the new residential lots substantiates payment for a proportion of the Road Works, via s.94 contributions, but the existing community also has an obligation to pay for its share of the Road Works where a positive benefit is gained.

The proportion paid by the existing community is signified by the Council apportionment. The apportionment has been identified by considering the existing road works program in comparison with the 'proposed (250) lots of further subdivision' scenario of Road Works required. The resultant Road Works apportionment is shown in Table C.i.5.

## **The Contribution Calculation**

The contribution amount is calculated using the multi-step formulae below which firstly assesses the proportion of the traffic facility work costs attributable to this CP and secondly calculates the contribution rates. The contribution levied by Council on a Development Consent is a multiplication of these contribution rates by the site area or number of lots in the redevelopment/development. The Formula can be found in PART B of this Contributions Plan.

Table C.i.6 shows the calculation of the contribution rates for Roadworks.

**Table C.i.6: The Contribution Rates Calculation**

<b>Total Cost S94</b>	<b>Bains Dairy s.94CP proportion</b>		<b>Bains Dairy</b>	
	<b>%</b>	<b>Cost</b>	<b>Benefit Lots</b>	<b>Contribution rate (\$/Lot)</b>
\$1,082,036	28.5	\$224,511	250	\$898.04

**END OF PART C(i)**

# PART C - Transport

## (ii) CYCLEWAY

**Causal Nexus**  
**Physical Nexus**  
**Temporal Nexus**

**Cost Estimation Derivations**

**Apportionment**

**The Work Schedule**

**The Contribution Calculation**



**Fig C.ii.1. Existing Condition of ROADWAY**

This portion of the CP establishes the relationship (nexus) between the new residential lots and the demand for a cycleway in Bains Dairy. The nexus relies upon the anticipated creation rate of the new lots and their projected need for alternate methods of transport and provision of recreation/leisure activities. The bike plans produced by GEOPLAN for Council indicate strong on going increases in a variety of bike riding activities, both purely recreational and competitive.

There is evidence of strong growth in the use of bicycles and cycling as a recreation / leisure / sporting activity. In addition governments are committed to promoting cycling as an alternate mode of transport as well as an activity which promotes a healthier lifestyle.

The Roads and Traffic Authority have embarked on a program known as “Bike Plan 2010” which aims to improve bicycle network facilities. The RTA also have a NSW Bike plan implementation Strategy (RTA 1996).

The nexus in this CP is divided into three parts, those being a causal nexus, a physical nexus and a temporal nexus. The causal nexus discusses the reasons why, or, the cause for the cycleway. It is dependent on the anticipated rate of lot creation, the apportionment of the costs and the extent to which these works will satisfy the needs of the Bains Dairy community.

The physical nexus establishes the relationships of where, in terms of location. The temporal nexus indicates the timing or staging reasons for the Bains Dairy Cycleway.

## **Causal Nexus**

The Causal Nexus between the new rural residential lots in Bains Dairy and the need for cycleway infrastructure in Bains Dairy has been established having regard to:

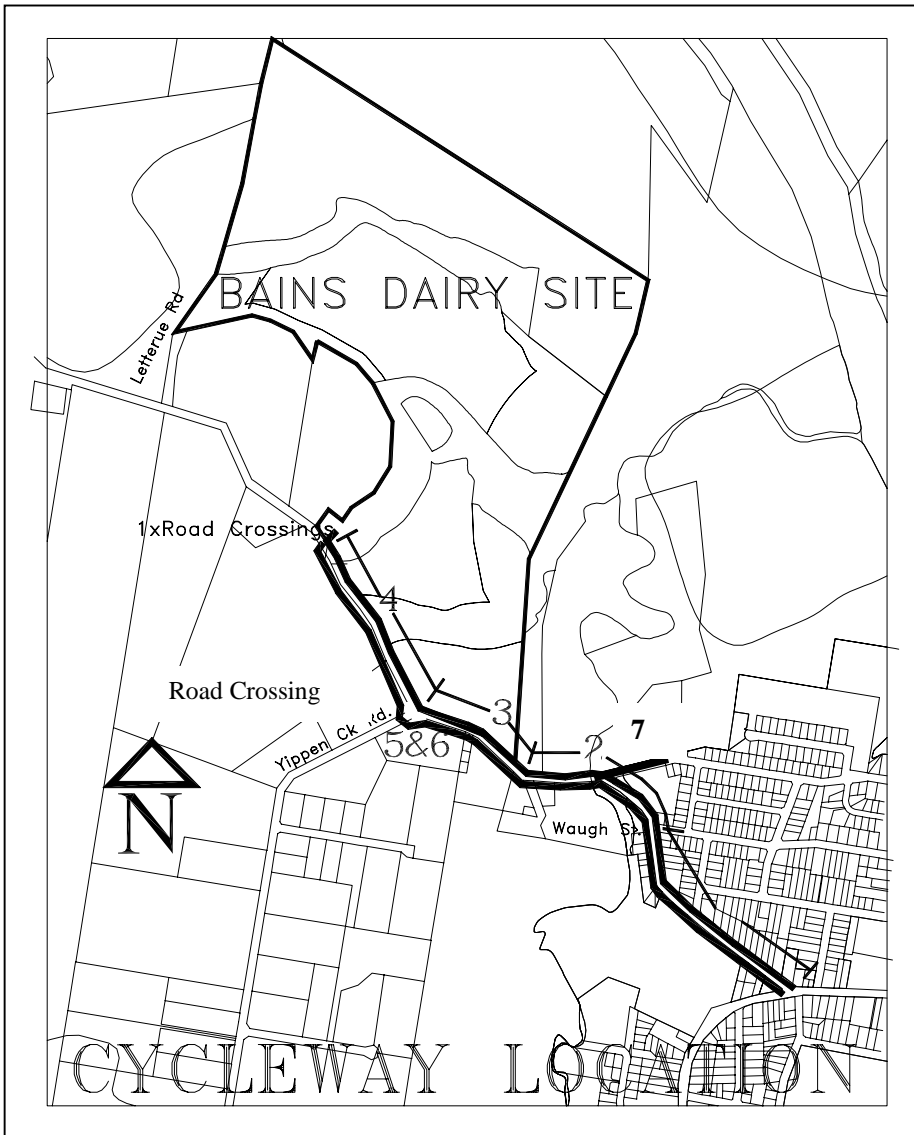
- the type and extent of further residential subdivision in Bains Dairy.
- the expected increase in demand in alternate transport use as a consequence of that new sub division

The proximity of Bains Dairy to Wauchope puts in a position where there will be strong links in various methods of transport, including walking running and cycling. The walking and cycling activities are likely to be undertaken for both recreational purposes and need for transport, such as children riding to local schools. In addition the local shops of Wauchope are relatively close enough to expect both shoppers and those working in Wauchope to consider the use of alternate transport such as cycling to work, as a viable option. Finally in order to encourage an alternate mode of transport the issue of safety needs also to be addressed. The provision of a dedicated cycleway or cycle lane will provide the required safety to encourage the adoption of this as a means of transport by the adult population.

**Physical Nexus**

A physical nexus indicates the reasons for the location of a particular facility to be provided relative to the community which it is intended to serve. The Physical Nexus for the Cycleway relies upon the predicted increase in bicycle usage due to the additional lots being created. There is a need to provide strong links to the township of Wauchope a cycleway / footway provides an incentive for the new community to maintain or develop close links to the existing township.

The proposed location for the cycleway is along the full length of Beechwood Rd. It is likely that the cycle way works will be carried out in conjunction with the proposed road works along Beechwood Road.



**Figure C.ii.2 The Location of the cycleway in Bains Dairy**



**Road Widening**

A 1.5m bicycle lane width is proposed for both sides of the road from Waugh Street to Yippen Creek Road. This will result in a desirable width of cycleway for the 60km/h section. For the 80km/h section the width of cycleway is to be 2m the ‘desirable width’, as there are many horizontal and vertical curves in the road. This requires a 1.0m extension to the side of the proposed upgraded Beechwood Road.

**Temporal Nexus**

The temporal nexus indicates the reasons for the staging and provision strategy chosen by Council for the implementation of the Upgrading Works. The implementation is based upon the anticipated rate of development of Bain’s Dairy, the resultant increase in bicycle usage and traffic generation and the expected contribution income. The implementation is also dependent, timing-wise, upon Council’s financial resources.

The resultant staging and provision strategy chosen by Council for the implementation of the Cycleway Works in Bain’s Dairy is given in Table C.ii.3.

Note that the timing and locality of the works is dependent on the location and timing of development and the timing of works within the Bain’s Dairy Roads contributions plan works program ( Refer to Part C(i) ). It is envisaged that the cycleway will generally be constructed as development proceeds generally along Bain’s Dairy Road.

**Cost Estimate Derivation**

For the purposes of this contributions plan, the costs utilised for the estimates of required works are as indicated by a report prepared by ARUP GEOPLAN for Council titled, “The Wauchope Local Bike Plan”. Generally the following indicative costs apply:

**Table C.ii.1: CYCLEWAY indicative Estimate of Costs**

<u>Size or Type of Cycleway Required</u>	<b>Indicative Cost Estimate Per km Or Unit*</b>
For bi-directional traffic, ie. Sealed shoulder on both sides of the road, shared path or two way movement	
Sealed Shoulder Complete Reconstruction	
1.0m	\$69,377
1.5m	\$104,065
2.0m	\$138,754
Seal Only over existing Prepared Base	
1.0m	\$13,008
2.0m	\$27,100
Lane line marking (showing road markings)	\$705

- Cost indexed using CPI for September, 2000, from values in Wauchope Bike Plan.

## APPORTIONMENT

The Cycleway will be provided, to meet the needs and increased demands on the Bains Dairy road network due to, or in anticipation of, the new residential lot subdivisions.

The residential lot creations will increase the demand on the Bains Dairy road network by cycle users. There is a combined impact due to growth. That is, as growth progresses increased motor vehicle traffic makes the roads more hazardous for cyclists and the cycling population to increases.

As discussed previously regarding Nexus, the provision of a cycleway link from Bains Dairy to Wauchope, provides a safe means of alternate transport and also a recreational facility.

Functionally strong links to the township encourages a sense of community, it can be expected that individuals and families would utilise the cycleway to access facilities and services in Wauchope.



Fig C.ii.3. Typical Cycleway treatment

Children will have ready access to independently travel from Bains Dairy to sporting and recreational facilities in Wauchope.

Any development of the cycleway infrastructure must compliment the provision of a cycleway proposal as set out in the Port Macquarie - Hastings Regional Bike Plan and the Wauchope Bike Plan. The recommendations indicate that a cycleway should be provided along Beechwood Road, as part of the regional bike strategy. This will create part of the regional bike link between Port Macquarie, Telegraph Point and Wauchope. The total length from Wauchope back to the Pacific Highway at Telegraph Point is some 18km.

This route is identified in the regional Bike Plan, which may have some of its future funding sourced from the RTA, subject to successful funding applications, each year. It is unlikely that the regional route will be provided for some time. Due to the location of Bains Dairy it would generate a good proportion of the users of a regional cycleway to the west of the development area. It is therefore considered likely, to balance out any regional use by others into the future of the proposed link in this plan.

The proposed works for the cycleway are indicated in Table C.ii.2. Figure C.ii.2 shows the location of the Cycle way.

**Table C.ii.2: Cycleway costs for Bains Dairy**

<b>Cycle Way</b>	<b>Treatment</b>	<b>Estimated Cost</b>
End Bains Road to Beechwood Road 150m cycle path	2.1 m wide conc. path	\$18,900
Oxley -Waugh St, 550m, 10m wide 60km/h	K&G Both sides of Road with Line Marking and Signage	\$3,630
Waugh St – Yippen Ck , 350m@ 9m wide 60km/h zone (1.5m Cycleway)	Widen Sealed shoulders by 0.5m both sides of road with line marking and signage.	\$12,140.98
Yippen Ck – Yippen Creek Rd, 350m@9m wide, 80km/h zone (2.0m cycleway)	Widen sealed shoulders by 1m both sides of road with line marking and signage	\$24,281.95
Yippen Ck Rd – Main entry, 530m@ 9m wide 80km/h zone (2m cycleway)	Widen sealed shoulder by 1m on both sides of Road, with line marking and signage & a cycle bridge over Yippen Creek	\$36,769.81
	Bridge	\$48,000
Road Crossing over Beechwood Rd at Yippen Creek Reserve & at end of cycleway	Line Marking Signage & Bollards	\$3,400
Road Crossing over Yippen Ck Rd at Yippen Creek Reserve	Line Marking Signage & Bollards	\$1,700
	<b>TOTAL</b>	<b>\$148,822.74</b>

The works can be split into two segments. The first being North of Yippen Creek Rd, the second being the balance of works. Benefit gained by the residential lots substantiates payment for whole of the cycleway costs north of Yippen Creek Rd. Yippen Creek Rd contains around 30 lots with Beechwood Rd possibly contributing an additional 20 lots. Therefore it can be said that that the total number of lots served by the cycleway is around 300 of which 250 are sourced from Bains Dairy. As the cycleway is part located along the eventual route of the regional cycleway between Wauchope and Telegraph Point and as the works proposed for the regional cycleway were predominantly signage, a nominal 5% apportionment has been allowed for in the apportionment of costs.

This represent 78% of the balance of works east of Yippen Creek Rd and 95 % to the estate. Therefore the existing community also have an obligation to pay for 22% and 5% of the balance of works, respectively. The resultant cycleway cost apportionments are given by Table C.ii.3.

**Table C.ii.3: The Cycleway Works Schedule**

ITEM	No of Lots	Est. Timing of Works*	TOTAL	Apportionment			
			COST	Bains Dairy		Other Sources	
			(\$)	%	\$	%	\$
Bains Rd to Beechwood Rd cycle path	25	2001/2	\$18,900	83	\$15,687.00	17	\$3,213.00
Oxley – Waugh St.	175	2008/9	\$3,630	78	\$2,831.40	22	\$ 798.60
Waugh St – Yippen Ck	125	2005/6	\$12,140.98	78	\$9469.96	22	\$2,671.02
Yippen Ck – Yippen Creek Rd	175	2008/9	\$24,281.95	78	\$18,939.92	22	\$5,342.03
Yippen Creek Rd – Main Entry (incl. Bridge)	250	2010/11	\$84,769.81	95	\$80,531.34	5	\$4,238.49
2 x Road Crossings of Beechwood Rd	175 250	2008/9 2010/11	\$3,400	91.5	\$3,111	8.5	\$289
Road Crossing Yippen Creek Rd.	175	2008/9	\$1,700	95	\$1,615.00	5	\$ 85.00
<b>TOTAL</b>			\$148,822.74	88.8	\$132,185.62	11.2	\$16,636.54

\*Estimate of timing based on development rate of 25 lots/year.

## Cycleway Work Schedule

The work schedule has been derived with reference to Council Staff and from the Bains Dairy Structure Plan produced by Council’s Development & Environment Division in conjunction with the ARUP-GEOPLAN reports ( Port Macquarie - Hastings Regional Bike Plan and The Wauchope Bike Plan).

In order to provide a cycle way, the existing road pavement can be widened to include a bicycle lane. Recommended lane widths are provided in AUSTRROADS Part 14 ( Bicycles). Widths are related to vehicle speed environment. An absolute minimum is an 8m road surface made up of two 3.0m traffic lanes and two 1.0m wide bicycle lanes. As speed environment increases so do lane widths.

The existing speed environment along Beechwood rd varies from 60km/h in the residential fringes of Wauchope to 80km/h beyond Yippen Ck bridge to Pembroke Rd. The traffic volumes encountered presently are 3535AADT at the southern end of Beechwood Rd and 3100AADT at the northern end (AADT is the annual average Daily Traffic Volume).

The current road width varies from 6.3 to 10m of sealed roadway. The cost of the sealed shoulders is not included in the Major Roads contributions plan. As part of Road improvements the pavement from the Bains Dairy Site will be widened to a minimum of 8m, and generally will be 9m wide.

## **The Contribution Calculation**

The contribution amount is calculated using the multi-step formulae as in PART B which firstly assesses the proportion of the facility work costs attributable to this CP and secondly calculates the contribution rates. The contribution levied by Council on a Development Consent is a multiplication of these contribution rates by the site area or number of lots in the redevelopment/development.

**Table C.ii.4: The Contribution Rates Calculation**

<b>Total Cost</b>	<b>Bains Dairy s.94CP proportion</b>		<b>Bains Dairy</b>	
	<b>%</b>	<b>Cost</b>	<b>Benefit Lots</b>	<b>Contribution rate (\$/Lot)</b>
<b>\$148,822.74</b>	<b>88.8%</b>	<b>\$132,185.62</b>	<b>250</b>	<b>\$528.74</b>

**END OF DOCUMENT PART C(ii)**

# PART C - Transport

## (iii) Bus Shelters

**Causal Nexus**  
**Physical Nexus**  
**Temporal Nexus**

**Cost Estimation Derivations**

**Apportionment**

**The Work Schedule**

**The Contribution Calculation**

This portion of the CP establishes the relationship (nexus) between the new residential lots and the demand for covered bus shelters in Bains Dairy. The nexus relies upon the anticipated creation rate of the new lots and their projected need for better public transport and related infrastructure in Bains Dairy.

The nexus in this CP is divided into three parts, those being a causal nexus, a physical nexus and a temporal nexus. The causal nexus discusses the reasons why, or, the cause for the covered bus shelters. It delves into the facilities costs and the extent to which these works will satisfy the needs of the Bains Dairy community. The physical nexus establishes the relationships of where, in terms of location. The temporal nexus indicates the timing or staging reasons for the supply of covered bus shelters in Bains Dairy.

## **Causal Nexus**

The Causal Nexus between the new residential lots in Bains Dairy and the provision of additional covered bus shelters in Bains Dairy has been established having regard to:

- the type and extent of further subdivision in the area of Bains Dairy
- the expected increase in public transport demands as a consequence of that new residential subdivision
- the characteristics of the new residential lots and the requirements for public transport and the need for all weather bus stops
- the public transport use patterns of typical rural residential and residential communities and, in particular, the Bains Dairy and environs community
- the extent to which the provision of these facilities will meet the needs of the Bains Dairy community

## **Physical Nexus**

A physical nexus indicates the reasons for the location of a particular facility to be provided relative to the community which it is intended to serve. The Physical Nexus for the Bus Shelters Works relies upon the general guidelines in the AMCORD document produced by the Commonwealth Department of Housing & Regional Development. AMCORD stipulates that 90% of dwellings should be within 400m of a bus stop and at a maximum of 500m.

The location of the bus shelters is indicated in Figure C.iii.1, which also indicates the catchment of each bus shelter.

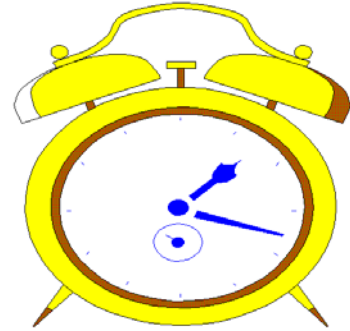


Figure C.iii.1: The Location of existing & proposed Bus Shelters in Bains Dairy



## **Temporal Nexus**

The temporal nexus indicates the reasons for the staging and provision strategy chosen by Council for the implementation of the installation of Bus Shelters. The implementation is based upon the anticipated rate of development of Bains Dairy, the resultant increase in demand for public transport and the expected contribution income. The implementation is also dependent, timing-wise, upon Council’s financial resources.



The staging of the provision is also dependent on the location of the ongoing development. That is how the actual development of the area will occur. At this stage this can only be assumed, until such time that Council receives actual applications.

The resultant timing and provision strategy chosen by Council for the implementation of the installation and Upgrade of bus shelters is given in Table C.iii.2.

## **Cost Estimate Derivation**

For the purposes of this contributions plan the costs utilised for the estimates of required works are as indicated by Councils Development & Environment Division, who have prepared a design and costing for the proposed bus shelters for the Bains Dairy Area. Generally the following indicative costs apply:

**Table C.iii.1: BUS SHELTERS indicative Estimate of Costs**

<b><u>Type of Bus Shelter Works Required</u></b>	<b>Indicative Cost Estimate</b>
1. Upgrade Existing covered bus shelter to 2.	\$3,000
2. Rural type covered bus shelter ( Fig C.iii.2.)	\$4,000
3. Bus Bay, pull off area	\$7,500

Figure C.iii.2 indicates a typical type of treatment sought for the bus shelters. Note that the cladding at this stage may vary but generally will be a low maintenance pre-painted product.

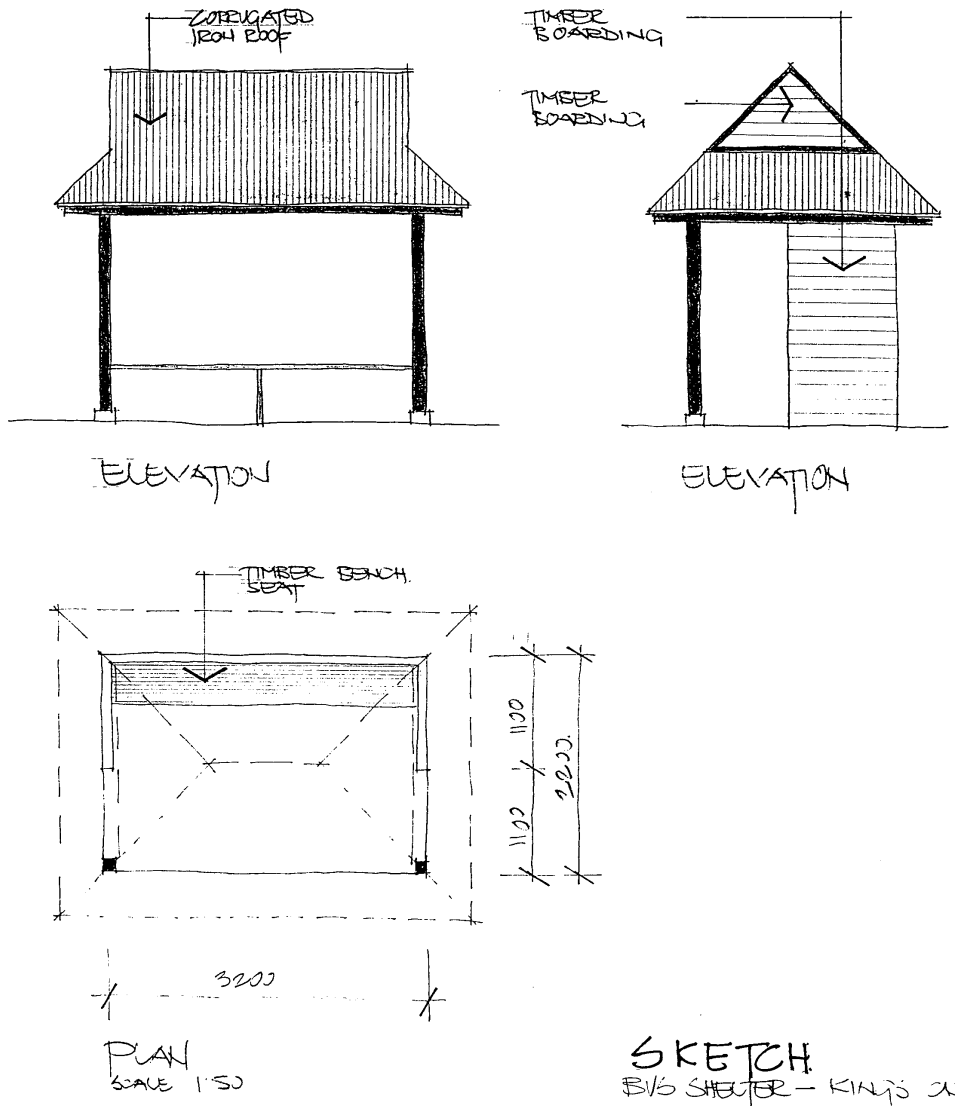


Fig C.iii.2. Typical Rural bus Shelter

## APPORTIONMENT

The provision of Bus Shelters will be carried out, to meet the needs and increased demands on Public Transport in the Bains Dairy area due to, or in anticipation of, the new residential lot subdivisions. A full explanation of the anticipated type and extent of subdivision in Bains Dairy can be found in the background report for the considerations of a Draft LEP for Bains Dairy.

The creation of residential lots will increase the demands on public transport in the Bains Dairy area. Council staff have considered the role of public transport in the Bains Dairy Area and the impact of additional residential lots to devise a warranted Supply & Upgrade program as listed in Table C.iii.2. Figure C.iii.1 shows the location of the facilities.

Bus services will only enter residential areas when it is viable to do so. There is also a need

to provide for buses that can only be accessed along Beechwood Road. Due to the distance of this area from the Port Macquarie private and high schools the bus servicing these will not be able to enter the estate, even at full development. It is therefore appropriate to provide a stop on both sides of Beechwood Road from early on in the estates development, with a shelter on one side of the road for pickup. At a later date as the development grows to a distance greater than 400m from the Beechwood Road stop, there will be a need to provide a stop internal to the estate.

As the facilities are essentially for the use of the subdivision there is a 100% apportionment to the development.

**Table C.iii.2: The Bus Shelters apportionment**

Location & ITEM	Timing		Total Cost \$	Apportionment			
	No of Lots	Est. Year		Bains Dairy		Other Sources	
				%	Cost \$	%	Cost \$
1. Beechwood Rd	25	2000/1	19,000	100	19,000	0	0
2. Bain's Dairy Bus Stop	125	2005/6	4,000	100	4,000	0	0
<b>TOTAL</b>	250				23,000		0

## Bus Shelter Work Schedule

The work schedule has been derived from an analysis of the bus routes and with reference to the maximum preferred travel distance to each bus stop (400m).

The works are listed in Table C.iii.3 below:

**Table C.iii.3: Works List for Bus Shelters**

<b>Bus Shelter location</b>	<b>Treatment</b>
1. Beechwood Rd	1x New Bus Shelter & 2 x bus bays
2. Bains Dairy	New Bus Shelter

## The Contribution Calculation

The contribution amount is calculated using the multi-step formulae in PART B firstly assesses the proportion of the traffic facility work costs attributable to this CP and secondly calculates the contribution rates. The contribution levied by Council on a Development Consent is a multiplication of these contribution rates by the site area or number of lots in the redevelopment/development.

Table C.iii.4 shows the calculation of the contribution rates for each traffic facility item.

**Table C.iii.4: The Contribution Rates Calculation**

Item No.	Item	Bains Dairy proportion	Bains Dairy	
			Benefit Lots	Contribution rate (\$/Lot)
1	Bus Shelters \$31,000	\$23,000	250	\$92..00
	<b>TOTAL</b>	<b>\$23,000</b>	<b>250</b>	<b>\$92.00</b>

**END OF PART C(iii)**

# PART D - WATER

**NB Water contributions are now included under the Port Macquarie  
- Hastings District Water Supply Development Servicing Plan**

# PART E -

## SUPPORTING DOCUMENTS

**Other Reference Material  
Bibliography**

## Other Reference Material

This section includes supporting information for the Bains Dairy Contributions Plan. The reference material is in the form of documents or calculation sheets. A brief summary of the supporting information is given below to assist the reader.

<b>SUPPORT DOCUMENT</b>	<b>DESCRIPTION</b>
[S1] Traffic Impact Study Link to rest of Document	List of Roadworks deemed necessary Part C( i) – Roadworks, Nexus
[S2] The Wauchope Local Bike Plan  Link to rest of Document	Prepared by ARUP GEOPLAN sets forth local requirements for a cycleway in Wauchope Part C(ii) – Cycleway - Nexus
[S3] The Port Macquarie - Hastings Regional Bike Plan  Link to rest of Document	Prepared by ARUP GEOPLAN sets forth regional requirements for a cycleway Part C(ii) – Cycleway – Nexus
[S4] Parsons Bus Service Timetable Link to rest of document	Sourced directly from Parsons Bus Service Part C(iii) – Bus Shelters - Nexus
[S5] Reticulation Analysis  Link to rest of Document	Computer analysis of the demands on Water supply Infrastructure Part D – Water Supply – Nexus

### Reticulation Analysis of the water supply infrastructure in Bains Dairy

A report by Port Macquarie - Hastings Council staff in the Water Department of the Engineering Services Division has been prepared to show the extent of Water Supply Infrastructure Upgrades required in Bains Dairy with the additional demands of 250 new residences.

### Road works Costing and Apportionment summarised from ERM Mitchell McCotter Report

The Bains Dairy Traffic Study Report dated June 1999, by ERM Mitchell McCotter, details the costs and apportionment for the extent of roadworks associated with Bains Dairy. The roadworks are required to maintain the level of service based on the increase in lots in the area, and its impact on the road infrastructure.

## Bibliography

1. Consideration of Draft Local Environment Plan “BAINS DAIRY”, Beechwood Road, Crosslands, Wauchope (DLEP-BD)
2. Minutes of Extra-ordinary Meeting held on 20/8/97 & Resolution
3. Port Macquarie - Hastings Council's Open Space Plan of Management, Connell Wagner, Port Macquarie - Hastings Council, April 1996
4. Rural Settlement - Guidelines on Rural Settlement on the North Coast of NSW, Department of Urban Affairs & Planning, 1995
5. Traffic Study of Bains Dairy Area – ERM Mitchell, McCotter June 1999
6. Reticulation analysis for the water supply infrastructure. Using computerised modelling of the demands placed on water supply systems
7. Wauchope Community Facilities Audit by Twyford Consulting
8. Agricultural Classification Report by Julia Vincent