



Appendix A:
Background information review
Working report



## Wingecarribee Shire Council

## Small Towns and Villages PAMP: Review of Background Material

#### Stage 2: Bundanoon and villages

## QED pty Itd

e qed@qedecisions.com.au

309 Angas Street Adelaide SA 5000

t 08 8227 0188 f 08 8227 0271

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Job No: 06-226Y Report No: 07-018b w www.qedecisions.com.au

PO Box 420 Wollongong NSW 2520

t 02 4228 8668 f 02 4228 8446



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Appendix:

Maps of traffic volumes and crash statistics



#### 1 Introduction

This working document presents an overview of background information informing the development of the Small Towns and Villages Pedestrian Access and Mobility Plan (PAMP) for Wingecarribee Shire Council.

Due to time and budgetary constraints, an exhaustive review of all Council documents has not been undertaken. Instead, the review has focused on documentation identified by Council staff to be relevant and which has been provided to QED for this reason.

The Small Towns and Villages PAMP has been undertaken in two stages:

- Stage 1: Robertson Study
- Stage 2: Bundanoon and Villages Study.

This working document refers to the Stage 2 study.

The villages included with Bundanoon in the Stage 2 study are:

1.	Avoca	11. Hill Top
2.	Aylmerton	12. Medway
3.	Balaclava	13. New Berrima
4.	Balmoral Village	14. Penrose
5.	Berrima	15. Sutton Forest
6.	Braemar	16. Welby
7.	Burrawang	17. Willow Vale
8.	Colo Vale	18. Wingello
9.	Exeter	19. Yerrinbool

10. Fitzroy Falls

This list has been amended from the original Brief for the project to exclude Canyonleigh and Kangaloon and include Avoca.

#### 2 Traffic volumes

Traffic volume information is not extensive for the study area, reflecting the fact that these are towns and villages rather than cities and their traffic volumes are commensurate. With relatively low traffic volumes, traffic engineering issues such as road capacity are less commonplace and fewer traffic counts need to be commissioned as part of addressing such issues.

To provide some guidance in interpreting the traffic volume data that is available:

 A value of up to 3,000 vehicles per day is considered acceptable in most residential streets. For example, below this volume, specific bicycle facilities are not considered necessary.



- In main street situations (i.e. relatively low speeds), at volumes of around 6,000 vehicles a day it becomes difficult for pedestrians to cross a street without some form of pedestrian facility being provided.
- In urban situations, heavy vehicles typically make up 2%-7% of the traffic stream, with the lower end of the scale being more typical of local streets and the higher end of the scale more typical of arterial roads.

It is also notable that the traffic volume information is not accompanied by traffic speed data. Volumes combine with speed to influence how well a road suits pedestrians and cyclists in terms of safety, ability to cross and amenity.

#### 2.1 Introduction

Traffic volumes are not available for all villages in the study area, and are not comprehensive in the villages for which they are available.

Further, it was not easily possible to calibrate traffic growth for Bundanoon and the villages. Therefore, volumes from before 1997 (i.e. more than 10 years old) were considered likely to be misleading and were generally not examined, while volumes that remained have been presented as raw data rather than as 2006-equivalent volumes. These volumes have been differentiated as being taken in 1997-2001 or 2002-2006 in the presentation of this data, so that the age of the counts can be taken into account.

Traffic volume data has been mapped with crash statistics, as shown in the Appendix. (Data for Braemar, Balaclava and Willow Vale are shown on one map.)

The following observations about traffic counts and their implications for walking and cycling also take into account the transport network.

#### 2.2 Analysis

The settlements of Wingecarribee shire have grown alongside the major transport arterials: the Hume Highway, the Illawarra Highway and the railway lines. The Hume Highway has developed to be the main regional road in the Southern Highlands and now carries around 25,000 vehicles a day in the study area. A new alignment has been found for the Hume Highway north of Mittagong and this road by-passes the towns and villages of the Southern Highlands.

At such high volumes and with high speeds, the Hume Highway are unsafe for pedestrians and cyclists to use or cross without walking/ cycling provision or facilities. As these roads generally bypass the shire's settlements, this is not as great an issue as it might first appear in that the villages themselves are not severed by these roads. However, the roads do sever connections between some settlements, notably Balmoral, Hill Top and Colo Vale (on the west of the Hume Highway) from Aylmerton, Braemar, Welby, Willow Vale and Yerrinbool (all on the south east to east of the Hume Highway).

Again, this is not as major an issue as it might first appear, in that these communities generally developed along transport corridors that have not been interrupted by the Hume Highway. That is, Balmoral, Hill Top and Colo Vale all developed along the



Picton-Mittagong railway and Wilson Drive, and travel between these villages is unaffected. Travel to Yerrinbool across the Hume Highway from these villages has not been severed as such (i.e. existing travel patterns disrupted), but is likely to be discouraged from occurring in the future. Having said that, there is a bridge over the Hume Highway in Yerrinbool and natural features – the Bargo River, topography, bushland – form much more of a barrier between Yerrinbool and the other villages than the Hume Highway does.

Severance has occurred between Colo Vale and both Aylmerton and Braemar, and thus to Welby, Willow Vale and Balaclava and, ultimately, Mittagong. Strategically, this increases the importance of linkages between Colo Vale, Hill Top and Balmoral in that these communities are somewhat forced to self-containment; and few remaining crossings of the Hume Highway, such as Drapers Road.

The development of the Hume Highway and Hume Highway as the major regional routes through the Southern Highlands has not removed all major traffic from the shire's villages. North of Mittagong, the (now) Old Hume Highway has volumes of around 16,000 vehicles a day, and would require dedicated pedestrian and cycle facilities to achieve safe and convenient access. As with the Hume Highway, the volumes on the Old Hume Highway have a greater impact in severing connections between villages than in severing the villages themselves, but it does sever small areas of Braemar, Balaclava and Welby from the main part of the village.

These severed areas are likely to grow. In particular, it is understood that there are a number of reasonably large development proposals for Braemar east of the Old Hume Highway, which will be completely isolated from the main settlements west of the Old Hume Highway. While it can be argued that this is not 'severance' in a literal sense<sup>1</sup>, the impact will be similar – residents unable to access services and walking opportunities by foot, as these are mainly located on the other side of a wide, high volume, high speed road. Severance of connections between villages caused by the Old Hume Highway applies in particular to Aylmerton, Braemar and Balaclava on the northern outskirts of Mittagong. (Willow Vale is also served by the Old Hume Highway, but is by-passed.)

Most of the other towns and villages have much more moderate traffic volumes in their streets, but without effective bypasses and strung along a single main road, through traffic passes through their built up areas. These through traffic volumes are generally under 5,000 vehicles a day, although Sutton Forest experiences a traffic volume of around 6,500 on the Illawarra Highway to its north-east. (This volume may be more moderate west of Golden Vale Road, which provides access to the Hume Highway, but traffic volumes are unknown at this point.) This is over twice the traffic volume of 3,000 vehicles a day at which (say) bicycle facilities should be provided, and likely to cause severance issues for at least the north-east end of the village. (This is still less than half the traffic volume on the Old Hume Highway through Braemar, Balaclava and Welby and past Willow Vale.). The traffic volume on its other main axis – Exeter Road – is a more moderate 1,000 to 3,000 vehicles a day.

The southern townships of Exeter, Bundanoon, Penrose and Wingello are strung out along the road linking each other and all of them to Moss Vale, either via Sutton Forest

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<sup>&</sup>lt;sup>1</sup> The act of severing, the state of being severed. The Macquarie Dictionary defines "sever" as: 1 to put apart; separate; 2 to divide into parts, especially forcibly; cut; cleave 3. to break off or dissolve (ties, relations, etc).



and the Illawarra Highway or via Werai and Mt Broughton Road. The road from Exeter to Wingello, which goes by various names along its route, eventually joins the Hume Highway north of Marulan. Generally, the more northern the town, the more traffic passes through, but this remains under 3,000 vehicles a day at Exeter. Wingello is further linked to the Hume Highway by a road that meets the Highway at Paddy's River, and Exeter is similarly linked by a road meeting the Hume Highway at Sally's Corner. Traffic counts are not available for these roads but they are likely to be at least locally busy.

A similar effect occurs for Colo Vale, Hill Top and Balmoral, which are strung out along Wilson Drive. Volumes on Church Avenue, which provides the southern link to the Hume Highway, are in excess of 5,000 vehicles a day, dropping to under 5,000 (but still in excess of 3,000) vehicles a day at Hill Top and, although traffic volumes are not available, probably dropping further still at Balmoral. (From Balmoral, volumes are likely to start increasing again as the Wilson Drive metamorphoses into Harbour Road on its way to Thirlmere, and roads to Tahmoor and Picton).

Avoca and Fitzroy Falls, to the south east of the shire, are built alongside the road from Sheepwash Road and Nowra Road respectively. Both roads provide access to Nowra and the traffic volume counts show moderate volumes of 1,000 to 3,000 vehicles a day. However, these are likely to be misleading, due to the popularity of Morton National Park as a destination and use of these roads to access this destination. In 2002, the Fitzroy Falls Visitor Centre was estimated to attract some 386,000 visitors per annum<sup>2</sup>.

With increasing tourism experienced in the Southern Highlands area since 2001, the actual traffic volumes are likely to be higher than those recorded. Also, these are AADT – average annual daily traffic – but tourist traffic is more likely to be peaked towards weekends and holiday periods.

#### 3 Crash statistics

#### 3.1 Introduction

Five years of crash statistics were been examined for the study areas, from December 2000 to December 2005. This period is examined because it corresponds with RTA requirements for the identification of Black Spot locations.

However, it should be noted that less than 20% of non-fatal hospital admissions involving cyclists<sup>3</sup> and about 60% of non-fatal pedestrian admissions<sup>4</sup> are recorded in police statistics (on average; this may not be true of crashes in any one location). Hence the crash statistics examined probably under-report non-fatal pedestrian and cyclist crashes.

<sup>&</sup>lt;sup>2</sup> Fitzroy Falls Visitor Centre: The Economic Impact of Management and Visitor Expenditure, Technical Report, Gillespie Economics for NPWS, 2003

<sup>&</sup>lt;sup>3</sup> The Effectiveness of Bicycle Helmets: A Review (1995 revised edition), Dr M Henderson, 1995.

<sup>&</sup>lt;sup>4</sup> Bicycle Crashes and Injuries in Western Australia, 1987 to 2000, Meuleners, Gavin, Cercarelli & Hendrie, Injury Research Centre, University of Western Australia, 2003.



Further, for locations with relatively low pedestrian and traffic volumes – such as the villages – the exposure to crash risk is reduced, hence a low crash rate may occur despite conditions being poor from a safety perspective. That is, a location that presents twice the crash risk of a second location but only has a quarter of its traffic would be expected to have half the number of crashes as the second location, despite its poorer safety risk.

And finally, pedestrians and cyclists will tend to avoid locations that they perceive to present a crash risk. This is more easily achieved when walking or cycling, compared to driving, and non-motorised users can therefore avoid locations with safety problems. This can translate to low crash rates at the most unsafe locations.

As these problems cannot easily be quantified or addressed, examination of actual conditions is an additional means of identifying potential problem locations more relevant to pedestrians and cyclists than motorists.

Formal road safety audits of identified problem locations are also an alternative avenue by which hazardous locations can be identified for consideration under both State and Federal Black Spot funding programs.

Crash statistics have been analysed by representing these on GIS mapping to show vehicle involved (car, pedestrian, bicycle), degree of injury sustained (property damage only, injury or fatality) and location of crash. These are presented in the Appendix, with traffic volume data. (Data for Braemar, Balaclava and Willow Vale are shown on one map.)

#### 3.2 Analysis

There are generally few pedestrian and cyclist crashes recorded for the period examined Bundanoon and the villages. None were recorded in:

- Avoca
- Aylmerton
- Balaclava
- Balmoral
- Berrima
- Braemar
- Exeter
- Fitzroy Falls

- Medway
- New Berrima
- Penrose
- Sutton Forest
- Willow Vale
- Wingello
- Yerrinbool

(NB The map of crashes for Yerrinbool clearly demonstrates the exposure risk effect and possibly the impact of greater speeds on crash risk, with many more crashes recorded on the high-quality, high volume, high speed Hume Highway than the Old Hume Highway.)

Eight crashes were recorded, at:

- Bundanoon one cyclist crash on Penrose Road. This is not shown on the mapping due to the scale, but was 250m out of town.
- Burrawang one pedestrian crash on the Illawarra Highway, near Church Road, on the outskirts of the village itself.



- Colo Vale one pedestrian crash on Colo Road.
- Hilltop two cyclist and one pedestrian crash. One cyclist crash was on Wilson Drive, near Telopea Road. The remaining cyclist crash and pedestrian crash were on West Parade, near the school.
- Welby one cyclist and one pedestrian crash along the Old Hume Highway.

This is a very low number of crashes from an analysis viewpoint.

The pedestrian crash at Welby and the cyclist crash at Bundanoon were fatalities and both occurred in high speed (greater than 80km/h) zones. All other crashes were injury crashes. Excess speed was not considered a factor in any of the crashes.

There appears to be a high rate of fatality for non-motorised crashes, however may reflect the low numbers involved. Certainly, speed is a factor that greatly increases the injury and probability of death for vulnerable road users and this appears to have been the case for the two fatalities.

All crashes occurred during the day. No particular crash type dominated. All occurred in fine weather, except for the pedestrian fatality, which occurred in overcast conditions.

Four of the crashes (three cyclist and one pedestrian) occurred between 4pm and 6pm, including both fatalities. Two crashes occurred between 6am and 10am and a further two between 12 noon and 4pm.

Of site features that were contributory factors (identified for seven of the crashes), two crashes occurred on steep grades and one on a crest. One occurred at a driveway, as the cyclist exited, and the pedestrian fatality occurred in the road shoulder.

In terms of vehicle types involved, none of the pedestrian crashes involved passenger vehicles (cars). Three involved a light truck/ panel van/ utility not based on a car design and the fourth a large rigid lorry. The type of vehicle recorded for the cycle crashes is less informative, with two being bicycles (although another vehicle was involved in at least one of these). The other two crashes were with cars.

## Wingecarribee Open Space, Recreation, Cultural and Community Facilities Needs Study and Strategy

This document highlighted the need for a PAMP for the small towns and villages of Wingecarribee.

Excerpts from this document were provided. These comprised:

- Chapter 8: Community Needs and Opportunities this includes break down into local as well as shire-wide needs and opportunities.
- Chapter 10: Strategy and Action Plan.

Of the towns and villages included in the scope of the Stage 2 study, the Chapter 8 analysis includes:

- Aylmerton
- Berrima and New Berrima



- Bundanoon
- Burrawang
- Colo Vale
- Exeter
- Hill Top
- Mittagong (Welby, Willow Vale, Braemar and Balaclava)
- Wingello
- Yerrinbool
- Rural precincts (Avoca, Balmoral, Fitzroy Falls, Medway, Penrose, Sutton Forest).

Overall, the focus on recreation in the Study and Strategy does not also cover walking and cycling for purpose.

Surplus open space, could be sold to fund things: Waratah Park, Colo Vale

Indoor leisure centre - not local, accessible by walking and cycling for further away villages.

'Home' for individual sports (hockey at Welby, baseball/ softball at Colo Vale, croquet at Exeter, equestrian at Bundanoon): access?

Shared paths: need for more linking town centres, as facilities. Occasional heritage trains run, proposed to extend to Colo Vale. Safety an issue: drop offs, gullies, etc. Wingecarribee Bike Plan appendix D referenced. Seating requirements.

Natural areas: need to enhance recreational value through upgrading and promoting walkways. A Natural Areas Walkways Strategy recommended. Coordination with other agencies.

Village by village: overall, fairly sound, but assumes car access to facilities as a standard. Loop Rail Line not considered past Hill Top and Colo Vale. Notes that generally, cycleway provision is inadequate for existing and/ or future populations. Further details as follow.

#### **Aylmerton**

Bike plan recommendation of an on-road pathway along the Old Hume Highway, linking Aylmerton with Braemar, Willow Vale and existing bike track to Mittagong is supported.

#### Balaclava, Braemar, Welby and Willow Vale

Considered as part of Mittagong.

- Ageing population (not the case in other areas, which are attracting young families from Sydney).
- Anticipated rezoning of state rail land at Willow Vale a growth opportunity.
- Cycleway from Mittagong to Welby under construction (now constructed?).
- Feasibility of linking the cycleway from Mittagong to Willow Vale with a Loop Rail Line cycleway should be investigated.
- Need to extend the existing path to the playground on Gascoigne Street.



#### Berrima, New Berrima

- Lack of link between these.
- Berrima OK for open space, tourism opportunities for walking along river, but no open space in New Berrima.
- Doesn't mention sports ground in Berrima, or adequacy of this.

#### Bundanoon

Notes need for shared path at Jordan's Crossing, now implemented. Mentions need for a link over rail line.

#### **Burrawang**

Need for safe pathway from village to Oval.

#### Colo Vale

- Possibility of selling Waratah Park to fund other open space/ recreation improvements.
- Commitment to shared path along Wattle St, need to extend to connect Jurd Park with shops (scheduled).
- Wingecarribee Bicycle Plan: Loop Rail Line to Hill Top, supported as a Shire-wide priority. Alternatively, Wilson Drive road reserve could be used.
- Need for skate park/ recreation slab.

#### **Exeter**

Split by railway line, need to link school with Exeter Park and store.

#### **Hill Top**

- Loop Rail Line to Colo Vale supported as Shire-wide priority.
- Also need to link the school to shops and Boronia Park, including safe crossing of Wilson Drive.
- Demand for skate board facility, option of car park outside the Hill Top Recreation Centre ideal.

#### Wingello

- No cycleways, consider developing (longer term priority) a shared path from the southern side of the railway (the store) to the Oval and school.
- Community halls in both Wingello and Penrose, no need for both.
- Area next to the post office may have potential as passive open space.

#### Yerrinbool

- Skateramp, basketball hoops and BMX adjacent to the Oval need upgrade.
- No cycleways, may be a need for a pathway linkage (to where?)



#### Avoca, Balmoral, Fitzroy Falls, Medway, Penrose and Sutton Forest

Included as part of the rural precincts.

- Need for mowing and clearing of vegetation along road verges for safe cycling and walking identified for Balmoral during community consultation, and is supported.
- No cycleways or shared paths, considered appropriate given wide population distribution in these areas. But there is a need to clear/ mow road verges more frequently to enhance pedestrian and cycle access and improve safety.

## 5 Draft Developer Contributions Planning for Open Space and Recreational Facilities

This corresponds to the Wingecarribee Open Space, Recreation, Cultural and Community Facilities Needs Study and Strategy.

## 6 Wingecarribee Bicycle Plan

A list of bicycle plan projects updated October 2003 appears to be the only available documentation relating to the Wingecarribee Bicycle Plan.

If this is the case, it is noted that a one or two sheet program is insufficient in itself to achieve an integrated network serving the needs of the community within a realistic timeframe.

The bicycle plan projects are prioritised from 1 (which appears to be highest) to 3.

There is a reasonably impressive list of 23 projects completed between approximately 1997 and 2003, comprising off-roads paths in Bowral, East Bowral, Mittagong and Burradoo. Four other projects were scheduled for 2004-05, and at least one of these had been commenced. Of the remaining projects:

- 13 are priority 1 These comprise off-road paths only, in Bowral (2), Burradoo (2), Mittagong (1), Moss Vale (4) and Welby (1).
- 13 are priority 2 These comprise 7 off-road paths and 6 shoulder-widenings, in Aylmerton (1), Bowral (1), Burradoo (4), Colo Vale (to Hill Top, 1), East Bowral (2), Mittagong (1), Moss Vale (2) and Willow Vale (1).
- 21 are priority 3 These comprise on-road projects only, in Bowral (11), Moss Vale
   (3) and Mittagong (7). Of these, 20 have a comment that insufficient road exists for an on-road path.

It is difficult to assess the bicycle plan on the basis of a single sheet of action plan priorities, but it seems inadequate for current requirements and in need of a comprehensive review. Indeed, in the absence of a more formal document, such the review would need to take the form of a new rather than reviewed bicycle plan. A few overview notes follow, but these reflect the use of a program for projects in place of a formal bicycle document; it is assumed that a formal document was initially prepared and these comments do not necessarily reflect this document.

■ The plan is (not surprisingly) heavily biased towards the larger towns. This leaves the small towns and villages of Wingecarribee lacking in facilities.



- The plan is purely based on pathways. Bicycle parking is not included. It is not clear whether the program is balanced by non-infrastructure measures such as incorporation of requirements into relevant DCPs, but judging by development in the area, this is not the case. This leaves Council with a large budgetary requirement for developing the Shire's bicycle infrastructure, and a commensurately long timeframe for Shire residents before an integrated bicycle network is created.
- Without additional information, the priority for works cannot be varied, for example in response to works occurring in the area, in response to a new project, demographic changes in settlements, or if a project is infeasible.
- The date of completed works indicates that planning occurred under a different regulatory regime, as the main guidelines for design of bicycle infrastructure have been updated since 1997 (as have the Australian Road Rules). This may be one reason for the comments regarding infeasibility of projects and indicating a need for further feasibility assessment of many measures.
- Council appears to be implementing the plan in terms of priority, but (if feasible), the cost for constructing on-road paths (more accurately, bicycle lanes) is typically 1% of that of off-road paths. That is, the same funds could be used to construct either 100km of on road bicycle lanes or 1km of off-road path. There is no mechanism for implementing inexpensive, lower priority paths as part of the program. It is difficult to judge without additional documentation, but opportunities for quick, easy projects that can deliver real safety benefits do not appear to be incorporated into the program.
- Where bicycle lane projects are noted as being infeasible, there appears to be no assessment of an alternative, such as an advisory treatment, wide kerbside lane, etc. would be a feasible alternative. This leaves these projects apparently in limbo.
- It is generally accepted that bicycle plans need to be reviewed roughly every 5 years. An update of the status of projects is an insufficient form of review for a document guiding bicycle planning for the Shire; and the single sheet program would be too inflexible, high cost, and poorly prioritised to achieve an integrated network serving the needs of the community within a realistic timeframe.

## 7 Statutory Planning Requirements

The various DCPs have not been comprehensively reviewed to assess the degree by which they encourage pedestrian-friendly development. Instead, the resulting development provides guidance to this.

Generally, new development was not observed to incorporate measures to facilitate or encourage walking (as mentioned previously). In particular, development forms observed include:

- cul-de-sac development without pedestrian or cyclist cut-throughs
- no particular provision of walking facilities in street layouts, or design of road space to facilitate sharing between pedestrians and vehicles (including cyclists) where volumes are low
- the provision of verandas for weather protection appears to be limited to older buildings
- there is no provision of bicycle parking outside commercial development.



As there is no Council-wide PAMP as yet, there would be no defined pedestrian network that developments must provide or enhance.

On this basis, Council's LEP and DCPs could be upgraded to incorporate measures encouraging walking and cycling.

Regarding specified areas of interest, the following DCPs have been briefly examined:

## DCP 50 - Outdoor Eating Areas and Other Commercial Uses of Community Land

This provides a good framework for ensuring that footpaths are kept clear of obstructions. However, it was not apparent in any of the settlements visited that this DCP is being enforced. This may be due to its relatively recent development and adoption, becoming effective in April 2006. A 'roll out' of enforcement would be a reasonable approach, commencing in the larger townships and starting with education and enforcement of the greatest breaches first, however this approach was not verified.

## DCP 52 – Development Planning and Subdivision Guidelines for Bundanoon

This contains provisions that should result in more connected development generally. For example, there are references to maximising pedestrian and vehicular connectivity within subdivisions, pedestrian and cycle accessibility generally, and integration with surrounding pathway networks. It is not known whether this document contributed to the superior pedestrian access and connectivity of the development on the north-eastern end of Bromhall Road, compared to other cul-de-sac developments in the area.

The structure plans are hand drawn and can be difficult to follow. However, there are at least a few locations where pedestrian linkages could be better articulated (particularly in conjunction with vehicular access), and additional linkages provided between dead-end roadways.

This DCP refers to the Blue Gum Road area, but it is unclear whether the road connections in the area will also provide pedestrian connectivity. A performance standard regarding pedestrian (and cyclist) accessibility might be one way in which this could be addressed.

#### **DCP 54 – Exeter Village**

This document mainly relates to the village character, which could have a limited ability to improve pedestrian permeability and connections, although it enhances the walking environment. However, the DCP also notes that cul-de-sac development is not in keeping with the historic grid pattern of development. A grid will generally – though not always – provide superior permeability for walking trips to cul-de-sac development, particularly if few or no pedestrian cut-throughs are provided as part of the latter.

A shared use path is proposed on the northern side of Middle Road, western side of Bundanoon Road, western side of Exeter Road between the shop and sports ground, the northern side of School Lane and connecting from School Lane to the Bundanoon



Road/ Exeter Road/ Middle Road intersection via Badgery's Way, with upgrade of the intersection. In the text, this is not strongly supported, with only a reference that a route should be nominated.

This is generally supported, although the route through Badgery's Way is more appropriate for cycling than walking and it is doubtful that a shared use path could be provided within the road width under the railway bridge. While there may be some opportunity to reduce pavement width, the bridge is located at a bend in the road and a shared use path would have to be carefully designed to ensure safety.

The other questions that are not addressed are what constitutes a reasonable provision of infrastructure for the village population, and funding for the proposal.

## 8 Future Development

## Wensleydale New Urban Communities Environmental Investigations and Preliminary Structure Planning –Volume 1

This document was reviewed for its implications on Colo Vale.

Overall, the planning contained in the document indicates a limited impact on development of a pedestrian network for the remainder of Colo Vale. The location of shops and services in Wensleydale are not adequately specified for walking links to be developed from the existing Colo Vale, and the proposed traffic lights will funnel pedestrian crossing activity to this point.

Generally, further concept development is required before a detailed assessment of the impacts can be assessed. The proposal is also subject to Council adoption.

#### **Final Environmental Study: Gibbergunyah**

From an examination of the site analysis and structure planning for the subject site, this development will be only marginally connected to Welby, if at all. The proposal is also subject to Council adoption.

### 9 Wingecarribee Social Plan 2005-2010

Excerpts of this document were provided, relating to:

- community care and support
- key issues for Wingecarribee Shire Council
- issues analysis and recommendations (part)
- community care and support additional information.

While transportation is mentioned as an issue, the excerpts provided do not focus on the transport needs of people with disabilities or ageing communities. Transportation, including barrier free access and public transport, are mentioned.

Other relevant chapters were sourced separately:

- Chapter 7 discusses demographics in considerable detail.
- Chapter 3 discusses access and mobility.



The chapters are essentially stand-alone documents.

Key issues relating to access and mobility for Shire residents include:

- Equity of access to information and to Internet technology.
- Inadequacy of public transport services, particularly for rural communities.
- Mobility, safety and amenities for pedestrians and cyclists.
- Barrier free access for people with a disability, the elderly and persons with other mobility restrictions.

Chapter 3, section 3.2, covers actions for public transport, pedestrians and cyclists. Section 3.3 covers actions for universal access ("access for all", barrier free access).

## 10 2001 Census Data and Population Projections

While relevant, this type of data and its implications is covered in other documents.



# Appendix: Maps of traffic volumes and crash statistics