

Residential Development (DU)

Residential development in the B2 & B4 zones (precincts 5, 6a, 6b & 7a) will be levied on a DU basis. This approach has been taken in recognition that the mixed commercial /residential nature of these zones, makes the use of the NDA methodology potential inequitable.

The determination of the DU rate for **open space land, embellishment and recreational facilities** and the monetary contribution payable for a development is as follows:

$$\begin{aligned} \text{Contrib}_{\text{per}} (\$) &= \frac{\text{Cost}_{\text{prec}} (\$)}{\text{Pop}_{\text{prec}}} \\ \text{Contrib}_{\text{du}} (\$) &= \text{Contrib}_{\text{per}} (\$) \times \text{Occ}_{\text{du}} \\ \text{Contrib}_{\text{total}} (\$) &= \text{Contrib}_{\text{du}} (\$) \times \text{DU}_{\text{prop}} \end{aligned}$$

Where:

Contrib_{per} is the total contribution payable for open space (land & works) per person.

Cost_{prec} is the total cost of open space (land & works) attributable to the projected residential population for precincts 5, 6a, 6b & 7a

Pop_{prec} is the total projected residential population for precincts 5, 6a, 6b & 7a

Contrib_{du} is the total contribution payable for open space (land & works) for a development unit

Occ_{du} is the occupancy rate per DU.

Contrib_{total} is the total contribution payable in respect to a development proposal

DU_{prop} is the number of DU's proposed

Table 23 provides the contribution per person, which is the first step in determining the DU rate.

Table 23 Contributions for Open Space Land and Embellishment (per person)

	Population	Apportionment of Land Costs	Per Person	Apportionment of Embellishment Costs	Per Person
Total	1,062	\$1,747,246	\$1,645	\$2,335,612	\$2,199

Table 24 illustrates the relative value of DU for various types of dwellings and the corresponding contributions for open space land and open space embellishment.

Table 24 Contributions per DU for Precincts 5, 6a, 6b & 7a

Unit Size	Assumed Occupancy Rate	DU	Open Space Land Contribution Rate	Open Space Embellishment Contribution Rate
1 bedroom residential unit	1.30	0.42	\$2,138.57	\$2,858.71
2 bedroom residential unit	1.70	0.55	\$2,796.59	\$3,738.31
3 bedroom residential unit	2.60	0.84	\$4,277.14	\$5,717.42
4 bedroom residential unit / residential allotment	3.10	1.00	\$5,099.66	\$6,816.92
5 or more bedroom residential unit	1 person per total bedroom minus one	Proportional	Proportional	Proportional

Non-Residential Development (GFA)

Non-residential development will make a small contribution towards open space land and embellishment on the basis of the vehicle trips that are generated.

The determination of the GFA rate for **open space land, embellishment and recreational facilities** for non-residential developments and the monetary contribution payable for a development is as follows:

$$\text{Contrib}_{\text{trip}} (\$) = \frac{\text{Cost}_{\text{non-res}} (\$)}{\text{Trips}_{\text{total}}}$$

$$\text{Contrib}_{\text{total}} (\$) = \text{Contrib}_{\text{trip}} (\$) \times \text{Dev}_{\text{trip}}$$

Where:

Contrib_{trip} is the total contribution payable for open space (land & works) for one daily vehicle trip

Cost_{non-res} is the total cost of open space (land & works) attributable to the projected non-residential uses

Trips_{total} is the total projected daily vehicle trips generate by the projected non-residential development in the WTC i.e. 25,194 trips

Contrib_{total} is the total contribution payable in respect to a development proposal

Dev_{trip} is the number of daily vehicular trips generated by the proposed development

Table 25 provides the contribution rates that apply to commercial development.

Table 25 Contributions per Rate per GFA of Non-Residential Uses

Total Projected Non-residential Daily Vehicle Trips	Total Land Costs	Open Space Land - Total Cost per Vehicle Trip	Total Embellishment Costs	Open Space Embellishment Total Cost per Vehicle Trip
25,194	\$657,330	\$26.09	\$878,678	\$34.88

4.2 Community and Cultural Facilities

Council provides a network of community facilities throughout the Shire. These community facilities provide space for community members and local groups and organisations to meet, and for the delivery of a range of community support services, programs and activities which address the social needs of the community. Community facilities play an important role as a focal point for community activities and for building a sense of community. There is much evidence, from Australia and elsewhere, that community facilities improve people's quality of life. "Investing in new and improved community facilities is important because such facilities help build communities, keep people healthy and happy and provide opportunities for individuals to improve and learn" (Montgomery, 2005) (WSC, Draft Community Facilities Strategy).

4.2.1 Baseline Community Services and Facilities

The concept of a 'baseline' level of community services and facilities is broadly accepted across NSW as a reasonable and practical guide in determining the area of community facilities required per head of population.

This concept has been applied to both the local neighbourhood level facilities and the broader district level of provision. The Wyong Shire Council Guidelines for the Planning and Provision of Community Facilities (June 2000 amended 2002) provides that a flat rate of 0.282 m² of non-specified community facility floor space is required meet the community facility needs of a District population of approximately 22,000 persons.

The standard for a local/neighbourhood centre is 1 facility per 3,500 to 6,000 people, and the standard for a district facility is 1 facility per 10,000 to 20,000 people (Wyong Shire Council Guidelines for the Planning and Provision of Community Facilities June 2000, see Briggs 1992, Nesbitt/Donahee 1992, and the Human Service Planning Kit, South Australian Urban Land Trust 2nd Edition 1994). These standards have been developed by many local governments in Australia based on recommendations from government departments such as the Department of Community Services and the Department of Planning.

Providing a network of community facilities is one way which Council can have an impact on the social problems of the Shire. While a community facility will not solve the social issues of the Shire, it goes some way to addressing the infrastructure needs of the growing community.

4.2.2 Specific Analysis of the Warnervale / Wadalba Area

In 1999 Wyong Shire Council and state government human services agencies identified the need to prepare and implement a *Community Support and Human Services Strategy for Warnervale/Wadalba*. The purpose of this strategy was to develop a planning framework to strengthen neighbourhood and community networks and to co-ordinate the planning and timely provision of human facilities and services in the Warnervale/Wadalba Social Planning District commensurate with population growth. The strategy, completed in 2002, identifies the advantage of a hierarchy of community facilities based on 'local' and 'district' facilities.

The project was carried out under the auspices of the Central Coast Regional Co-ordination Management Group (RCMG), established by the NSW Premier's Department. A Human Services Planning Team (HSPT) has created and delegated responsibility for implementing the strategy. The HSPT has representation from the core state government agencies that provide human services for the region and Wyong Shire Council.

In 2002, consultant Paul Van Reyk was engaged by the HSPT to prepare a feasibility study and develop a business case for Integrated Service Provision. The study recommended three community facilities be included in the WTC; these being a Community Development/ Learning Centre, an Integrated Family Centre and a Youth Centre.

In 2003 a *Community Facilities Study* was undertaken to plan the provision of human services and community facilities within the WTC in further detail. The proposed facilities underwent further analysis and assessment throughout this process.

Decisions were made on the basis of delivering an integrated approach to planning and provision of human services and took the following points into account:

- the research and recommendations in the Paul van Reyk report;
- the philosophy, assessment of demand and implementation strategies as documented in the Community Support and Human Services Strategy;
- population projections for the area that the WTC will potentially service;
- benchmarks and population thresholds;
- extensive consultation;
- service mapping and data analysis results;
- trends in service delivery and policy;
- access and equity issues for key target and minority groups; and
- reference material for service requirements.

The following six community facilities were identified in the 2003 study as being core to the WTC:

- Community Art and Cultural Facility;
- Knowledge / Learning Centre / Government Transaction Centre;
- Indoor Aquatic and Recreation Centre;
- Integrated Child and Family Centre;
- North Wyong Primary Care Network (*no longer required*); and
- Youth Space.

The requirements for each of the above facilities have been continually reviewed and updated by the HSPT since 2003 in response to:

- location of the WTC – Continual change in location of the WTC and the location of community facilities within the WTC;
- the final determination by State Government for the WTC at 'The Top of the Hill' on Woolworths land has impacted to some extent on the original plans for the community facilities (for example: due to the compact nature of the TC location there is a requirement for community facilities to locate within multi storey premises);
- the provision of a GP Super Clinic and associated health care facilities within the boundary of the WTC (to be delivered by private operators) means that the North Wyong Primary Health Care facility is no longer required and will not be funded through this plan;
- lack of space within the WTC to provide all the required elements of a facility. This has resulted in elements from the other proposed facilities that are able to be delivered being incorporated in the Library/ Community Centre;
- changes in legislation and Section 94 funding availability, resulting in a decision to construct 1 facility only in the WTC known as the Library/ Community Centre.

A description of the Library / Community Centre otherwise referred to as the knowledge Centre is detailed below.

4.2.3 Knowledge Centre

The Knowledge Centre will be a focal point within the WTC. The aim of the facility is to provide a mix of government, non-government and community initiated activities. The facility has distinct components being a library, a community centre, a café and commercial kitchen, arts and cultural spaces, creative enterprise retail pods and a government transaction centre.

While the Knowledge Centre will provide high level community facilities for the projected population for the wider Warnervale District, it will also serve to satisfy the local community facilities needs for the projected population of the WTC, as no other local community facilities will be provided.

The projected population for WTC will also use the local community facilities that have and will be provided with the WWAHT.

In the short to medium term the Knowledge Centre is intended as a Stage 1 facility, to be constructed and fitted out to the full 2,700m² and integrated with the retail and commercial functions of the WTC. Due to the lack of Section 94 Funding availability, the key elements and functions of the Integrated Child and Family Centre, the Youth Space, and the Arts and Cultural Centre will be permanently incorporated into the Library/ Community Centre.

Library

The Library Council of NSW in a document titled '*A guide for Public Library Buildings in NSW – People Places 2005*' recommends a number of methods for determining the appropriate library capacity for a community. One of the methods in its most simplistic provides for a base of 39m² of building area per 1000 people for population s between 20,000 and 65,000. Using this standard the library component should be a minimum of 930m². Other factors will determine whether this base area needs to be increased.

The benchmark for libraries includes areas for telephones, foyer, lobby, toilet and restrooms; all of which will be located within the attached Learning and Community Centre.

Community Centre

The aim of the Community Centre component is to provide a mix of government, non-government and community initiated activities. The Learning and Community Centre will comprise internet access islands, computer training rooms, various meeting and activity rooms, main activity and function rooms, and telecommuting rooms.

Government Transaction Centre

A number of government agencies have identified the need to have a central location within the Shire. Many have identified Warnervale as the most appropriate location. This will increase people's access to government services and enable people to access all three levels of government in one place to ask questions, pay bills etc.

Café and Commercial Kitchen

The café and commercial kitchen will operate under a social enterprise model and will be staffed by young people undertaking hospitality courses to provide vocational training opportunities.

Arts and Cultural Spaces

These spaces within the Library/ Community Centre will be part of a network of Arts and Cultural facilities in the Shire. These components are based on providing public spaces for community members to learn new skills, as well as public exhibition space, both representing major gaps in the Northern parts of the Shire.

Creative Enterprise Retail Pods

Allocation of these spaces provides real opportunities for young people to put their skills, training and passion into practice. The aim of the pods is for young people to start up small businesses in the pods, utilising their creative skills and gain on- the- job business skills with support and mentoring by the local business sector.

Section 94E Direction

Council has reduced the community land and facilities that have been identified as being required to serve the projected population in the various studies and in accordance with the various community standards.

This has action has been undertaken in order to meet the objectives of the NSW Government in regard to making residential development more affordable. The NSW Government's policy position is that Greenfield sites should be limited to \$30,000 per dwelling/residential allotment.

Accordingly, the Child and Family Centre and Youth Space have been downsized and incorporated into the Knowledge Centre.

4.2.4 Community Facilities Standards

A report was also prepared by the Strategic Planning Department to review the Strategic Social Planning Framework and Guidelines used by Council in the planning, provision and development of community facilities. The report titled *Guidelines for the Planning and Provision of Community Facilities in Wyong Shire* (July 2002) (D02226844) recommends the following baseline provision standards:

Table 26 Community Facility Standards

	m ² Per Person	Area Required for 1m ² of Building
Community facility floor space	0.282	
Community facility land	1.76	6.24

Note: Standards from Guidelines for the Planning & Provision of Community Facilities in Wyong Shire - Amended July 2002 - D02226844

Where these standards are applied over the Wider Warnervale District the following sizing of community facilities should be provided.

Table 27 Application of Community Facilities Standards to the Warnervale District

Community Facilities Standard	Approx GFA (m ²)	Units
Community facility GFA standard per person	0.282	m ²
Approximate WWAHT future population	23,600	persons
GFA required to meet the Community Facility GFA standard	6,655	m ²
Area of land per person on which to site community facilities	1.71	m ²
Community facilities land required to meet the standard	40,356	m ²

The total GFA of community facilities planned for the Warnervale District will meet 84.3% of this standard as per the table below. The total land area on which the proposed facility will be sited is significantly below the specified standard for a number of reasons including that one facilities have been co-located with a school and in the case of the knowledge centre, some of the parking facilities is likely to overflow on to the adjoining proposed Hill Top Park.

The existing Warnervale Village population has been discount from the contributing population on the basis that Council has already provided community facilities in the form of the Warnervale Hall.

Table 28 Proposed Community Facilities Standards for Warnervale District

Community Facilities	Background	Existing GFA (m ²)	Planned GFA (m ²)	Total GFA (m ²)	Land Area (m ²)
CF1 Wadalba Community Centre	On Wadalba Community School - Completed 2000	400		400	Nil
CF3 - Hamlyn Terrace Community Centre	Completed 2010-11 - Official Opening 26/5/2012	380		380	2,500
CF5 Additional Local Facility	To be provided within WWAHT		400	400	2,496
Knowledge Centre (multi-purpose centre)	To be located within the Warnervale Town Centre - includes HACC, Integrated Child & Family Centre, Youth Precinct, Arts & Cultural Centre.		4,500	4,500	2,400
GFA of COMMUNITY FACILITIES TO BE FUNDED UNDER THIS PLAN (m²)		780	4,900	5,680	7,396
% of GFA Standard Met by Proposed Facilities				85.3%	18.3%
Provision Rate per Person				0.241	0.313

Apportionment of the Knowledge Centre

Having regard to the existing and planned community facilities with the adjoining WWAHT release area, the appropriate apportionment of cost for the knowledge centre for the various release areas is provided in the following table.

Table 29 Apportionment of the Knowledge Centre

Development Areas	Projected Population	% of Population	Total Community facilities (GFA m ²) - To meet Standard at 85.3%	Existing Community Facilities (GFA m ²)	Planned community facilities within WWAHT (GFA m ²)	GFA of Knowledge Centre (m ²) apportioned to Development Areas	% Apportionment of Knowledge Centre Costs	Indexed Land Cost (July 2012)	Indexed Construction Costs (July 2012)	Total
Base cost (m ²) - MJD Valuers 19 May 2010										
Base cost (m ²) Graham Bridson (MSC) April 2011										
Land & Building size m ²										
WWAHT ¹	16,000	67.8%	3,851	780	400	2,671	59.4%	\$413,321	\$12,292,124	\$12,705,445
WTC	3,600	15.3%	866			866	19.3%	\$134,084	\$3,987,647	\$4,121,731
7A Precinct	4,000	16.9%	963			963	21.4%	\$148,982	\$4,430,719	\$4,579,701
TOTAL	23,600	100.0%	5,680			4,500	100%	\$696,387	\$20,710,489	\$21,406,876

Note: WWAHT - Wadalba, Woonqarah & Hamlyn Terrace

Indoor Recreation Centre

Council has identified the need to provide an **Indoor Recreation Centre** in the Warnervale Area to provide prospective residents with the ability to satisfy a range of passive and active recreational needs, as well as leisure needs with a recreational focus within a structured and non-structured format.

The principal components of the proposed **Indoor Recreation Centre** are aquatic facilities and indoor sports courts.

A catchment population of up to 70,000 is required to service a substantial aquatic centre based around a 50m indoor pool. A lower population is required to service an aquatic facility based around a 25 metre indoor pool. It is important that aquatic facilities are appropriately sized to meet the demands of the catchment population to minimise the annual running cost that are required to be subsidised by Council.

Conversely, aquatic and indoor sports facilities need to contain a wide range of leisure opportunities to maintain high levels of patronage and thus viability.

CGP Management Pty Ltd in its report "*Warnervale Indoor Aquatic and Recreation Centre 2005*" concluded that a population of 32,000 in the wider Warnervale area would be needed to support the provision of an indoor recreation centre based around a 25 metre pool and 2 sports court.

The design details and component costs of the Indoor Recreation Centre recommended by CGP Management Pty Ltd is provided as follows:

Table 30 Indoor Recreation Centre Costs

Description	Additional Components	2005 Costs	Indexed Costs (June 2012)	Total Cost Funded by S94 Contributions
25m x 20m pool, separate leisure pool, warm water/programme pool,	Includes: outdoor water play, gymnasium, gymnastics room, pool store, creche, meeting rooms, outdoor creche play area, dry play facilities (outdoor), wet & dry toilets & change area, social & active garden areas, admin, staff, first aid, café & plant areas.	\$17,890,000	\$21,384,791	\$21,384,791
2 indoor sports courts + an extra court/multipurpose hall		\$4,350,000	\$5,199,767	\$5,199,767
Additional components (not included)	50 m outdoor pool	\$3,210,480	\$3,837,644	
	Commercial Kitchen	\$873,251	\$1,043,840	
	Spa Sauna	\$540,929	\$646,599	
	Outdoor courts	\$346,732	\$414,466	
	Outdoor Play Area	\$385,258	\$460,518	
	Climbing wall	\$192,629	\$230,259	
	Lazy River	\$898,934	\$1,074,540	
TOTAL COST		\$28,688,213	\$34,292,422	\$26,584,558

Source: Warnervale Indoor Aquatic & Recreation Centre, CGP Management Pty Ltd, 27 May 2005 (D02471933)

It is noted that the additional components in the above table are for information only and are not presently planned or to be funded by section 94 contributions.

Notwithstanding the conclusion by CGP Management Pty Ltd about the proposed *Indoor Recreation Centre* being suitable for a catchment population of 32,000, it is considered more reasonable that the Centre should be apportioned over a population of 35,000 as per the following table:

Table 31 Apportionment of Indoor Recreation Centre

Development Areas	Projected Population	% of Population	Apportioned Land Area (ha)	Apportioned Land Cost (Indexed July 2012)	Apportioned Building Costs (Indexed July 2012)	Total
Base cost per ha - August 2011 Robertson & Robertson				\$619,226		
Size (ha)				3.0		
WWAHT	16,000	45.7%	1.37	\$860,222	\$12,152,941	\$13,013,163
WTC	3,600	10.3%	0.31	\$193,550	\$2,734,412	\$2,927,962
7A Precinct	4,000	11.4%	0.34	\$215,056	\$3,038,235	\$3,253,291
Future Release Areas	11,400	32.6%	0.98	\$612,908	\$8,658,970	\$9,271,879
TOTAL	35,000	100.0%	3.00	\$1,881,736	\$26,584,558	\$28,466,294

Note: Land Value based on 2011 R & R Valuations - 10.9 ha - \$6,750,000 i.e. \$619,226 per ha

4.2.5 Works Schedule

Table 32 & Table 33 shows the estimated cost of community and cultural facilities to be delivered under this contributions plan.

Table 32 Land Costs for Community Facilities

Item No.	Description	Total Area (ha)	Owner	Valuation Source	Rate/ m ²	Estimated Base Land Value	Base CPI	Total Indexed Land Costs (July 2012)	Apport. to WTC	Total Apportioned Land Cost (Indexed July 2012)	Comment
1	Library / Knowledge Centre	0.240	WSC	MJD Valuers (19 May 2010) - Site 1	275	\$660,000	170.5	\$696,387	19.3%	\$134,084	Increased from 2,000m ² to accommodate Arts & Cultural Facility, Child & Family Centre & Youth Centre. To be located on Hilltop Park.
2	Child and Family Centre	0.200		MJD Valuers (19 May 2010) - Site 2	265	\$530,000	170.5	\$559,220	19.3%		Deleted as separate entities to comply with DoP \$30,000 cap for greenfield sites.
3	Youth Space	0.100		MJD Valuers (19 May 2010) - Site 4	270	\$270,000	170.5	\$284,886	19.3%		
4	Aquatic Recreation Centre	3.000		MJD Valuers (19 May 2010) - Site 3	62	\$1,857,678	177.6	\$1,981,736	10.3%	\$193,550	
	TOTAL	3.540								\$327,634	

* MJD Valuers Report - D0227/120

Table 33 Capital Costs for Community Facilities

Description	Base Capital Costs	Base CPI	Total Indexed Costs (July 2012)	Apport. to WTC	Indexed Capital Costs (July 2012)	Comments
Warnervale Knowledge Centre (incorporating the HACCC Centre) 4,500m ² @ \$4,500 per m ²	\$20,583,854	178.8	\$20,710,489	19.3%	\$3,987,647	Expanded to accommodate a range of facilities
Integrated Child and family Centre						
Youth Precinct						Incorporated into Knowledge Centre
Arts & Cultural Centre						
Aquatic and Leisure Centre (July 2012)	\$26,584,558	179.9	\$26,584,558	10.3%	\$2,734,412	
TOTAL	\$47,168,413	\$359	\$47,295,047		\$6,722,058	

4.2.6 Non-Residential Apportionment

The total cost of community facilities (land & works) attributable to development in the WTC is apportioned between residential development and non-residential development. The cost is apportioned between residential and non-residential development on a ratio of 90:10. The 90% apportioned to residential development will be apportioned on the basis of projected population, with the 10% apportioned to non-residential development being apportioned on gross floor area. **Table 33** illustrates the apportionment of the costs between residential and non-residential development.

The levying of community facilities contributions on non-residential uses is in recognition that there will be significant benefits derived from the provision of such facilities for businesses. These benefits are associated with the future use of community facilities by employees and commercial patrons that reside elsewhere. This applies in particular to the knowledge centre that will be accessible to employees and patrons.

Table 34 Apportionment between Residential and Non-Residential Uses

	% Split	Total Indexed Land Costs (July 2012)	Total Indexed Capital Costs (July 2012)
TOTAL	100%	\$327,634	\$6,722,058
Apportioned to Residential Use	90%	\$294,871	\$6,049,853
Apportioned to Commercial Use	10%	\$32,763	\$672,206

4.2.7 Calculation of the Contribution Rate

Residential Development (NDA)

Residential development within R1 Residential zone (precincts 1, 2, 3, 4 & 7b) will be levied on a NDA basis, while residential development in the B2 & B4 zones (precincts 5, 6a, 6b & 7a) will be levied on a DU basis.

The determination of the Precinct NDA rate for **community facilities (land and works)** and the monetary contribution payable for a development is as follows

$$\begin{aligned} \text{Cost}_{\text{prec}} (\$) &= \text{Cost}_{\text{total}} (\$) \times \frac{\text{Pop}_{\text{prec}}}{\text{Pop}_{\text{total}}} \\ \text{Contrib}_{\text{nda}} (\$) &= \frac{\text{Cost}_{\text{prec}} (\$)}{\text{NDA}_{\text{prec}}} \\ \text{Contrib}_{\text{total}} (\$) &= \text{Contrib}_{\text{nda}} (\$) \times \text{Area}_{\text{dev}} \end{aligned}$$

Where:

Cost_{prec} is the total cost of community facilities (land & works) attributable to the projected residential population for the selected precinct

Cost_{total} is the total cost of community facilities (land & works) attributable to residential development in the WTC

Pop_{prec} is the total projected residential population for the selected precinct

Pop_{total} is the total projected residential population for the WTC

Contrib_{nda} is the total contribution payable in the selected precinct for community facilities for one hectare of net developable area proposed to be developed

NDA_{prec} is the Net Developable Area within the selected precinct

Contrib_{total} is the total contribution payable in respect to a development proposal

Area_{dev} is the area proposed to be development in hectares

Table 35 applies the formulas above to calculate the contribution rates for community facilities land and works on a per hectare of NDA for each precinct.

Table 35 Contribution Rate for Community Land and Facilities (NDA) Residential Development (Precincts 1,2,3,4 & 7b)

Precinct	Total Population	% of Total Population	Area	Apportionment of Land Costs	Community Facilities Land Contribution per ha of NDA	Apport. of Community Facilities Works Costs	Community Facilities Contribution per ha of NDA
Precinct 1	438	12.2%	6.416	\$35,893.55	\$5,594	\$736,427	\$114,776
Precinct 2	890	24.7%	13.039	\$72,940.36	\$5,594	\$1,496,516	\$114,776
Precinct 3	717	19.9%	10.514	\$58,818.43	\$5,594	\$1,206,776	\$114,776
Precinct 4	216	6.0%	3.172	\$17,746.93	\$5,594	\$364,113	\$114,776
Precinct 7b	273	7.6%	4.001	\$22,383.03	\$5,594	\$459,232	\$114,776
Sub Total	2,534	70.5%	37.143	\$207,782	\$5,594	\$4,263,064	\$114,776
Precincts 5, 6a, 6b & 7a	1,062	29.5%	9.204	\$87,088	N/A	\$1,786,788	N/A
TOTAL	3,596	100%	46.346	\$294,871		\$4,263,064	

Figure 5 Community, Cultural and Social Facilities



Residential Development (DU)

Residential development in the B2 & B4 zones (precincts 5,6a, 6b & 7a) will be levied on a development unity (DU) basis. This approach has been taken in recognition that the mixed commercial /residential nature of these zones, which makes the use of the NDA methodology potential inequitable.

The determination of the DU rate for **community facilities land and works** and the monetary contribution payable for a development is as follows:

$$\begin{aligned} \text{Contrib}_{\text{per}} (\$) &= \frac{\text{Cost}_{\text{prec}} (\$)}{\text{Pop}_{\text{prec}}} \\ \text{Contrib}_{\text{du}} (\$) &= \text{Contrib}_{\text{per}} (\$) \times \text{Occ}_{\text{du}} \\ \text{Contrib}_{\text{total}} (\$) &= \text{Contrib}_{\text{du}} (\$) \times \text{DU}_{\text{prop}} \end{aligned}$$

Where:

Contrib_{per} is the total contribution payable for community facilities (land & works) per person

Cost_{prec} is the total cost of community facilities (land & works) attributable to the projected residential population for precincts 5, 6a, 6b & 7a

Pop_{prec} is the total projected residential population for precincts 5, 6a, 6b & 7a

Contrib_{du} is the total contribution payable for community facilities (land & works) for a development unit

Occ_{du} is the occupancy rate per DU

Contrib_{total} is the total contribution payable in respect to a development proposal

DU_{prop} is the number of DU's proposed

Table 36 provides the contribution per person, which is the first step in determining the DU rate.

Table 36 Contributions for Community Facilities (per person)

	Population	Apportionment of Community Facilities Land Costs	Land Cost per Person	Apport. of Community Facilities Capital Costs	Works per Person
Total	1,062	\$87,088	\$82	\$1,786,788	\$1,682

Table 37 illustrates the relative DU value for various types of dwellings and the corresponding contributions for community facilities.

Table 37 Contribution Rate per DU for Precincts 5, 6a, 6b & 7a

Unit Size	Assumed Occupancy Rate	No. of Development Units (DU's)	Community Facilities Land Contribution Rate (DU)	Community Facilities Works Contribution Rate (DU)
1 bedroom residential unit	1.3	0.42	\$34.38	\$705.47
2 bedroom residential unit	1.7	0.55	\$44.96	\$922.54
3 bedroom residential unit	2.6	0.84	\$68.77	\$1,410.95
4 bedroom residential unit / residential allotment	3.1	1.00	\$81.99	\$1,682.28
5 or more bedroom residential unit	1 person per total bedroom minus one	Proportional	Proportional	Proportional

Non-Residential Development (GFA)

Non-residential development will make a small contribution towards community facilities on the basis of the gross floor area that is proposed.

The determination of the GFA rate for **community facilities land and works** for non-residential developments and the monetary contribution payable for a development is as follows:

$$\text{Contrib}_{\text{trip}} (\$) = \frac{\text{Cost}_{\text{non-res}} (\$)}{\text{Trips}_{\text{total}}}$$

$$\text{Contrib}_{\text{total}} (\$) = \text{Contrib}_{\text{trip}} \times \text{Dev}_{\text{trip}}$$

Where:

Contrib_{trip} is the total contribution payable for community facilities (land & works) for one daily vehicle trip

Cost_{non-res} is the total cost of community facilities (land & works) attributable to the projected non-residential uses

Trips_{total} is the total projected daily vehicle trips generate by the projected non-residential development in the WTC i.e. 25,194 trips

Contrib_{total} is the total contribution payable in respect to a development proposal

Dev_{trip} is number of daily vehicular trips generated by the proposed development

Table 38 provides the contribution rates that apply to non-residential development

Table 38 Contributions Rate per GFA of Non-Residential Uses

Total Projected Non-Residential Daily Vehicle Trips	Total Land Costs	Community Facilities Land Contribution (Cost per Vehicle Trip)	Total Works Costs	Community Facilities Works Contribution (Cost per Vehicle Trip)
25,194	\$32,763	\$1.30	\$672,206	\$26.68

4.3 Roadworks and Traffic Management

4.3.1 Strategy Details

The additional traffic generated from the development of an urban release area, without responding investment in roads and intersection upgrades, reduces the safe and efficient operation of an existing road network.

Development in the Warnervale / Wadalba District, including the WTC, will require a significant investment in the road network in terms of:

- new intersections and upgrades to existing intersections;
- new and upgraded road links that meet the needs of the release areas as a whole (i.e. only the extra pavement width attributable to higher order roads outside the WTC is funded via development contributions).

The approach to establishing road and intersection requirements for the Warnervale / Wadalba District and the WTC has been to:

- identify existing road hierarchy and traffic flows;
- predict future road hierarchy and traffic flows generated by all development including the proposed development in this plan area;
- identify road and intersection improvements / upgrades necessary to cater for these predicted flows;
- identify additional road and intersections required to cater for these predicted flows;
- apportion costs of improvements based on assessed daily vehicle trips for different land use types and development precincts.

This plan seeks a contribution from all development within the WTC for the additional cost over and above the normal road costs for signalised intersections and major roundabouts within the WTC, half road construction for the road along the great northern railway line, full road construction for roads that cross open space land, and several roads and intersections external to the WTC where there is a direct nexus.

Private development will be responsible for the dedication of land and full width construction of all other roads within the WTC, including full road construction adjacent to open space (with the exception of the roads crossing the Environmental Corridor).

4.3.2 Works Schedule

Council has assessed the cost of upgrading intersections and providing new and widened roads to meet the demands from projected residential and non residential development across the Warnervale / Wadalba District.

Developments in various precincts in the Warnervale / Wadalba District contribute to the demand for the works, namely:

- 1 Wadalba, Woongarra and Hamlyn Terrace (WWAHT)
- 2 Warnervale Town Centre (WTC)**
- 3 Precinct 7A
- 4 South & East Wadalba (SEW)
- 5 Wyong Industrial Park (WIP)
- 6 Employment Corridor
- 7 MacKillop Catholic College
- 8 GP Super Clinic
- 9 Wyong Employment Zone - South & West
- 10 Wyong Employment Zone - Mountain Rd
- 11 Precinct 14
- 12 Porters Enterprise Park
- 13 Bruce Avenue
- 14 Lakeside Grammar School
- 15 Warnervale Business Park (WBP)

Although Catchments 7 & 8 are nominally within the Warnervale Town Centre, the roads contribution under this plan will be confined to the Warnervale Town Centre as defined by the Catchment Map in **Figure 6**. The Roads contributions for the remaining catchments will be levied under *Contributions Plan No. 7A – Drainage, Water Quality, Open Space, Community Facilities & Roads – Warnervale District* or its successor.

Within the works program, there are road and intersection works that relate to the development within a precinct for which development in the WTC will fund 100% of the costs. Other road and intersection works will be funded on a shared basis based on proportion of projected daily vehicle trips.

Demand attributable to regional traffic growth has been accounted for in calculation of apportioned costs. Regional traffic demands on the network are assumed by this plan to be met by the Road and Traffic Authority of NSW.

Figure 6 Road Contribution Catchments

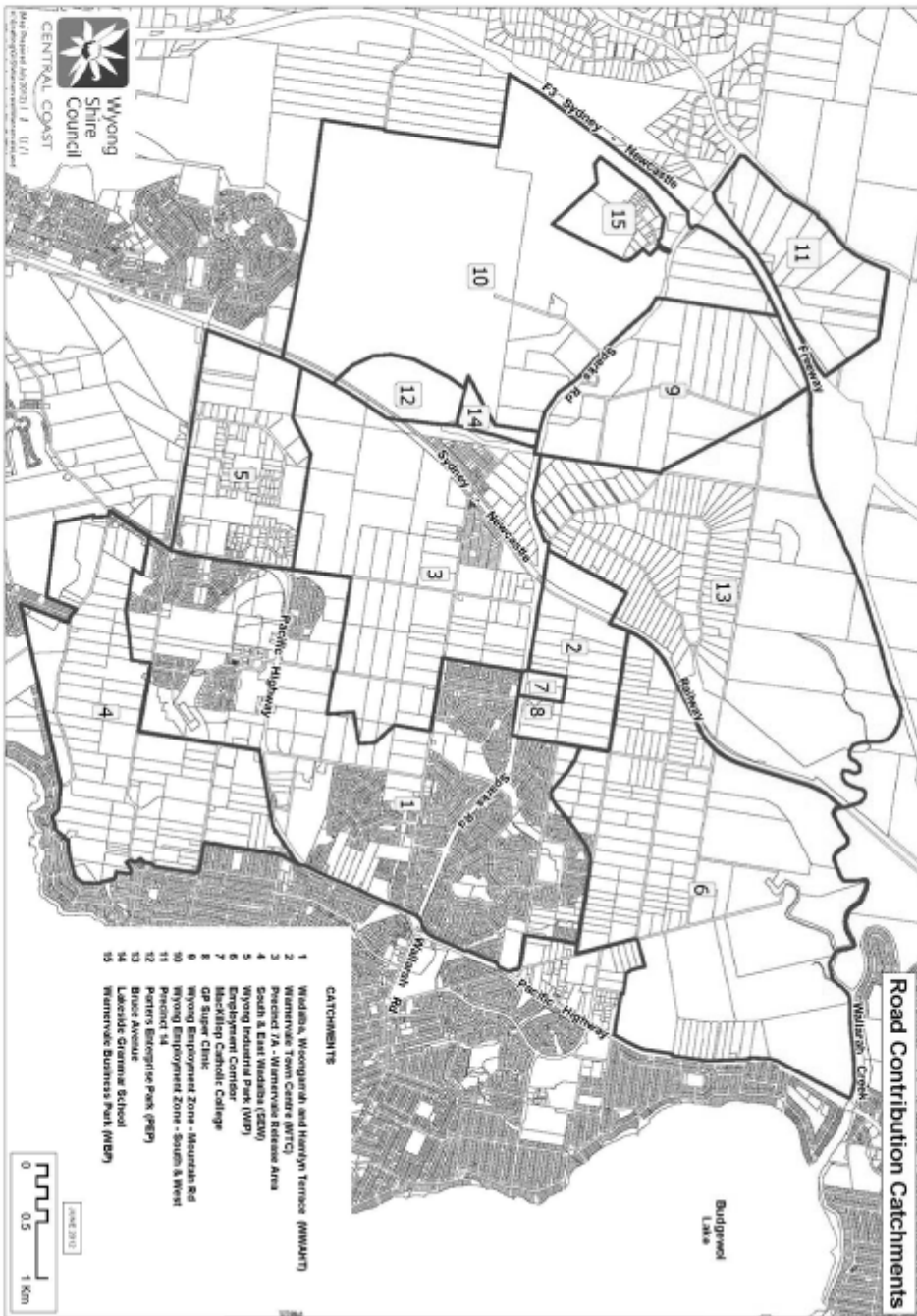


Table 39 provides a summary of the roadworks and intersections costs covered by this plan

Table 39 Summary of the Road Works Costs

	Land	Works	Total
Proposed Road Works	\$1,890,105	\$21,420,394	\$23,310,499
Proposed Intersection Works		\$13,179,453	\$13,179,453
TOTAL COST	\$1,890,105	\$34,599,846	\$36,489,952

Schedules showing an estimate of the cost of road works to be delivered under this plan are shown in **Tables 40** and **41**.

Table 40 Proposed Roadworks

Reference	Road Projects	Description of Project	Total Land Cost	Total Works Cost	Total Project Cost (Indexed to July 2012)	State Govt Contributions - RMS, Treasury, Dept Health	% Apportioned to WTC	Land Cost Apportioned to WTC	Works Apportioned to WTC	Total WTC Share
R1	Railway Road (Link Road)	New road linking Wairarohi and Wairerua		\$30,385,794	\$30,385,794	\$0	25.9%	0	\$7,869,671	\$7,869,671
R3	District Entry Road from Sparks Road	Additional cost to provide off-road cycleway		\$40,000	\$40,000	\$0	50.5%	0	\$20,181	\$20,181
R4	Hilawatha Road	Half Road adjacent to Open Space		\$558,614	\$558,614	\$0	65.8%	0	\$367,617	\$367,617
R6	Hakone Road	Half Road adjacent to Open Space + Vehicular Bridge over Railway Line + DfT in cost with off-road cycleway	\$2,427,600	\$18,945,105	\$21,372,705	\$0	45.0%	\$1,091,547	\$8,518,481	\$9,610,028
R16	Sparks Road	Pedestrian Crossing of Railway		\$1,257,690	\$1,257,690	\$0	49.9%	0	\$626,980	\$626,980
R19	Niiko Road (south section) TC2 - Type 2 Street	Town Centre R2 - 1/2 Road adjacent to railway line + land acquisition for widening	\$613,440	\$806,896	\$1,420,336	\$0	100%	\$613,440	\$806,896	\$1,420,336
R20	Niiko Road (north section) TC3 - Type 3 Street	Town Centre R3 - 1/2 Road adjacent to railway line	\$99,400	\$597,701	\$697,101	\$0	100%	\$99,400	\$597,701	\$697,101
R29	Hill Top Park FrontageTC9 - Type 10 Street	Full Width (equivalent) across open space riparian corridor	\$53,300	\$1,401,831	\$1,455,131	\$0	100%	\$53,300	\$1,401,831	\$1,455,131
R41	WTC Riparian Crossing TC3 - Type 10 Street	Full Width (equivalent) across open space riparian corridor	\$32,419	\$397,159	\$429,578	\$0	100%	\$32,419	\$397,159	\$429,578
R57	WTC Cycleways & Bus Shelters	3.1 Km of off-road cycleway + 8 bus shelters		\$813,876	\$813,876	\$0	100%	\$0	\$813,876	\$813,876
		TOTAL	\$1,890,105	\$55,204,658	\$58,430,826		39.9%	\$1,890,105	\$21,420,394	\$23,310,499

Table 41 Proposed Intersection Works

Reference	Intersection	Description of Project	Total Project Cost (Indexed to July 2012)	State Govt Contributions - RMS, Treasury, Dept Health	Total Project Cost Funded by Section 94 Contributions	% Apportioned to WTC	WTC Share
I1	Mataram Rd/Hiawatha Roads		\$312,110	\$0	\$312,110	63.1%	\$196,866
I2	Sparks Rd/Entrance Dr (to Town Centre)	Project now funded by NSW Govt.	\$0	\$0	\$0	0.0%	\$0
I3	WTC Internal Intersection on Entry Rd		\$749,063	\$0	\$749,063	63.1%	\$472,548
I4	WTC northern internal intersection - Road Type 3B/Road Type 3B	Signals	\$499,375	\$0	\$499,375	52.2%	\$260,569
I5	WTC middle internal intersection - Road Type 8A/Road Type 10	Signals	\$499,375	\$0	\$499,375	52.2%	\$260,569
I6	Pacific Hwy/Chelmsford Rd		\$3,845,191	\$1,348,314	\$2,496,877	23.2%	\$579,473
I7	Chelmsford/Arizona Roads	Roundabout plus land	\$3,121,096	\$0	\$3,121,096	49.9%	\$1,555,919
I8	Arizona/Hakone Roads	Roundabout plus land	\$3,121,096	\$0	\$3,121,096	52.2%	\$1,628,557
I9	Hakone Rd/Waterside Dr/Sports Field	Signals	\$1,872,658	\$0	\$1,872,658	51.5%	\$965,115
I10	Hakone/Hiawatha Roads	Signals	\$1,248,439	\$0	\$1,248,439	65.8%	\$821,582
I11	Entry Road/Main Street/ Nikko Rd extension	Signals	\$499,375	\$0	\$499,375	52.2%	\$260,569
I19	Sub-arterial (West of Railway) East	Signals	\$1,872,658	\$0	\$1,872,658	52.2%	\$977,134
I20	Sub-arterial (West of Railway) West	Signals	\$1,872,658	\$0	\$1,872,658	52.2%	\$977,134
I21	Sub-arterial/Railway Station/ Nikko Rd	Signals or Roundabout	\$2,496,877	\$0	\$2,496,877	50.5%	\$1,259,725
I31	WTC Entry Rd/ Nikko Rd /Road Type 8A	Signals	\$499,375	\$0	\$499,375	63.1%	\$315,032
I32	WTC Internal Intersection - Mataram Rd Extension/Minnesota Rd Extension	Signals	\$624,219	\$0	\$624,219	68.7%	\$434,796
I49.2	Sparks/Minnesota Roads	Signals	\$3,608,576	\$0	\$3,608,576	37.9%	\$1,368,374
I49.7	Minnesota Rd/ Warnervale Rd		\$2,638,905	\$112,000	\$2,526,905	33.5%	\$845,458
		TOTAL	\$29,381,048	\$1,460,314	\$27,920,734	47.2%	\$13,179,453

The location of the proposed road works and intersection works are provided in **Figures 7 and 8** respectively.

Figure 7 Roadworks and Intersections within the Town Centre

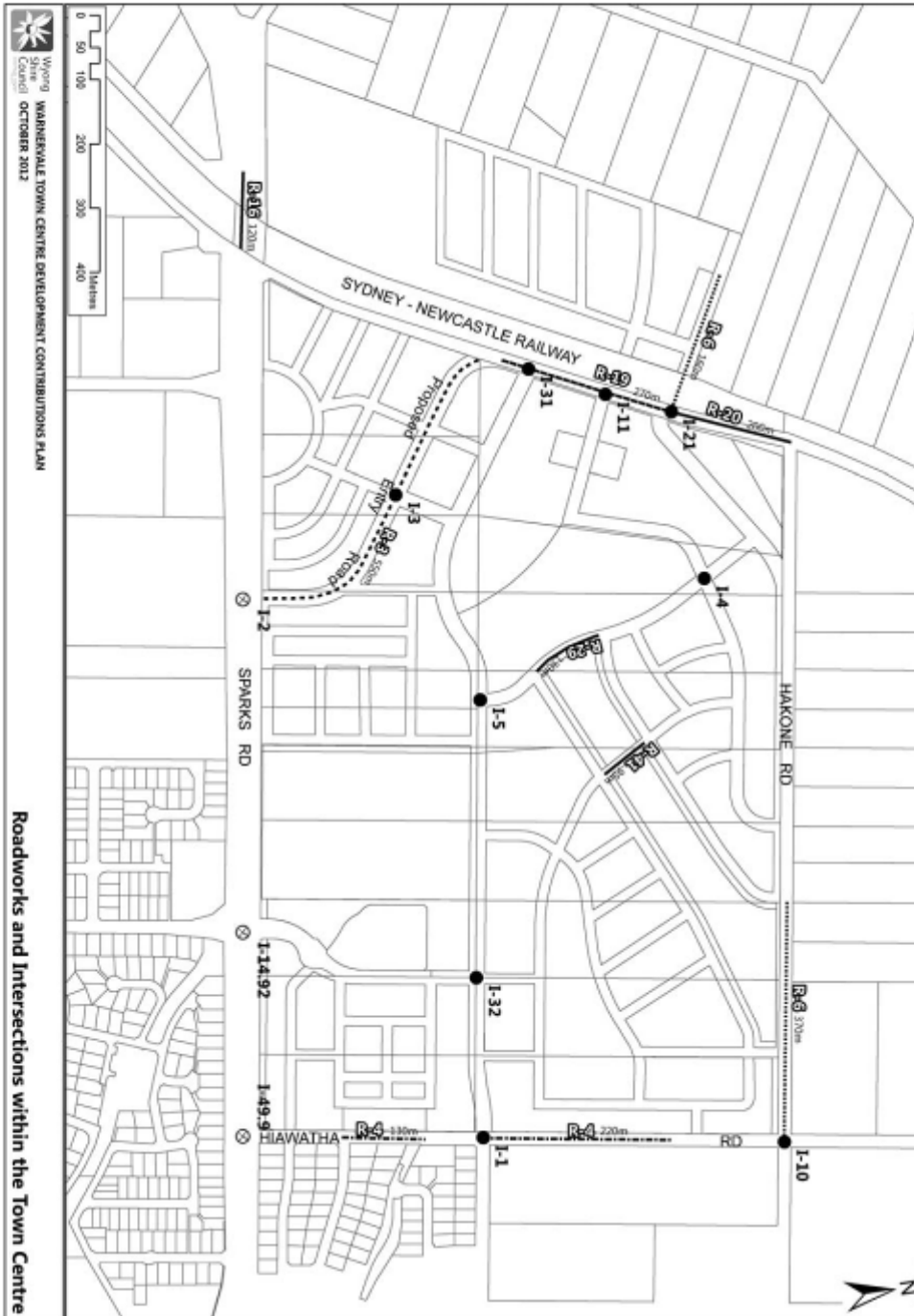


Figure 8 Roadworks and Intersections External to the Town Centre



Table 42 Projected Residential Vehicle Trip Generation

Precinct	Dwellings	Town Houses / Attached	Apartments	Generation Rate	Total Trips	% of Total Trips
Precinct 1 Residential	81	77		5 or 7	951	12.0%
Precinct 2 Residential	164	156		5 or 7	1,932	24.5%
Precinct 3 Residential	132	126		5	1,558	19.7%
Precinct 4 Residential	40	38		5	470	6.0%
Precinct 5 Residential		28	33	5	303	3.8%
Precinct 6a Residential		71	82	5	765	9.7%
Precinct 6b Residential		78	91	5	847	10.7%
Precinct 7a Residential		44	51	5	478	6.1%
Precinct 7b Residential	50	48		5 or 7	593	7.5%
TOTAL	468	667	258		7,898	100.0%
	TOTAL Dwellings				1,392	

Table 43 Projected Non-Residential Vehicle Trip Generation

Land Use	GFA m ² from DCP	Trips per 100 m ²	Total Trips	% of Total Trips
Retail as per DCP	25,000	63	15,750	62.5%
Commercial as per DCP	15,000	12	1,800	7.1%
Bulky Goods as per DCP	8,000	27.2	2,176	8.6%
Provision for additional Non-Residential Trip	10,936	50	5,468	21.7%
TOTAL	58,936		25,194	100.0%

4.3.3 Apportionment of Roads Costs based on Vehicle Trips

The apportionment of the total cost of upgrading the road network to accommodate the projected growth in the WTC is based on the projected daily vehicle trips.

Residential trips are based on projected dwelling numbers in each precinct. The draft WTC DCP 2011 provides floor space projections for business uses that comprise retail, commercial and bulky goods retailing in Precinct 6a. There are no projections for business uses outside Precinct 6a. This plan assumes that the upper limits for business floor space for Precinct 6a specified in the Draft DCP will be reached. Given that there is a further 7.8 ha of land zoned either B2 or B4 outside of Precinct 6a, as well as other areas that may be developed for non-residential use, this plan assumes an additional non-residential 5,500 daily trips when the WTC is fully developed.

Tables 42 and **43** provides the methodology for determining the projected daily vehicle trips for the projected residential and non-residential development respectfully.

Table 44 provides a summary of the total daily vehicle trips generated by the projected residential and non-residential development within the WTC when it is fully developed. This table is used to apportion the total cost of road works to each proposed land use, in particular the cost of works that is attributable to residential development.

Table 44 Total Projected Trips

Traffic Generators	Total Trips	% of Total Trips	Apportionment of Trips
Residential	7,898	23.9%	\$8,708,582
Retail (25,000m ² GFA)	15,750	47.6%	\$17,367,491
Commercial (15,000m ² GFA)	1,800	5.4%	\$1,984,856
Bulky Goods (8,000m ² GFA)	2,176	6.6%	\$2,399,471
Additional Non-Residential	5,468	16.5%	\$6,029,552
TOTAL	33,092	100%	\$36,489,952

4.3.4 Calculation of the Contribution Rate

Residential Development (NDA)

Residential development within R1 Residential zone (precincts 1, 2, 3, 4 & 7b) will be levied on a NDA basis, while residential development in the B2 & B4 zones (precincts 5, 6a, 6b & 7a) will be levied on a DU basis.

The road costs attributable to residential development is apportioned to each of precincts 1,2,3,4 & 7b on the basis of that precinct's proportion of the total projected residential vehicle trips. The contribution rate per hectare is calculated by dividing the costs attributed to a precinct by the Net Developable Area of that precinct.

The determination of the Precinct NDA rate for **road works for residential development** in precincts 1, 2, 3, 4 & 7b and the monetary contribution payable for such development is as follows:

$$\begin{aligned} \text{Cost}_{\text{prec}} (\$) &= \text{Cost}_{\text{total}} (\$) \times \frac{\text{Veh Trips}_{\text{prec}}}{\text{Veh Trips}_{\text{total}}} \\ \text{Contrib}_{\text{nda}} (\$) &= \frac{\text{Cost}_{\text{prec}} (\$)}{\text{NDA}_{\text{prec}}} \\ \text{Contrib}_{\text{total}} (\$) &= \text{Contrib}_{\text{nda}} (\$) \times \text{Area}_{\text{dev}} \end{aligned}$$

Where:

Cost_{prec} is the total cost of road works (land & works) attributable to the projected residential development within the selected precinct

Cost_{total} is the total cost of road works (land & works) attributable to residential development in the WTC i.e. \$9.28M

Veh Trips_{prec} is the total projected residential vehicle trips for the selected Precinct

Veh Trips_{total} is the total projected residential vehicle trips for WTC

Contrib_{nda} is the total roads contribution payable within the selected precinct for every hectare of net developable area that is developed

NDA_{pre} Net developable area within the selected Precinct

Contrib_{total} is the total contribution payable in respect to a development proposal

Area_{dev} is the area proposed to be development in hectares

Table 45 provides the cost per net developable area for each precinct using the formulas above.

Table 45 Roads Contribution for Residential Development (NDA)

Precinct	Total Trips	% of Total Trips	Residential Apportionment by Trips	Area (ha)	NDA - Contribution Rate per ha
Precinct 1	951	12.0%	\$1,048,539	6.416	\$163,420
Precinct 2	1,932	24.5%	\$2,130,768	13.039	\$163,420
Precinct 3	1,558	19.7%	\$1,718,231	10.514	\$163,420
Precinct 4	470	6.0%	\$518,431	3.172	\$163,420
Precinct 7a	593	7.5%	\$653,863	4.001	\$163,420
Precincts 1,2,3,4&7a	5,505	69.7%	\$6,069,833	37.143	\$163,420
Precincts 5, 6a, 6b & 7a	2,393	30.3%	\$2,638,749	9.204	n/a
TOTAL	7,898	100%	\$8,708,582	46.346	

Residential Development (DU)

Residential development within the B2 & B4 zones (precincts 5, 6a, 6b & 7a) will be levied on a DU basis.

This approach has been taken in recognition that the mixed commercial /residential use of this zone, which makes the use of the NDA methodology potential inequitable.

The determination of the DU rate for **road works for residential development** within precincts 5, 6a, 6b & 7a and the monetary contribution payable for such development is as follows:

$$\begin{aligned} \text{Cost}_{\text{trip}} (\$) &= \frac{\text{Cost}_{\text{total}} (\$)}{\text{Trips}_{\text{total}}} \\ \text{Contrib}_{\text{du}} (\$) &= \text{Cost}_{\text{trip}} (\$) \times \text{Trips}_{\text{du}} \\ \text{Contrib}_{\text{total}} (\$) &= \text{Contrib}_{\text{du}} (\$) \times \text{Trips}_{\text{no}} \end{aligned}$$

Where:

Cost_{trip} The cost per daily vehicle trip

Cost_{total} is the total cost of road works attributed to the WTC

Trips_{total} Is the total projected daily vehicle trips

Contrib_{du} is the total contribution payable in respect of one DU

Trips_{du} is the number of daily vehicle trips for a DU, i.e. 7 trips

Contrib_{total} is the total contribution payable for residential development in precincts 5, 6a, 6b & 7a

Trips_{no} is the total number of projected daily vehicle trips for the proposed residential development

The cost per trip is calculated as per **Table 45**, which is the first step in determining the DU rate.

Table 46 Vehicle Trip Cost

Total Cost of Road Works Apportioned to WTC	\$36,489,952
Total Projected Vehicle Trips	33,092
Cost per Trip	\$1,103

Table 47 provides the application of the trip rates and contribution rate for different dwelling sizes base on the number of bedrooms. .

Table 47 Road Contribution for Residential Development by Bedroom Size in Precincts 5, 6a, 6b & 7a

	Assumed Daily Trips	DU Rate	Road Contribution per DU
1 bedroom unit/dwelling	4	0.57	\$4,410.79
2 bedroom unit/dwelling	5	0.71	\$5,513.49
DU - 3 bedroom unit/dwelling/ residential allotment	7	1	\$7,718.89
4 bedroom unit/dwelling	7	1	\$7,718.89
Larger units / Dwellings to be determined on a proportional basis			

Non-Residential Development

The total roads contributions attributable to a non-residential development is calculated by multiplying the cost per trip with the total number of trip that development will generate. For the purpose of this plan non-residential development will apply to all development except residential development that involves permanent occupation such as dwelling, townhouses, permanently occupied units, nursing home etc.

The determination of the contribution for daily vehicle trips for **road works for non-residential development** and the monetary contribution payable for such development is as follows:

$$\text{Cost}_{\text{trip}} (\$) = \frac{\text{Cost}_{\text{total}} (\$)}{\text{Trips}_{\text{total}}}$$

$$\text{Contrib}_{\text{total}} (\$) = \text{Cost}_{\text{trip}} (\$) \times \text{Trips}_{\text{no}}$$

Where:

Cost_{trip} is the cost per daily vehicle trip

Cost_{total} is the total cost of road works attributed to the WTC

Trips_{total} is the total projected daily vehicle trips for the WTC

Contrib_{total} is the total contribution payable for residential development in precincts

Trips_{no} is the total number of projected daily vehicle trips for the non-residential development being assessed

The method for determining the number of non-residential daily trips shall be by reference to the current Roads and Traffic Authority "Guide to Traffic Generating Developments". Where a development type is not listed, the daily trip generation shall be determined by Council having regards to the standards applicable to like uses and/or other substantive research.

Table 48 provides a compilation of land use trip generation rates from the RTA guidelines.

Table 48 Land Use Trip Generation Rates

Development Type	Daily Trips	Unit
Child minding facility	3.7	Enrolment
Primary school	1.4	Enrolment
High school	1.4	Enrolment
TAFE college	1.8	Enrolment
Shopping Centre 1-10,000 m ²	121	100 m ² GLFA
10,000-20,000 m ²	78	100 m ² GLFA
20,000-30,000 m ²	63	100 m ² GLFA
30,000-40,000 m ²	50	100 m ² GLFA
Garden centre not included in Shopping Centre	40	100 m ² retail area
Hardware not included in shopping centre	80	100 m ² GLFA
Mixed retail showroom	40	100 m ² GLFA
Furniture showroom	10	100 m ² GLFA
Office (professional centre)	16	100 m ² GLFA
Major Offices (including government)	12	100 m ² GLFA
Medical centres & dentists	50	100 m ² GLFA
Doctor's surgery	50	100 m ² GLFA
Retail tyre outlets	10	100 m ² GLFA
Motels	3	Per unit
Taverns, hotels	110	100 m ² GLFA
Restaurant	60	100 m ² GLFA
Fast food not included in shopping centre	60	100 m ² GLFA
Retail market	20	100 m ² GLFA
Recreation - Squash	45	Court
Recreation - Tennis	45	Court
Recreation - Gymnasium	50	100 m ² GLFA
Factories covered by light industry	5	100 m ² GLFA
Warehouses	4	100 m ² GLFA
Hospitality facilities	50	100 m ² GLFA
Licensed clubs	100	100 m ² GLFA
Motor showrooms	5	100 m ² GLFA
Road Transport Terminal	5	100 m ² GLFA
General heavy industry	1.5	100 m ² GLFA
Mixed industrial park	7	100 m ² GLFA

4.4 Stormwater Management

4.4.1 Background

The Porters Creek Wetland is the largest remaining freshwater wetland on the Central Coast and one of the last of its kind in NSW. Porters Creek Wetland contains large areas of Endangered Ecological Communities (EECs) and significant areas of habitat for a number of threatened species, which are protected under the *Threatened Species Conservation Act, 1995 (TSC Act)* and *Commonwealth Environment Protection and Biodiversity Act, 1999*.

Porters Creek Wetland was also recognised as a wetland of State significance when it was gazetted as a State Environmental Planning Policy No 14 - Coastal Wetland (SEPP 14 – Coastal Wetlands) in 1999. Council has a responsibility under the TSC Act and SEPP 14 – Coastal Wetlands to protect this wetland and to properly manage the effects of planned developments within its catchment. WTC is situated in the upper catchment of Porters Creek and therefore development and associated stormwater runoff from WTC will have an impact on Porters Creek wetland unless it is managed appropriately.

Porters Creek Wetland is exhibiting signs of stress from altered drainage and hydrology from previously approved development within the Porters Creek catchment. Impervious surfaces such as roads, roofs and car parks increase stormwater runoff, which poses a significant threat to the long-term viability of the wetland. Increased runoff from additional development in the catchment, if left unchecked, will result in loss of significant areas of EECs and the consequential reduction in habitat values and natural water quality treatment capacity.

4.4.2 Stormwater Management Strategy Details

An Integrated Water Cycle Management (IWCM) Strategy was formulated in 2006 to mitigate impacts on the Porters Creek Wetland associated with development of the Wyong Employment Zone and WTC. The aim of the IWCM Strategy is to capture and treat urban runoff and to divert excess stormwater around the Porters Creek Wetland and into Wyong River. This is achieved primarily through the Regional Stormwater Harvesting Scheme. The justification for the Scheme is provided in the Risk Assessment undertaken by AECOM, 2010.

Modelling shows that the IWCM Scheme would significantly contribute to maintaining the wetland in its pre-development condition. Construction of treatment and storage areas together with a piped diversion around the Porters Creek Wetland will also permit a valuable water resource to be tapped whilst permitting further development in the Porters Creek catchment to occur in a sustainable manner.

The aims of the original 2006 IWCM Scheme were amended by Council in 2009 to reflect a change in the operating parameters i.e. reduction in the required stormwater storage and pump rate. Certain elements of the scheme were also removed. Council adopted a revised scheme in February 2010 (Wyong Shire Council Report, 2010) as shown in **Figure 9**.

The main elements of the revised IWCM scheme as explained in the Ecological Engineering Report 2006 are:

Water quality requirements mainly provided by artificial wetlands (in areas outside of WTC), but also by allotment and streetscape works. These are designed to reduce the sediment and nutrient load from runoff entering the Porters Creek Wetland or before being diverted to the regional stormwater harvesting scheme. These elements are to be provided by Developers at no expense to Council.

Water diversion works consisting of storages, pump stations and pipelines designed to divert stormwater around Porters Creek Wetland to Wyong River. The discharge point into Wyong River is at the Wyong River Weir, which provides the options:

- of discharging stormwater either upstream of the weir for use in directly supplementing the town water supply,
- into the weir as an environmental flow substitution thereby indirectly supplementing the town water supply, or
- downstream of the weir without contacting the town water supply.

Table 49 outlines the main elements of the revised IWCM scheme. **Figures 9 and 10** show the location of the various elements of drainage and stormwater management.

Table 49 Main Elements of the IWCM Scheme

Water Cycle Management Element	Precinct Scale Elements (to be delivered by developers)	Regional Scale Elements (to be delivered by Council and funded by s94)
Demand Management (ie. AAA+ fixtures, dual flush toilets, waterless urinals, water efficient industrial practices)	✓	
Rainwater Tanks (supply non-potable demand (toilets, washdown, cooling etc. and/or irrigate an allotment landscape zone (equivalent to 20-25% of allotment)	✓	
At Source, Streetscape and Precinct Scale Stormwater Treatment	✓	
Constructed Wetlands (provide best practice treatment of stormwater before entering Stormwater Storage)	✓	
Stormwater Storages (active storage sized in combination with rapid drawdown pump rate of 36 kL/ha/day to preserve wetland hydrology)		✓
Stormwater Transfer Pipeline and Pumps (diverts excess stormwater around Porters Creek Wetland to Wyong River)		✓

4.4.3 Work Schedules

A summary schedules showing an estimate of the cost and staging of the stormwater management facilities to be delivered under this strategy plan are shown in **Appendix B** of this plan. The detailed costs of individual components of the scheme is provided in **Appendix F**.

The total estimated costs of the various components of the revised IWCM scheme are detailed in **Tables 50, 51 and 52**.

Table 50 Drainage Land Costs

Land Areas	Area (m ²)	Valuation source	Rate per m ²	Land Cost	CPI Base	Land Costs (Indexed to July 2012)	Acquisition Costs	Total
N1A	3,360	MJD Valuers (19 May 2010) - Site 11	n/a	\$10,000	170.5	\$10,551	\$10,000	\$20,551
N1B	1,975	MJD Valuers (19 May 2010) - Site 12	\$13	\$25,675	170.5	\$27,091	\$20,000	\$47,091
N2A	3,510	MJD Valuers (19 May 2010) - Site 13	\$100	\$351,000	170.5	\$370,351	\$20,000	\$390,351
N2B	2,037	MJD Valuers (19 May 2010) - Site 14	\$125	\$254,625	170.5	\$268,663	\$20,000	\$288,663
SE2	4,530	MJD Valuers (19 May 2010) - Site 15	\$50	\$226,500	170.5	\$238,987	\$20,000	\$258,987
SW1	10,140	MJD Valuers (19 May 2010) - Site 16 - Sept 2012 update	var	\$375,000	170.5	\$395,674	\$20,000	\$415,674
TOTAL	25,552			\$1,242,800		\$1,311,318	\$110,000	\$1,421,318

Table 51 Drainage Works Costs

Work Code	Stormwater Reticulation (from upstream Node)	Stormwater Easement (from upstream Node)	Pumping Stations (with easements)	Stormwater Storage Basins	CPI Base	Total Costs (Indexed to July 2012)
N1A	\$129,567	\$77,619	\$103,726	\$565,943	179.9	\$876,854
N1B				\$277,327	179.9	\$277,327
N2A	\$48,267	\$41,877	\$86,996	\$269,438	179.9	\$446,577
SW1			\$137,414	\$1,643,556	179.9	\$1,780,970
SE2			\$90,874	\$405,855	179.9	\$496,728
SW1 - SE2	\$313,646	\$240,314			179.9	\$553,960
TOTAL	\$529,558	\$405,442	\$498,248	\$3,361,887		\$4,795,134

Table 52 Cost of Works – Diversion Pipeline

	Total Cost	Basis for Apportionment	Total Cost Attributable to WTC
Diversion Pipeline (including easements)	\$15,094,749	% of NDA benefiting from Pipeline	\$1,395,976
Investigation costs	\$1,500,000	WTC - 11.2% of catchment	\$167,331
TOTAL			\$1,563,307

4.4.4 Apportionment

The total costs associated with managing stormwater within the WTC that comprise stormwater land costs and stormwater works costs will be apportioned over the net developable areas within the WTC.

The proportion of the cost of the proposed trunk main costs and investigation works attributable to the WTC will also be apportioned over the net developable area within the WTC. The balance of the Trunk Main and investigation works is paid for by development in Precinct 7a and the Wyong Employment Zone.

4.4.5 Calculation of the Contribution Rate

The determination of the NDA rate for **stormwater land, stormwater works and trunk main** and the monetary contribution payable for a development is as follows:

$$\text{Contrib}_{\text{nda}} (\$) = \frac{\text{Cost}_{\text{total}} (\$)}{\text{NDA}_{\text{total}}}$$

$$\text{Contrib}_{\text{total}} (\$) = \text{Contrib}_{\text{nda}} (\$) \times \text{Area}_{\text{dev}}$$

Where:

Contrib_{nda} is the contribution payable for stormwater land, stormwater works and trunk main for one hectare of net developable area proposed to be developed

Cost_{total} is the total cost of stormwater land, stormwater works or trunk main attributable to the WTC

NDA_{total} is the total net developable area within the WTC

Contrib_{total} is the total contribution payable in respect to a development proposal

Area_{dev} is the area proposed to be development in hectares

Table 53 applies the formula above to provide the rate per hectare of NDA that applies to the development of land for any purpose.

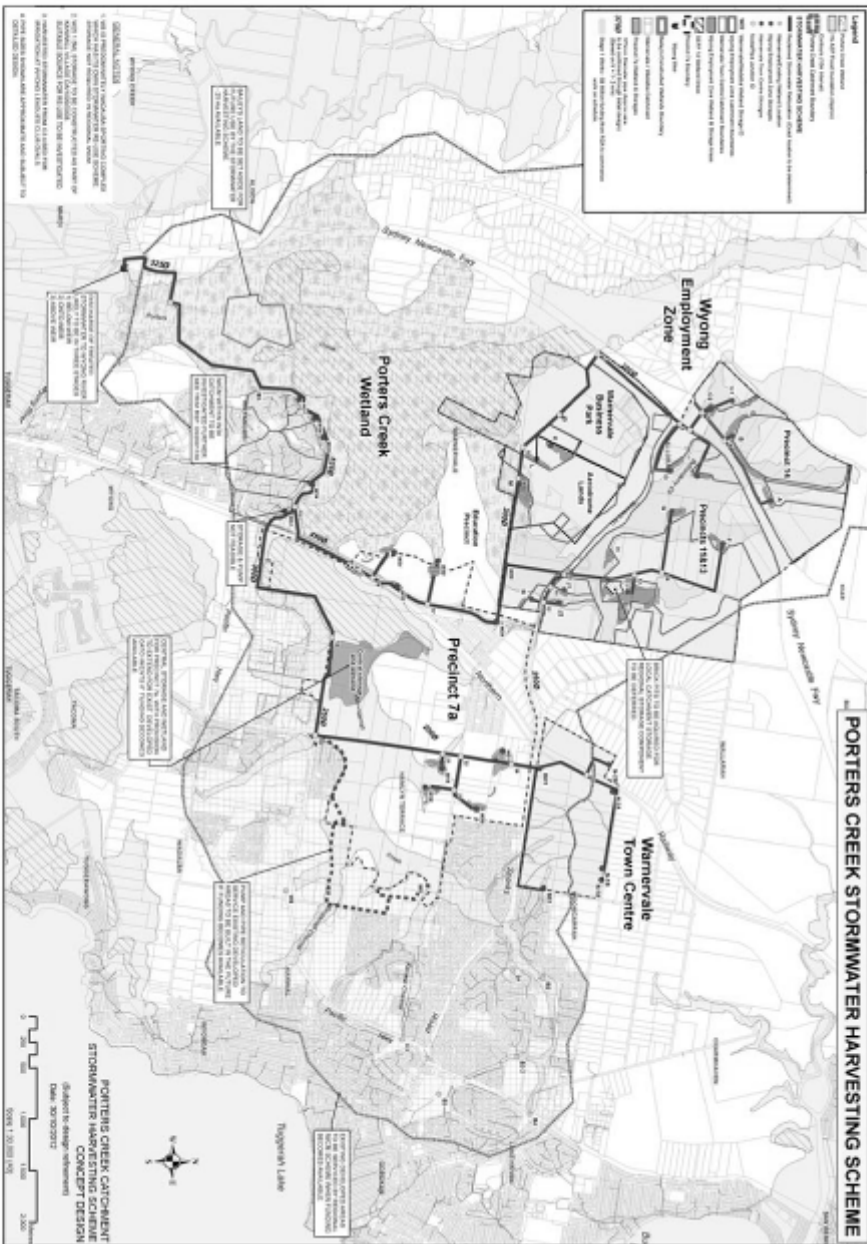
Table 53 Contribution Rates for Stormwater Management NDA

Contribution Category	Contributing NDA (ha)	Total Costs of Land / Works	Contribution per ha of NDA
Stormwater Management Land	52.436	\$1,421,318	\$27,106
Stormwater Mangement Works	52.436	\$4,795,134	\$91,447
Diversion Trunk Main	52.436	\$1,563,307	\$29,813
TOTAL		\$7,779,759	\$148,366

Figure 9 Drainage Catchments and Location of Stormwater Storages and Reticulation



Figure 10 Porters Creek Regional Stormwater Harvesting Scheme



4.5 Contributions Plan Studies

A number of studies were carried out, with further studies proposed, to establish the type and extent of works and land acquisitions to address the demands generated by development of the WTC. These studies relate to ecological investigations, water quality, drainage, integrated water cycle management, roads and land valuations.

This plan aims to recoup the cost of these studies that are attributable to the WTC.

4.5.1 Apportionment

Table 54 shows the nature of the studies and the percentage attributable to the WTC.

Table 54 Studies Relating to Studies / Investigations

Description	Cost	% Share to WTC	WTC Cost
Integrated Water Cycle Management Study	\$114,769	11%	\$12,803
Ecological Investigations 1999	\$139,981	3%	\$4,662
Roads	\$28,285	100%	\$28,285
Aquatic Centre Feasibility Study	\$35,996	10%	\$3,702
2006 Land Valuations	\$62,058	50%	\$31,029
2010 Land Valuations (May 2010 value)	\$16,188	100%	\$16,188
Additional Road study	\$30,000	100%	\$30,000
Future Land Valuations (every 5 yrs for 15 yrs)	\$48,000	100%	\$48,000
TOTAL	\$475,277		\$174,669

The total cost of studies will be apportioned to development within the WTC on the basis of the net developable area.

4.5.2 Calculation of Contribution Rates

The determination of the contribution rate per ha of NDA for **studies / investigations** and the monetary contribution payable for a development is as follows:

$$\text{Contrib}_{\text{nda}} (\$) = \frac{\text{Cost}_{\text{total}} (\$)}{\text{NDA}_{\text{total}}}$$

$$\text{Contrib}_{\text{total}} (\$) = \text{Contrib}_{\text{nda}} (\$) \times \text{Area}_{\text{dev}}$$

Where:

Contrib_{nda} is the contribution payable for studies/investigations for one hectare of net developable area proposed to be developed

Cost_{total} is the total cost of studies/investigations attributable to the WTC

NDA_{total} is the total net developable area within the WTC

Contrib_{total} is the total contribution payable in respect to a development proposal

Area_{dev} is the area proposed to be development in hectares

Table 54 applies the formulas above to calculate the contribution rate for studies/investigations on a per hectare rate.

Table 55 Contribution for Studies / Investigations

Administration Costs	\$174,669
Total Developable Area	52.436
Contribution Rate per Hectare	\$3,331.07

4.6 Contributions Plan Administration

The costs to be recovered under this plan include:

- the salary and operating costs over a 5 year period for the coordination of the development contribution process;
- a salary component over a five year period for other Council officers who are directly involved in preparing plans and carrying out other development contribution functions;
- on-costs, vehicles and award increases over a 5-year period.

4.6.1 Apportionment of Costs

The effective administration and management of the development contribution process is crucial to achieving the objectives of the Section 94 process. To ensure that contribution funds are managed effectively and that services and facilities are provided within a reasonable time, Council has a number of staff that are directly involved in the contribution process. The administration and management costs to be recovered under this plan only partly cover the full costs of the process; however the Department of Planning recognises that these costs are a legitimate cost able to be recovered under Section 94. The administration costs will be included in all of Council's contributions plans.

An estimate of the likely cost of administering this plan has been prepared and is provided as follows in **Table 56**.

Table 56 Administration Costs

Description	Total Salary & On Costs for 5 year Period	Percentage to be Recovered by S94	Amount to be Recovered across All Contribution Plans	Amount to be Recovered by this Plan Based on 10% of Total Costs
Development Contributions Section Staff	\$1,423,661	100%	\$1,423,661	\$142,366
Accounting Staff	\$429,605	20%	\$85,921	\$8,592
Development Design Staff	\$2,456,104	35%	\$859,636	\$85,964
Subdivision Supervision Staff	\$1,397,045	20%	\$279,409	\$27,941
TOTAL	\$5,706,415		\$2,648,628	\$264,863

4.6.2 Calculation of the Contribution Rate

Contributions will be collected from residential and non residential development in the WTC toward the cost of administering and managing development contributions.

The most effective means of recouping the administration cost is by applying a percentage charge on the contributions. A 0.4% charge of the total contributions payable approximates the estimated administration costs shown in **Table 56**. The administration contribution is thus, 0.4% multiplied by all other contributions.

The monetary contribution is calculated as follows:

$$\text{Contrib}_{\text{admin}} (\$) = \text{Contrib}_{\text{total}} (\$) \times \text{Admin}_{\text{rate}}$$

Where:

Cont_{admin} is the total administration charge

Contrib_{total} is the total of all other contributions payable under this plan

Admin_{rate} is the rate of 0.4%

Appendix A References

The following references have been used to formulate this Plan. This document includes all documents prepared by or on behalf of Council to support this Plan. Other documentation such as the Practice Notes and CPI are available on the relevant website.

AECOM 2010	Porters Creek Wetland and Wyong River Risk Assessment, April 2010 (D02176549)
Central Coast Regional Co-ordinators Managers Group (CCRCMG) and Wyong Shire Council 2002	Community Support and Human Services Strategy for Warnervale Wadalba, September 2002 (D01912921)
Ecological Engineering 2006	Integrated Water Cycle Management Strategy Warnervale Town Centre, 2006 (CPA/104592)
Heather Nesbitt Planning & Blight Voller Nield 2005	People Places: A Guide for Public Library Buildings in NSW, 2005
MJD Valuers	Valuation Report – Warnervale Town Centre, 19 May 2010 (D02271120)
MJD Valuers	Valuation Report – Warnervale Town Centre Review, 18 September 2012 (D03137912)
NSW Department of Planning 2008	Central Coast Regional Strategy 2006-31 (D01194752)
NSW Department of Planning 2012	Warnervale Town Centre Development Control Plan 2012
Wyong Shire Council 2002	Guidelines for the Planning and Provision of Community Facilities in Wyong Shire, Amended July 2002 (D02226844)
Wyong Shire Council 2003	Warnervale Town Centre Community Facilities Study, October 2003 (D00697415)
Wyong Shire Council 2005	Wyong Open Space Principles Plan 2005 (D02453188)
Wyong Shire Council 2005	Local Park Strategy 2005 (D00427905)
Wyong Shire Council 2009	Wyong Recreational Facilities Strategy (D02070427)
Wyong Shire Council 2007	Warnervale Town Centre Traffic Impact Assessment, January 2007 (D02565471)
Wyong Shire Council 2011	Porters Creek Stormwater Harvesting Scheme: Revised Concept Design , 9 March 2011 (D02520205)
Van Reyk, Paul 2002	Warnervale/ Wadalba Community Support and Human Services Strategy: Feasibility Studies for a Business Case for Integrated Service Provision, September 2002

Appendix B Schedule of Works

Item	Description	Cost Summary		Timing / Thresholds	Priority
1	Open Space Land	\$6,573,296			
1.1	Civic Square		\$774,947	Transferred as part of development of the surrounding residential area	High
1.2	Ridge Park East		\$1,657,280	Transferred as part of development of the surrounding residential area	Low
1.3	Ridge Park West		\$679,257	Transferred as part of development of the surrounding residential area	Low
1.4	Hill Top Park		\$802,895	Transferred as part of development of the surrounding residential area	Medium
1.5	Apportionment of WWAHT playing fields		\$1,519,083	Transferred as part of development of the surrounding residential area	High
1.6	District Sporting Fields / Courts		\$1,139,834	Transferred as part of development of the surrounding residential area	High
2	Open Space Works	\$8,786,783			
2.1	Civic Square		\$543,322	Embellished by developer as part of the development of the surrounding residential area	Medium
2.2	Ridge Park East		\$1,464,507	Embellished by developer as part of the development of the surrounding residential area	High
2.3	Ridge Park West		\$663,313	Embellished by developer as part of the development of the surrounding residential area	Low
2.4	Hill Top Park		\$1,826,120	Embellished by developer as part of the development of the surrounding residential area	Medium
2.5	Apportionment of WWAHT playing fields Embellishment		\$2,908,194	Transferred as part of development of the surrounding residential area	High
2.6	District Sporting Fields / Courts		\$1,381,327	Embellished by developer as part of the development of the surrounding residential area	High
3	Community Facilities Land	\$327,634			
3.1	Warnervale Knowledge Centre / Community Centre		\$134,084	Transferred as part of the development of the surrounding development	High
3.2	Recreation Centre		\$193,550	Locate and purchase site	Medium
4	Community Facilities Works	\$6,722,058			
4.1	Warnervale Library / Community Centre		\$3,987,647	Constructed as funds permit	High
4.2	Recreation Centre		\$2,734,412	Construct facility when threshold population achieved.	Low

Item	Description	Cost Summary		Timing / Thresholds	Priority
5	Roads	\$23,310,499			
5.1	R1 - Link Road		\$7,869,671	Council to construct in the short term	High
5.2	R3 District Entry Road		\$20,181	Constructed as part of the development of the surrounding land	High
5.3	R4 - Hiawatha Road		\$367,617	Constructed as part of the development of the surrounding land	High
5.4	R6 - Hakone Road (including extension of Hakone Road to Sparks Road and Bridge over Railway Line)		\$9,610,028	Constructed as part of the development of the surrounding land	Medium
5.5	R15 - Sparks Road (Pedestrian Facilities at Railway Overpass)		\$626,980	Constructed by Council following establishment of the commercial area	Medium
5.6	R19 - TC2		\$1,420,336	Constructed as part of the development of the surrounding land	High
5.7	R20 - TC3		\$697,101	Constructed as part of the development of the surrounding land	Low
5.8	R29 - TC9		\$1,455,131	Constructed as part of the development of the surrounding land	Medium
5.9	R41 - TC23		\$429,578	Constructed as part of the development of the surrounding land	Low
5.1	WTC Cycleway & Bus Shelters		\$813,876	Constructed as part of the development of the surrounding land	Low
6	Intersections	\$13,179,453			
6.1	I1 - Mataram Road/Hiawatha Roads		\$196,895	When adjacent development proceeds	High
6.2	I2- Sparks Rd/Entrance Dr (to Town Centre)		\$0	Project now funded by NSW Govt.	
6.3	I3 - Town Centre Entry Road and Residential Signals		\$472,548	When adjacent development proceeds, average delay exceeds 42 secs or required for road safety	Medium
6.4	I4 - Adjacent to Hill Top Park (north) 38 Signals		\$260,569	When adjacent development proceeds or required for road safety	Low
6.5	I5 - Adjacent to Hill Top Park (south east) Signals		\$260,569	When adjacent development proceeds or required for road safety	Low
6.6	I6 - Pacific Highway/Chelmsford Road		\$579,473	Average delay exceeds 42 secs or required for road safety upgrade	Low
6.7	I7 - Chelmsford Road/Arizona Road Roundabout		\$1,555,919	When adjacent development proceeds, average delay exceeds 42 secs or required for road safety	Low
6.8	I8 - Arizona Road/Hakone Road Roundabout		\$1,628,557	Average delay exceeds 42 secs or required for road safety	Low
6.9	I9 - Hakone Road/West Arizona Road Roundabout		\$965,115	When adjacent development proceeds	Low
6.1	I10 - Hakone Road/Hiawatha Road Signals		\$821,582	Average delay exceeds 42 secs or required for road safety	Low
6.11	I11 - Nikko Road/Railway Signals		\$260,569	When adjacent development proceeds, commuter carparks (eastern side of road) are constructed or required for road safety	High
6.13	I19 - Hakone Road Extension East Signals (west of railway line)		\$977,134	When adjacent development proceeds or required for road safety	Low
6.14	I20 - Hakone Road Extension West Signals (west of railway line)		\$977,134	When adjacent development proceeds or required for road safety	Low
6.15	I21 - Hakone Road Extension/Nikko Road Signals		\$1,259,725	When development proceeds on both sides and adjacent to the railway line	Medium
6.16	I31 - Entry Road/Road Type 8a Signals		\$315,032	When adjacent development proceeds or required for road safety	Low

Item	Description	Cost Summary		Timing / Thresholds	Priority
6.16	132 - Mataram Road Extension/Minnesota Road Extension Signals		\$434,796	When it meets the RTA's warrant or is required for road safety	Medium
6.18	149.2 - Sparks Road/Minnesota Road Signals		\$1,368,374	When extension of Minnesota to the north is constructed	High
6.19	149.7 - Minnesota Road/Warmervale Rd		\$645,458	When road (mid-way between Virginia Road and Minnesota Road) is constructed between Warmervale Road and Sparks Road.	Medium
7	Trunk Pipeline		\$1,563,307		
7.1	Diversion Pipeline (pipeline only)		\$1,395,976	Prior to the first development off the town centre	High
7.2	Investigations		\$167,331	Prior to the first development off the town centre	High
8	Stormwater Management Land		\$1,421,318		
8.1	N1A		\$20,551	Transferred as part of the development of the surrounding land	High
8.2	N1B		\$47,091	Transferred as part of the development of the surrounding land	Medium
8.3	N2A		\$390,351	Transferred as part of the development of the surrounding land	Low
8.4	N2B		\$288,663	Transferred as part of the development of the surrounding land	Low
8.5	SE2		\$258,987	Transferred as part of the development of the surrounding land	High
8.6	SW1		\$415,674	Transferred as part of the development of the surrounding land	High
9	Stormwater Management Works		\$4,795,134		
9.1	N1A		\$876,854	Constructed as part of the development of the surrounding land	High
9.2	N1B		\$277,327	Constructed as part of the development of the surrounding land	Medium
9.3	N2A		\$446,577	Constructed as part of the development of the surrounding land	Low
9.4	N2B		\$362,717	Constructed as part of the development of the surrounding land	Low
9.5	SW1 & SE2		\$2,831,659	Constructed as part of the development of the surrounding land	High
10	Contributions Plan Studies		\$174,978		
10.1	Integrated Water Cycle Management Study		\$12,803		Low
10.2	Ecological Investigations 1999		\$4,662		Low
10.3	Roads		\$28,285		Low
10.4	Aquatic Centre Feasibility Study		\$4,011		High
10.5	2006 Land Valuations		\$31,029		Low
10.6	2010 Land Valuations (May 2010 value)		\$16,188		Low
10.7	Additional Road study		\$30,000		Low
10.8	Future Land Valuations (every 5 yrs for 15 yrs)		\$48,000		Low
	Sub-TOTAL		\$66,854,460		
10	Contributions Plan Administration		\$267,417		High
	TOTAL COSTS		\$67,121,876		