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Dubbo City Council

***Amended Section 94 Contributions Plan -
Roads, Traffic Management and Car Parking***

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Table of Contents

<i>Section</i>	<i>Page</i>
1. Summary Schedules	2
1.1 Executive Summary	2
1.2 Summary of Works Schedule	2
1.3 Schedule of Contribution Rates	4
1.4 Roads and Traffic Management Contributions by Development Type	4
1.5 Car Parking Contributions by Development Type	5
1.6 Administration Contributions by Development Type	5
1.7 Contributions Summary	6
2. Introduction	8
2.1 Section 94 Contributions Plans	8
2.2 How to Use this Plan	9
2.3 Name of this Plan	9
2.4 Objectives of this Plan	9
2.5 Where Does the Plan Apply?	10
2.6 Relationship of this Plan to the Act, the Regulation and other plans	10
2.7 Approval and commencement of this Plan	10
2.8 Savings and Transitional Arrangements	10
2.9 Definitions	11
2.10 Payment of Contributions	12
3. Administration and Accounting	13
3.1 Deferred or Periodic Payments	13
3.2 Works in Kind	13
3.3 Complying Development	13
3.4 Indexation of Contributions	13
3.5 Review of Contribution Rates	14
3.6 Flexibility in Imposition of Contributions	15
4. Strategy Plans	16
4.1 Future Growth and Development	16
4.2 Roads Upgrading and Traffic Management	20
4.3 Car Parking	25
4.4 Administration	27
5. Supporting Documents	30
Appendix A	
Assessment of Growth Needs	

1. Summary Schedules

1.1 Executive Summary

This Section 94 Plan replaces the *Dubbo Urban Roads Contribution Plan - February 1995* in its entirety.

This plan was prepared on the basis of certain strategic planning assumptions some of which have changed due to development changes and infrastructure planning requirements. The works in the Plan also required review particularly in light of more detailed traffic and car parking analysis undertaken by the Council in the period 1996-2000 by PPK Consultants which determined that the previous plan works would not adequately cater to the future population capacity of the area.

Whilst many of the original works in the former Plan remain valid, there is a need to ensure that the works in the new Plan are reflective of the needs of Dubbo and that the existing community does not unnecessarily pay for works that should reasonably be funded through a “user pays” system. In particular, the former Section 94 Plan did not include roadworks for the Industrial Candidate Areas (ICA’s) nor the West Dubbo area that have now been included in the development program for Dubbo. These development areas will require a range of roadworks that have increased substantially Council’s commitment to improvement of the road system.

For this reason, Dubbo City Council has prepared this Plan which will provide for roads, traffic management and car parking needs for the period to 2002-2016.

Notes, text and examples in shadowed boxes throughout this plan are for guidance or information only and do not form part of the Plan.

1.2 Summary of Works Schedule

The following table provides a summary of the works schedule adopted for this Plan and the costs of these works. Whilst all works may not be completed by 2016, Council will collect funds and review the Plan on a regular basis to ensure the works schedule remains valid.

Where works are incomplete Council may include these works in a subsequent plan. Alternatively, Council may review the works and substitute other works. The intention of the Council will be to ensure the demand created by future development is catered for and that costs borne by Council are recovered.

The works schedule includes all costs that are to be borne by future development. In the case of highway works, these costs are exclusive of RTA grants which will be used to cater to through traffic needs or to address such issues as “black spots” or other such traffic needs. Council’s costs for highway works is attributable to local traffic needs such as intersection treatments/improvements.

NOTE ON POPULATION AND TRAFFIC PROJECTIONS

The works schedule in this Plan is based on an assumed population growth that is projected in the period 2002-2016 as well as the concept of population “capacity”. Population capacity refers to the total population that could be accommodated within the Dubbo Urban Area under existing planning controls.

The works schedule is based on both the population capacity and the assumed population growth to 2016. Should this growth not occur to 2016, it will not render this Plan invalid. Rather, it will simply put back to a later date the works proposed in the schedule.

Summary of Works Schedule¹

WORKS	LOCATION		APPORTIONED COST ² (\$ '000)
Road Widening/Upgrades	<ul style="list-style-type: none"> • Cobbora Road • Wheelers Lane • Victoria Street/Whylandra Street traffic signals • Minore Road • Wingewarra Street • Newell Highway deviation • Richardson Road upgrading • Coreena Road upgrading 	<ul style="list-style-type: none"> • Boothenba Road Upgrading • Newell Highway widening • Mitchell Highway widening • Boundary Road widening • Fitzroy Street widening • Sheraton Road widening • Troy Bridge Road Upgrade • Cobra Street widening 	12,995
New Roads	<ul style="list-style-type: none"> • New river crossing • Cobra Street to Bligh Street link • Bligh Street extension • Realignment of Mendooran Road 	<ul style="list-style-type: none"> • Wheelers Lane/Yarrandale Road Link • Internal loop roads to industrial areas 	12,190
Level Crossings	<ul style="list-style-type: none"> • Wheelers Lane • Sheraton Road • Muller Street • Mendooran Road 	<ul style="list-style-type: none"> • Cobbora Road • Purvis Lane • Yarrandale Road 	2,813
Traffic Management	<ul style="list-style-type: none"> • Murrayfield/Websdale • Wheelers Lane • Myall/Buninyong/Whitewood • Gipps Street - Edwin/Myall • Sheraton Road 	<ul style="list-style-type: none"> • Victoria/Cobra Street • Myall/Darling Street • Windsor Parade • Minore Road/Joira Road 	43
Intersection improvements	<ul style="list-style-type: none"> • Whylandra Street/Thompson Street • Bligh Street/Wingewarra Street • Bultje Street/Bligh Street • Fitzroy Street/Cobra Street • Cobbora Road/White Street • Newell Highway/ Minore Road • Erskine Street/Brisbane Street • Newell Highway/Baird Street • Cobbora Road/Wheelers Lane • Baird Street extension/Bligh Street 	<ul style="list-style-type: none"> • Bligh Street/Macquarie Street • Newell Highway/Obley Road • Wingewarra Street/Darling Street • Newell Highway/ Camp Road • Mitchell Highway intersections • Airport roundabout • Newell Highway/Mogriguy Road • Boothenba Road/Golden Highway • Newell Highway/Boothenba Road • Mitchell Highway/Eulomogo Road 	19,258
Car Parking Dubbo CBD	<ul style="list-style-type: none"> • Multi-level Carpark 	<ul style="list-style-type: none"> • Temporary Surface-level Carpark 	7,710
Administration	<ul style="list-style-type: none"> • Administrative resources 	<ul style="list-style-type: none"> • S94 Studies and Plan Preparation 	375

Notes:

1. These are works that the Council anticipates will be required to cater to future growth. There may be a need to amend these works at a future date to cater to changed circumstances or where assumptions made in the Plan are not fully realised. This may require the Plan to be re-exhibited.
2. The apportioned costs are the costs to be borne by future development. In the case of highway works, these costs are exclusive of RTA grants which cater to through traffic. Costs for highway works are attributable to local traffic needs such as intersection treatments/improvements.
3. Details of the Works Schedule are included in the following supporting documents:
 - PPK Environment and Infrastructure, Dubbo Expanded Urban Area Traffic Management and Roads Contributions Study, 1998
 - PPK Environment and Infrastructure, Dubbo CBD Traffic & Parking Study 1998
 - TEC, A Traffic Management & Roads Contributions Study, 1993
 - Various Council Reports

1.3 Schedule of Contribution Rates

The following table provides a summary of the contributions rates:

CONTRIBUTION TYPE		AMOUNT
Road Upgrading/Traffic Management	Residential Development	\$375.10/trip ¹
	or	\$4,126.10/standard dwelling
	Commercial Development	\$375.10/trip ^{1,8}
	Industrial Development	\$500.13/trip ^{1,8}
Car Parking		\$16,334.75/space ²
Plan Administration		\$2.97/trip ¹

Any development application for a change of use with a cost of works value equal to or less than \$100,000 will not be levied road and traffic management contributions under the provisions of this Plan. A change of use development application is determined to be where one land use activity changes to another land use activity as defined by the Dubbo Local Environmental Plan 2011.

Notes:

- Contributions are levied on the amount of traffic generated by development. That is, the number of vehicle "trips" that a development will generate on a daily basis.
- The contribution for car parking is only charged in the CBD and only where all car parking is not provided on site. Where some car parking is provided on site but not all that is required by a development, only that car parking not provided on site is charged a levy.
- The rate for administration is charged on a "per person" basis. For residential development, this is equivalent to the number people in a dwelling (known as the "occupancy rate"). For other forms of development (eg commercial, retail, industrial), it is equivalent to the number of employees which is then reduced to a per square metre rate.

1.4 Roads and Traffic Management Contributions by Development Type

The following table provides the contribution rates for roads and traffic management facilities by the type of development predicted to generate traffic:

ROADS AND TRAFFIC MANAGEMENT CONTRIBUTIONS RATES ¹ .			AMOUNT ⁴ .
RESIDENTIAL DEVELOPMENT².			
	Occupancy rates	Trip generation	
1-bedroom unit	1.0 person	4 trips	\$1,500.40
2-bedroom unit	1.3 persons	5 trips	\$1,875.50
3-bedroom unit	2.5 persons	6 trips	\$2,250.60
Residential housing	2.9 persons	11 trips	\$4,126.10
Subdivision (per lot)	2.9 persons	11 trips	\$4,126.10
COMMERCIAL DEVELOPMENT			\$375.10/trip ¹
INDUSTRIAL DEVELOPMENT⁵.			\$500.13/trip ¹

Notes:

- Contributions are levied on the amount of traffic generated by development. That is, the number of vehicle "trips" that a development will generate on a daily basis.
- In order to determine the level of contribution payable for a proposed development, a pre-lodgement meeting with Council's Environmental Services Staff is recommended
- Residential housing includes semi-detached, townhouses, villas, etc.
- Contribution amount is based on the trip generation rates shown in Table 4.1. If no rate is given, Council will determine a suitable rate based on traffic surveys, previous experience or accepted standards.
- Industrial development is levied a 33% surcharge to take account of road damage by heavy vehicles
- Other uses not included in this table will be levied according to their traffic generation which is assessed at development application stage

1.5 Car Parking Contributions by Development Type

The following table provides the contribution rates for car parking by the type of development predicted to generate traffic. This will be charged in the CBD area (Regional Business 3a zone) only.

CAR PARKING CONTRIBUTIONS RATES	AMOUNT
COMMERCIAL DEVELOPMENT¹.	\$16,334.75 per space ² .
RETAIL DEVELOPMENT¹.	\$16,334.75 per space ²

Any development application for a change of use with a cost of works value equal to or less than \$100,000 will not be levied car parking contributions under the provisions of this Plan. A change of use development application is determined to be where one land use activity changes to another land use activity as defined by the Dubbo Local Environmental Plan 2011.

Notes:

1. Car parking rates for commercial and retail development will vary according to the type of use. Standard car parking generation rates have been used based on Councils previous studies in Dubbo and by reference to standard car parking generation spaces published by the NSW Roads and Traffic Authority "Guide to Traffic Generating Developments"
2. Car parking contributions will be calculated only for the number of spaces that a development is deficient and will only cover the CBD catchment.

1.6 Administration Contributions by Development Type

The following table provides the contribution rates for plan administration by the type of development predicted to generate traffic.

ADMINISTRATION CONTRIBUTIONS RATES BY TYPE OF DEVELOPMENT		AMOUNT
RESIDENTIAL DEVELOPMENT¹		
	Occupancy rate	
1-bedroom unit	1.0 person	\$11.88
2-bedroom unit	1.3 persons	\$14.85
3-bedroom unit	2.5 persons	\$17.82
Residential housing	2.9 persons	\$32.67
Subdivision (per lot)	2.9 persons	\$32.67
COMMERCIAL DEVELOPMENT².		\$2.97/trip ³
RETAIL DEVELOPMENT².		\$2.97/trip ³
INDUSTRIAL DEVELOPMENT².		\$2.97/trip ³

Any development application for a change of use with a cost of works value equal to or less than \$100,000 will not be levied road and traffic management contributions under the provisions of this Plan. A change of use development application is determined to be where one land use activity changes to another land use activity as defined by the Dubbo Local Environmental Plan 2011.

Notes:

1. Rates for residential is based on occupancy rates. Residential housing includes semi-detached, townhouses, villas, etc
2. Rates adopted for commercial and retail development is based on employees which are counted as a "person". Rates are 1 employee per 20 m² for commercial, 1 employee per 40 m² for retail, and 1 employee per 80 m² for industrial.
3. Rates for commercial and retail development based on Gross Floor Area.

Dubbo City Council will provide by way of subsidy to the Plan the expected shortfall in contributions to ensure works included in the Plan can continue to be delivered.

1.7 Contributions Summary

CONTRIBUTIONS RATES BY TYPE OF DEVELOPMENT		ROAD UPGRADING AND TRAFFIC MANAGEMENT	CAR PARKING	ADMINISTRATION	TOTAL
RESIDENTIAL DEVELOPMENT¹					
	Occupancy rate				
1-bedroom unit	1.0 person	\$1,500.40	N/A	\$11.88	\$1,137.16
2-bedroom unit	1.3 persons	\$1,875.50	N/A	\$14.85	\$1,421.45
3-bedroom unit	2.5 persons	\$2,250.60	N/A	\$17.82	\$1,705.74
Residential housing	2.9 persons	\$4,126.10	N/A	\$32.67	\$3,127.19
Subdivision (per lot)	2.9 persons	\$4,126.10	N/A	\$32.67	\$3,127.19
COMMERCIAL DEVELOPMENT²					
		\$375.10/trip ³	\$16,334.75 per space ⁵	\$2.97/trip ³	N/A
RETAIL DEVELOPMENT²					
		\$375.10/trip ³	\$16,334.75 per space ⁵	\$2.97/trip ³	N/A
INDUSTRIAL DEVELOPMENT^{2, 4}					
		\$500.13/trip ³	N/A	\$2.97/trip ³	N/A

1. Rates for residential is based on occupancy rates. Residential housing includes semi-detached, townhouses, villas, etc
2. Rates adopted for commercial and retail development is based on employees which are counted as a "person". Rates are 1 employee per 20 m² for commercial, 1 employee per 40 m² for retail, and 1 employee per 80 m² for industrial.
3. Contribution is based on the trip generation rates shown in Table 4.1. If no rate is given, Council will determine a suitable rate based on traffic surveys, previous experience or accepted standards.
4. Industrial development is levied a 33% surcharge to take account of road damage by heavy vehicles
5. Contribution only payable for spaces not provided on site.
6. In order to determine the level of contribution payable for a proposed development, a pre-lodgement meeting with Council's Environmental Services Staff is recommended

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2. Introduction

2.1 Section 94 Contributions Plans

Section 94 of the *Environmental Planning and Assessment Act 1979*, (“the Act”) contains provisions that allows Council to impose conditions of consent on a development application or an application for a complying development certificate to require the dedication of land free of cost, or the payment of a monetary contribution, or both, in order to meet demand for public amenities and public services within the City of Dubbo.

Council can accept a material public benefit in part or full satisfaction of such a condition. A condition can also be imposed to partly or wholly recoup funds that have been spent if those funds were spent to provide for demand (or a component of that demand) ahead of that demand occurring.

There are a number of fundamental principles that Council is required to follow when imposing contributions under section 94:

- Council must establish a **nexus** (or direct relationship) between the need (or demand) created by a new development and the provision of public amenities and public services.
- The contributions must relate to or be imposed for a **planning purpose**.
- The contributions must be **reasonable** for the particular development.
- The contributions must be spent within a **reasonable time**
- The funds collected must be **accounted for** in a clearly identifiable manner and in the prescribed form and manner.

For Council to impose a condition under section 94, a contributions plan that complies with the above principles and clause 27(1) of the *Environmental Planning and Assessment Regulation 2000* (“the Regulation”) must be in place. That plan must also set out in detail the manner in which Council has arrived at and calculated the contribution. This Plan satisfies those requirements.

Note: Clause 27(1) of the Regulation provides that a contributions plan must include particulars of the following:

- (a) the purpose of the plan;*
- (b) the land to which the plan applies,*
- (c) the relationship between the expected types of development in the area and the demand for additional public amenities and services to meet that development,*
- (d) the formulas to be used for determining the section 94 contributions required for different categories of public amenities and services,*
- (e) the contribution rates for different types of development, as specified in a schedule to the plan,*
- (f) the Council’s policy concerning the timing of the payment of monetary section 94 contributions and the section 94 conditions that allow deferred or periodic payment,*
- (g) a works schedule of the specific public amenities and services proposed to be provided by the Council, together with an estimate of their cost and staging.*

2.2 How to Use this Plan

This Plan has five Sections and one Appendix as follows:

- **Section 1:** This section establishes the statutory framework of this Plan, including matters such as objectives, definitions, timing of payments, and any amendments to this Plan.
- **Section 2:** This section provides a summary of the contribution rates applicable to various types of development throughout the City.
- **Section 3:** This section sets out administrative and accounting procedures including instances where deferred or periodic payments may be permitted, works in kind that may be accepted in lieu of monetary contributions and sets out the manner by which Council will review contributions.
- **Section 4:** This section outlines future demand in the area which is used to determine the public services and public amenities to be provided under this Plan. This section also outlines the strategies that Council will follow for the provision of public amenities or public services throughout the City during the term of this Plan including the costs and staging of public services and public amenities. This section also includes the formulae that have been used to establish the rates for each of the public services and public amenities, as well as the rates themselves.
- **Section 5:** This section outlines the background documents and research that has been used in the course of the preparation of the Contributions Plan.
- **Appendix A:** This provides a more detailed assessment of growth, development and demand for the public services and public amenities identified in the Plan.

Council will allocate funds for the upgrading and establishment of public services and public amenities or public services in line with growth and development in the local government area (LGA), and in consideration of funds accrued for the various types of facilities and services.

2.3 Name of this Plan

This document is called the Section 94 Contributions Plan – Roads, Traffic Management and Car Parking (the “Plan”)

2.4 Objectives of this Plan

The objectives of the Plan are:

- (a) To provide a means by which the Council can implement the provisions of section 94 in respect of road upgrading, traffic management and car parking.
- (b) To ensure that adequate public amenities and public services are provided to meet the demand created by new development.
- (c) To provide a comprehensive strategy for the assessment, collection, expenditure, accounting and review of development contributions on an equitable basis.
- (d) To ensure that the existing community is not burdened by the cost of providing public amenities and public services required as a result of future development.
- (e) To enable the Council to be both publicly and financially accountable in its assessment and administration of this Plan.

2.5 Where Does the Plan Apply?

This Plan applies to all land within the City of Dubbo under the Dubbo Local Environmental Plan 2011 for the purpose of levying for road upgrading, traffic management and car parking facilities.

This Plan will apply to development applications or complying development certificate applications that requires the provision of, or which increases the demand for road upgrading, traffic management and car parking facilities in the City of Dubbo.

In particular, the following will be subject of a condition of consent that requires a relevant contribution by way of a monetary contribution, dedication of land, or provision of a material public benefit (or combination of these forms of contribution) for the relevant contribution:

- i) development which result in a net increase in dwellings; or
- ii) development where subdivision is involved which results in a net increase in the number of lots where the additional lot or lots are capable of being used for the purpose of residential, commercial, retail or industrial development; or
- iii) residential development carried out on land that is vacant, or is made vacant for the development to occur; or
- iv) development that involves commercial, retail or industrial floorspace that yields additional floor area; or
- v) development that intensifies a current approved commercial, retail or industrial use.

This Plan does not levy contributions on any development application for a change of use with a cost of works value equal to or less than \$100,000.

2.6 Relationship of this Plan to the Act, the Regulation and other plans

This Plan has been prepared under the provisions of section 94 of the Act and Part 4 of the Regulation. This Plan supplements the provisions of Dubbo Local Environmental Plan 2011 and any amendment or local environmental plan which may supersede it.

This Plan repeals the *Section 94 Contributions Plan Urban Roads (Amended 27 February 1995)* in its entirety.

2.7 Approval and commencement of this Plan

This Plan was originally approved by Dubbo City Council on 23 August 2004 and commenced on 1 January 2005.

2.8 Savings and Transitional Arrangements

A development application that is submitted after the commencement of this Plan shall be under the provisions of this Plan and any relevant strategies made under this Plan.

A development application which has been submitted prior to the commencement of this Plan but not determined shall be determined under the provisions of the contributions Plan which applied at the date of lodgement of the application.

A development consent that was determined under a previous Contributions Plan that has been repealed by this Plan will be subject to the rates that applied under that previous Plan (subject to CPI and other escalations as described in that Plan).

A condition of consent imposed by virtue of this Plan, which at the date of the repeal of this Plan is unpaid, shall be indexed and adjusted as if this Plan had not been repealed in the manner set out in this Plan.

2.9 Definitions

<i>“Applicant”</i>	means the person, company or organisation submitting a development application.
<i>“Contribution”</i>	means the dedication of land, the making of a monetary contribution or the provision of a material public benefit, as referred to in section 94 of the Act.
<i>“Contributions Plan”</i>	means a contributions plan referred to in Section 94B of the EP & A Act.
<i>“Council”</i> .	means the Council of the City of Dubbo
<i>“CPI”</i>	means the consumer price index (Price index for materials used in building – Other than house building, Catalogue Reference 6807.0) as published by the Australian Bureau of Census and Statistics.
<i>“DoP”</i>	means the then NSW Department of Planning (or its predecessor bodies), now known as Planning NSW.
<i>“Embellishment”</i>	means the enhancement of any public amenity or public service provided by the Council by the provision of services, facilities or works which would increase its carrying capacity or allow additional use.
<i>“Gross Floor Area”</i>	For the purposes of this Plan, means the sum of the area of each floor of a building where the area of each floor is taken to be the areas within the internal faces of the walls measured at a height of 144mm above floor level, excluding stairs, amenities, lift corridors and other public areas but including stock storage area.
<i>“LEP”</i>	means a local environmental plan made by the Minister under section 70 of the Act.
<i>“LGA”</i>	means the local government area of the City of Dubbo.
<i>“Recoupment”</i>	means the payment of a monetary contribution to the Council to offset the cost (plus any interest) which the Council has already incurred in providing public amenities or public services in anticipation of development.
<i>“Settlement”</i>	means the payment of a monetary contribution, the undertaking of a work in kind or the exchange of documents for the dedication of land required as a result of new development.
<i>“the Act”</i>	means the Environmental Planning and Assessment Act 1979, as amended.
<i>“the Regulation”</i>	means the Environmental Planning and Assessment Regulation 2000, as amended.
<i>“Works in kind”</i>	has the same meaning as a “material public benefit” as referred to in section 94(5)(b) of the EP & A Act and means the undertaking of work associated with the provision of a public amenity or public service in part or in full.
<i>“Works schedule”</i>	means the schedule of the specific public amenities or public services for which contributions may be required, and the likely timing of provision of those public amenities or public services based on projected rates of development, the collection of development contributions and the availability of funds from supplementary sources.

2.10 Payment of Contributions

Payment of monetary contributions should be finalised at the following stages:

Type of Application	When is Contribution Payable?
In the case of a consent for subdivision	<ul style="list-style-type: none"> (a) Before the subdivision linen plan(s) (subdivision certificate) are released to the applicant. (b) Where an Occupation Certificate must be obtained for the building – prior to its issue; and (c) Where an Occupation Certificate is not required – prior to occupation of the building.
In the case of a consent for development not involving subdivision but where a subsequent building Construction Certificate is required	<ul style="list-style-type: none"> (a) Where an Occupation Certificate must be obtained for the building - prior to its issue; and (b) Where an Occupation Certificate is not required – prior to the occupation of the building.
In the case of a consent for development involving both a subdivision and building works requiring a subsequent building Construction Certificate	<ul style="list-style-type: none"> (a) Before the subdivision linen plan(s) (Subdivision Certificate) are released by the Council to the applicant; or (b) Where an Occupation Certificate must be obtained for the building - prior to its issue; or (c) Where an Occupation Certificate is not required prior to the occupation of the building, <p>whichever occurs first.</p>
In the case of a consent for any other development	Prior to occupation/use of the development

3. Administration and Accounting

3.1 Deferred or Periodic Payments

The Council may accept the deferment of the payment of a contribution in respect of subdivisions subject to the following conditions:

- (a) Lodgement of an unconditional bank guarantee to cover the amounts of such contributions.
- (b) All money due as part of such contributions being payable within twelve (12) months from the date of uplifting of the plan of subdivision.
- (c) The proposal applies to subdivision releases of five (5) blocks or more, or development of an equivalent value.
- (d) The decision to accept a deferred payment is at the sole discretion of Council's General Manager or delegate.

3.2 Works in Kind

The Council may accept an offer by the applicant to provide an "in-kind" contribution or through provision of another material public benefit in lieu of the applicant satisfying its obligations under this Plan.

The following formula will be applied for works in kind contributions in lieu of Section 94 contributions:

$$C = VW$$

where

- C** - is the Section 94 contribution due
VW - is the value of the work in dollars

Council will only accept such alternatives provided the value of the works to be undertaken is at least equal to the value of the contribution that would otherwise be required under this Plan. The value of the works must be provided by the applicant at the time of the request and must be independently certified by a Quantity Surveyor who is registered with the Australian Institute of Quantity Surveyors or a person who can demonstrate equivalent qualifications.

Acceptance of works in kind is at the sole discretion of the Council. Council may review the valuation of works and may seek the services of an independent person to verify the costs. In these cases, all costs will be at the expense of the applicant.

3.3 Complying Development

This Plan specifically requires an accredited certifier to impose a condition of consent for the payment of a monetary contribution in the following circumstances:

- Where a development consent for a subdivision was issued by the Council prior to the adoption of a Section 94 Contributions Plan, and no section 94 contribution was paid, any development application for residential, commercial, retail or industrial purposes will be required to pay a contribution in accordance with this Plan.

3.4 Indexation of Contributions

It is the policy of the Council to review contribution rates at 1 July each year to ensure that the monetary contributions reflect the costs associated with the provision of the particular public facility. This is to ensure that the value of contributions is not eroded over time by movements in the Consumer Price Index (CPI).

Where a Section 94 contribution is not paid to Council in accordance with the timing as set out in the Plan, Council will increase the amount of the contribution in accordance with the formula as set out in the Plan.

The following formula will be applied for indexing all Section 94 contributions:

$$\text{Contribution at time of payment} = P \times \frac{\text{CPI}_2}{\text{CPI}_1}$$

where

- P** - are the original contributions as shown on the consent
- CPI₁** - is the “Consumer Price Index: Price index for materials used in building – Other than house building, Catalogue Reference 6807” available at the time of calculating P, (ie the amounts shown on the consent)
- CPI₂** - is the current “Consumer Price Index: Price index for materials used in building – Other than house building, Catalogue Reference 6807” available from the Australian Bureau of Statistics

3.5 Review of Contribution Rates

The Council will regularly review the contribution rates by reference to:

- (a) Changes in the capital costs associated with provision of administration and salary costs for Council’s officers by reference to increases in salary rates under the Local Government State Award;
- (b) Changes in the actual costs of the facilities in this Plan as provided by the Council; and
- (c) Changes in the capital costs of various studies required to support the strategies in this Plan by reference to the actual costs incurred by Council in obtaining these studies.

For the capital cost component of public facilities - to be reviewed on the basis of Consumer Price Index (CPI) - (Price index for materials used in building – Other than house building, Catalogue Reference 6807.0) as published by the Australian Bureau of Statistics for the previous quarter; and

For the land acquisition component of public facilities - to be reviewed on the basis of current land values as determined by Council on the basis of comparable land or by an independent valuer for the land which remains to be acquired.

The following formula will be applied for reviewing all Section 94 contributions:

$$\text{Total Reviewed Contribution: TRC} = \text{RCC} + \text{RLAC}$$

Where

- TRC** = Total Reviewed Contribution
- RCC** = Reviewed Capital Component = Capital x ((Latest CPI - Previous CPI)/ Previous CPI)
- RLAC** = Reviewed Land Acquisition Component = Cland + Rland

where

- Ccapital** - is the current total capital cost component;
- Current CPI** - is the consumer price index at the time of adjustment;
- Previous CPI** - is consumer price index for the quarter at the date of adoption of this Plan (for the initial adjustment) or applicable at the time of the previous adjustment;

Cland - is the total value of land which has already been acquired;
Rland - is the revised land value of the land which is yet to be acquired.

Note: In the event that the Current CPI is less than the Previous CPI, the Current CPI shall be taken as not less than the previous CPI

3.6 Flexibility in Imposition of Contributions

This Plan assumes particular land uses and traditional forms of development consistent with a wide range of urban forms. However, not all situations can be predicted and, from time to time, Council may receive applications which do not fit within these assumptions.

Council may consider adjustment or waiver of Section 94 Contributions (either in full or in part) as they apply to individual applications. The following are provided as example of such circumstances:

- (a) Where previous contributions have been paid on a particular property towards the planning need for which the contribution is to be levied and where it can be demonstrated that this can be attributed to the current development (ie that the demand for which the previous contribution was levied has not been realised and will be superseded by the current development application); or
- (b) Where a material public benefit has been obtained by council in lieu of a monetary contribution for the purposes outlined in (a) above; or
- (c) Where the applicant can demonstrate that the development does not generate demand for public amenities or services, or generates demand at a lower quantum than the rates set out in part 4 of this plan.

Council has a strong preference for a negotiated outcome. However, in the event that an agreement cannot be reached, Council will commission a competent consultant funded by the applicant to resolve the matter.

The Council will maintain a register of all variations to the adopted Section 94 levies to allow identification of the potential liability that the Council may be accepting in allowing such variations.

4. Strategy Plans

4.1 Future Growth and Development

4.1.1 Introduction

This section summarises the strategies that Dubbo Council intends to follow to cater for the needs of future population growth and development in the LGA in regard to the provision of adequate urban roads, traffic management and car parking facilities. The strategies described are intended as a statement of policy with regards to the demand for these public services and public facilities identified by Council in response to development within the LGA. While Council has the intention to accomplish these strategies, conditions or assumptions may vary beyond that envisaged by Council. Council reserves the right to amend these strategies in response to future changes. This may require the amendment of the CP which will occur in accordance with the provisions of the EP & A Act.

To arrive at contributions for different types of development for urban roads, traffic management and car parking facilities, the methodology adopted in the Plan is as follows:

- identify the types of existing development in Council's area;
- identify the urban road, traffic management and car parking facilities that serve each type of existing development and assess whether they are adequate;
- identify the expected types of new development;
- assess the demand for urban road, traffic management and car parking facilities that will be generated by each expected type of new development;
- determine the additional urban road, traffic management and car parking facilities that the Council proposes to provide; and
- apportion the demand for those additional urban road, traffic management and car parking facilities between existing and new development and between local and regional demands where these are relevant.

The following sections provide an outline of the anticipated growth and development in the LGA that will create demand for a range of public amenities and public services (refer Appendix A for more details). Subsequent sections examine the demand for each of the following types of public amenities and public services:

- Urban road improvements
- Traffic management
- Car parking facilities and services
- Administration

4.1.2 Description of Dubbo City

The City of Dubbo is situated about 400 kms north-west of Sydney. It is the focal centre of the Orana Region as both an agricultural centre and major service and retail centre. The urban area of Dubbo has an estimated population of around 36,000 (ABS, 2002). Population growth has levelled over the last five years, but is expected to increase again over the planning period. The majority of this development is expected to occur within the urban area of the LGA. The city has significant commercial, industrial and institutional base, and strong growth is expected in all of these sectors over the coming decade.

The Dubbo urban area is relatively well defined by existing residential development. The transport links within and between its various precincts divide the urban area into a series of precincts that generally radiate out from the city centre.

Urban development primarily comprises low density detached dwellings which account for approximately 85% of residential stock. The Council has identified residential precincts as follows:

- Central
- North
- North East
- East
- South East
- South
- West

The central precinct contains the existing town centre which provides the main retail, commercial and services functions of the City. A free-standing retail centre ("Orana Mall") is located east of the main town centre. Industrial development is largely concentrated around and in proximity to the railway line and major road links.

The existing urban area (including the Residential Fringe, Residential Cluster and Residential Country zones) are fragmented, particularly around the fringe areas. However, there is considerable scope for infill development and consolidation of activities while catering for urban amenity and rural sustainability. The urban areas will continue to be segmented and defined by major roads and railways.

4.1.3 Catchment Areas and Planning Zones

For the purposes of this plan, the Dubbo Urban Area, as shown in Figure 4.1 operates as a single catchment area for the roads upgrading and traffic management contributions.

In addition to development within this catchment, there are four Industrial Candidate Areas (ICAs) which have been defined by Council's Urban Development Strategy- Industrial Lands. These are 'greenfield' industrial sites and require urban road upgrades (as well as other infrastructure improvements) to become suitable for industrial development. They are currently in varying stages of release, but all of them are expected to develop over the life of this plan. Consequently, road and traffic management infrastructure is being provided ahead of the demand that will be created by this development.

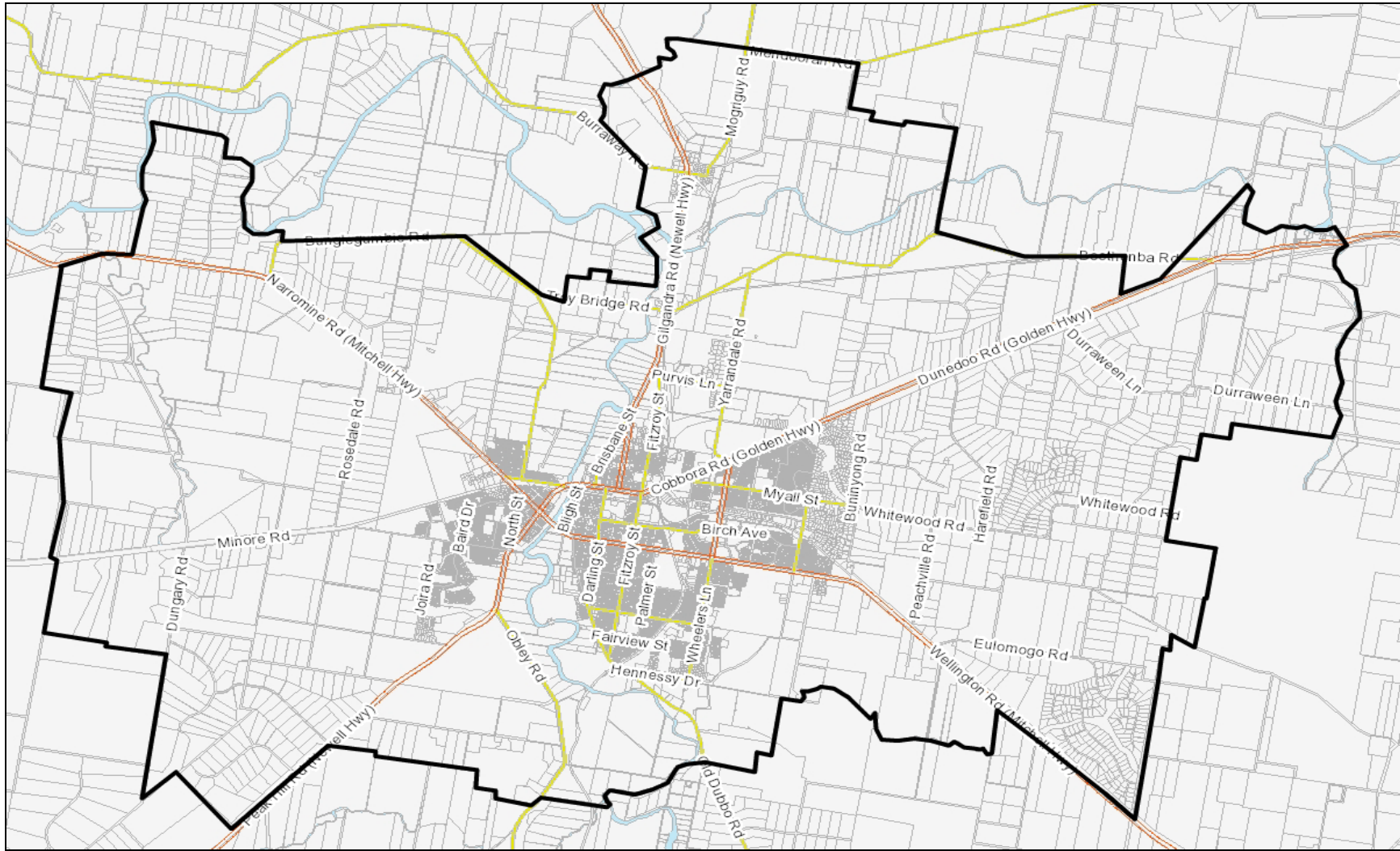


Figure 4.1 – Dubbo urban area map

4.1.4 Nexus

The strategies for provision of facilities and services made under this Plan must establish the nexus between the expected types of development in the area and the demand for additional public amenities and public services.

Each of the Public Facilities Strategies made under this Plan will provide a demonstration of nexus based on:

- the anticipated types of development in the Council area;
- the capacity of public facilities currently provided in the area;
- the anticipated demand for public facilities and infrastructure arising from the proposed development;
- the relationship between this development and the demand for additional public amenities and public services
- the contribution required by development to meet the anticipated demand; and
- the nature of the works proposed to be implemented from funds generated by the development.

The contribution rates for different types of development and the proposed works to satisfy those needs are summarised in Section 2 and the formulae to be used for determining contributions and the individual contributions are provided in this Section of this Plan.

4.1.5 Expected Development

Appendix A provides a detailed assessment of the expected development in the Dubbo LGA in the period 2002-2016.

Council has selected a longer planning period so that facilities with long lead times (eg second river crossing) can be accommodated in the planning period (2002 – 2016). Should population growth occur more slowly or quickly, it will mean that facilities will be required later or earlier than assumed in this Plan. Should these scenarios occur, a review of the Plan would be necessary.

In summary, the following development is expected in the planning period:

- The population capacity of all residential areas of Dubbo (ie existing and future) is approximately 60-70,000 persons which will be reached at some time in the future (dependent on growth rates, however, assumed at 15-20 years). The capacity of future residential areas within the city is approximately 25-35,000 persons. A figure of 30,470 is used in the plan for the future population growth to 2016.
- To achieve this population capacity, there will be need for a net dwelling increase of around 10,000 dwellings. It is anticipated that there will be another 6,200 dwellings to the year 2016.
- Development will occur in all areas of Dubbo although West Dubbo will gradually house a larger population base.
- The development of existing commercial and retail development will continue to occur in the CBD. It is anticipated that there will be an increase in floorspace of 45,000 square metres to 2016.
- Industrial development will occur in the existing zoned industrial areas as well as the Industrial Candidate Areas (ICAs) which will yield around 200,000 square metres of industrial floorspace in the period.
- Tourism growth will continue.
- The continuing development of institutional uses will occur.

The above growth will lead to increased demand for the following range of public amenities and public services:

- Road upgrading and improvement
- Traffic management facilities
- Provision of parking

This will also lead to increased administrative costs for the Council in planning for and provision of these public amenities and public services.

The following provides details of the strategies that Council intends to implement to cater to this demand. Specific demand for facilities is discussed in each section.

4.2 Roads Upgrading and Traffic Management

4.2.1 Nexus Issues

Dubbo is experiencing growth in residential, commercial and industrial development. For example, there are major urban release areas in both the south-eastern and western areas of Dubbo as well as smaller residential developments scattered throughout the LGA. In addition, the growth of the CBD will increase traffic in the inner areas of the city and create conflicts with pedestrian movement. Growth in commercial development (retail and office) in Dubbo CBD is expected to be in the order of 21,000m² gross floor area over the development period. Consequently, there is demand for road upgrading and traffic management measures to cater to this growth.

The four Industrial Candidate Areas (ICAs) have significantly increased industrial capacity within Dubbo networks. Development of these areas will also increase traffic on the state road system linking Dubbo to major population and urban centres.

The link between the expected types of development in these areas and the need for additional urban roads required to meet that need is based upon:

- Commercial/retail, industrial and residential development that supports the existing and projected population
- Assessment of the capacity of existing urban roads facilities
- Analysis of the extent of urban roads to meet the needs generated by the additional dwellings and industrial, retail and commercial floorspace growth.

A major resource in establishing nexus is the existing 1995 *Dubbo Council Section 94 Contributions Plan - Urban Roads*, the *Dubbo CBD Traffic and Parking Study Final Report* (PPK, 1998), the *Dubbo Expanded Urban Area Traffic Management and Road Contribution Study* (PPK, 1998), previous Council reports and studies, and various documents produced by the NSW Roads and Traffic Authority.

The development of the ICA's will be facilitated by the improvement of the road network and provision of additional traffic management facilities. These will be provided ahead of the demand that arise within these industrial areas. Consequently, Council will seek to recoup the costs of these improvements when industrial development proceeds.

4.2.2 Assessment of Existing Transport Networks

The *Dubbo CBD Traffic and Parking Study Final Report* (PPK, 1998) and the *Dubbo Expanded Urban Area Traffic Management and Road Contribution Study* (PPK, 1998) provide an analysis of the existing road network in the City of Dubbo. These studies have concluded that the existing road network is of sufficient capacity and of an appropriate standard to cater to the existing population and development.

These studies have also provided an assessment of the demand that future development will create and the potential needs that will arise from that demand for the upgrading and improvement of the road network.

The road network in Dubbo has generally experienced an increasing level of traffic growth over the last 10 years which has largely mirrored the spatial growth of population. The volume and characteristics of traffic growth and demand is directly related to land use. Manuals such as the *RTA Guide to Traffic Generating Development* clearly demonstrates the nexus between development and traffic increases. It also provides an indication of the magnitude of traffic generation by land use type. Commercial developments (particularly larger shopping centres) have a high traffic generating capacity. The development of the ICA's will also require considerable road works to accommodate increased traffic volumes as well as catering to heavy vehicles.

4.2.3 Traffic Generation Rates

Each use has a different trip generation rate, which is derived from the PPK reports as shown in Table 4.1. These rates are based on actual surveys (PPK, 1998) and are roughly in line with the rates nominated by the NSW Roads and Traffic Authority (*Guide to Traffic Generating Development*, 2000). These rates will be used to determine the contributions for individual land uses in the Dubbo area.

Table 4.1 Trip Generation Rates by Land Use

Land Use	Daily Trip Rate	Unit per
Aged housing	2	Dwelling
Child Minding Facility	3.7	Enrolment
CBD Commercial	25	100 m ² GFA ³
CBD Retail	48	100 m ² GFA
Factories covered by light industry	5	100 m ² GFA
Furniture Showroom	10	100 m ² GFA
Garden centre not included in Shopping Centre	40	100 m ² retail area
General Heavy Industry	1.5	100 m ² GFA
GP Surgery	50	100 m ² GFA
Hardware not included in shopping centre (500 m ² or greater)	20	100 m ² GFA
Hardware not included in shopping centre (<500 m ²)	80	100 m ²
Hospitality Facilities	50	100 m ² GFA
Licensed Clubs	100	100 m ² GFA
Medical Centres & Dentists	50	100 m ² GFA
Mixed Industrial Park	9.0	100 m ² GFA
Mixed Retail Showroom	40	100 m ² GFA
Motels	3	Unit
Motor Showrooms ²	5	100 m ² GFA
Other Office	16	100 m ² GFA
Recreation – Squash	25	Court
-Tennis	35	Court
- Gymnasium	45	100 m ² GFA
Residential housing ¹ .	11	Household
Residential Units	4 (1br) 5 (2 br) 6 (3br+)	Unit
Restaurant	60	100 m ² GFA
Retail Tyre Outlets	10	100 m ² GFA
Schools	0.7	Enrollment
Service station	200	Pump
Shopping Centres, < 10,000m ²	67	100m ² GFA ²

Land Use	Daily Trip Rate	Unit per
Shopping Centres, > 10,000m ² , < 20,000m ²	43	100m ² GFA ²
Shopping Centres, > 20,000m ²	35	100m ² GFA ²
TAFE College	1.8	Enrolment
Taverns, Hotels	110	100 m ² GFA
Warehouses	4	100 m ² GFA

Source: Dubbo City Council; NSW Roads and Traffic Authority

Notes:

1. Residential housing includes semi-detached, townhouses, villas, etc
2. GLA for Motor Showrooms includes any external display areas.
3. GFA is Gross Floor Area
4. Some situations may not fit these categories and accordingly the trip generation will have to be determined based on calculated generation rates.

Table 4.2 outlines the anticipated traffic growth for the road network based on the above trip generation rates. The increases in traffic are based on population growth discussed earlier (refer also Appendix A).

An overall increase in two-way vehicle trips of 126,096 directly attributable to residential, commercial/retail and industrial land use expansion was expected to occur over the 20 year period from 1996-2016. This is in addition to the baseline growth of local traffic from existing uses (due to changes in household travel patterns) and growth in through traffic expected to occur over the same period. Similarly, growth in traffic movements from institutional, utility and tourist uses is not accounted for in the above figures. The above growth in traffic movement numbers and consequent additional demand for urban road upgrades and expansion is directly attributable to new development.

Table 4.2: Predicted Trip Generation: Dubbo 2002-2016

Development Type	Additional Floorspace (sq metres)	Number of Additional Residential Dwellings	Existing Two-way Vehicle Trips 1996	Future Two-way Vehicle Trips 2016	Additional Two-way Vehicle Trips 1996-2016 ⁴
Residential	N/A	6,200	132,127	202,590	70,463
Industrial (existing zoned)	161,000	N/A	42,285	56,952	14,667
Industrial (ICA's) ¹	200,000	N/A	0	18,000	18,000
CBD Retail and Commercial ²	21,200	N/A	51,000	69,000	9,566
Neighbourhood Centres	23,850	N/A	32,600	46,000	13,400
Total ³	206,050	6,200	258,012	392,542	126,096

Source PPK, 1998; Connell Wagner, 2002.

Notes:

1. ICAs have been included in the traffic estimate.
2. Two way trip total for CBD includes around 18,170 square metres of existing floor space.
3. Additional trips generated by future commercial/retail, industrial, residential uses only. Overall traffic growth for city is higher due to external trips from traffic outside Dubbo.
4. While traffic growth has occurred in the period 1996-2002 which would have reduced the additional 2 way trips, road works that the Council has been carrying out since 1996 will be recouped so the use of 1996 figures remains valid.

4.2.4 Apportionment of Works

The previous reports on roads and traffic management facilities prepared on behalf of the Council have concluded that existing urban roads facilities are adequate for the traffic flows. The proposed works schedule is based on the road upgrading needs only of the future population and employment area growth. Any works that may cater to the existing population have been apportioned before insertion into the works schedule. Consequently, as the proposed works are solely to cater to future development, there will be no apportionment for these facilities and incoming development will be responsible for the future works

4.2.5 Costing of Improvements and Calculation of Contributions

Preliminary costs have been estimated by the Council for all proposed urban roads and traffic management works, based on current construction costs within Dubbo.

The works schedule includes all costs that are to be borne by future development. In the case of highway works, these costs are exclusive of RTA grants which will be used to cater to through traffic needs or to address such issues as “black spots” or other such traffic needs. Costs for highway works is attributable to future local traffic needs such as intersection treatments/improvements which are to be met by the Council. These costs will be indexed over time and will be reviewed regularly to ensure that they accurately reflect actual costs at the time of construction. Table 4.3 outlines the estimated costs for the various works discussed above.

The contributions rates for urban roads and car parking are based on the apportioned demand between the various uses. Funds are to be carried over from the existing CP for Urban Roads where full collection of the works has not occurred.

The formula for urban roads and traffic management facilities for development in Dubbo is:

$$\text{Contribution} \quad C \quad = \quad \frac{TC}{NT}$$

Where:

- C is the Section 94 levy expressed as a per trip contribution
- TC is the total cost of the work (including the cost of previous Plan works and any land acquisition costs)
- NT is the total number of new trips in the City

Thus,

$$\begin{aligned} \text{Contribution} \quad C &= \frac{\$47,299,000}{126,096} \\ &= \$375.10/\text{trip} \end{aligned}$$

Table 4.3: Road Upgrading Requirements

WORKS	ROADS	APPORTIONED COST (\$ '000)
Road Widening/Upgrades	<ul style="list-style-type: none"> • Cobbora Road • Wheelers Lane • Victoria Street/Whylandra Street traffic signals • Minore Road • Wingewarra Street • Newell Highway deviation • Richardson Road upgrading • Coreena Road upgrading • Boothenba Road Upgrading • Newell Highway widening • Mitchell Highway widening • Boundary Road widening • Fitzroy Street widening • Sheraton Road widening • Troy Bridge Road Upgrade • Cobra Street widening 	12,995
New Roads	<ul style="list-style-type: none"> • Cobra Street to Bligh Street link • Bligh Street extension • Realignment of Mendooran Road • Wheelers Lane/Yarrandale Road Link • Internal loop roads to industrial areas • New river crossing 	12,190
Level Crossings	<ul style="list-style-type: none"> • Wheelers Lane • Sheraton Road • Muller Street • Mendooran Road • Cobbora Road • Purvis Lane • Yarrandale Road 	2,813

WORKS	ROADS	APPORTIONED COST (\$ '000)	
Traffic Management	<ul style="list-style-type: none"> • Murrayfield/Websdale • Wheelers Lane • Myall/Buninyong/Whitewood • Gipps Street - Edwin/Myall • Sheraton Road 	<ul style="list-style-type: none"> • Victoria/Cobra Street • Myall/Darling Street • Windsor Parade • Minore Road/Joira Road 	43
Intersection improvements	<ul style="list-style-type: none"> • Whylandra Street/Thompson Street • Bligh Street/Wingewarra Street • Bultje Street/Bligh Street • Fitzroy Street/Cobra Street • Cobbora Road/White Street • Newell Highway/ Minore Road • Erskine Street/Brisbane Street • Newell Highway/Baird Street • Cobbora Road/Wheelers Lane • Baird Street extension/Bligh Street • Bligh Street/Macquarie Street • Newell Highway/Obley Road 	<ul style="list-style-type: none"> • Wingewarra Street/Darling Street • Newell Highway/ Camp Road • Mitchell Highway intersections • Airport roundabout • Newell Highway/Mogriguy Road • Boothenba Road/Golden Highway • Newell Highway/Boothenba Road • Mitchell Highway/Eulomogo Road 	19,258
TOTAL			47,299

Notes:

1. The works include \$630,000 of uncollected works that remain from the 1995 Section 94 Plan.
2. All costs are preliminary and subject to detailed review after concept plans prepared.

There will also be an additional surcharge on industrial traffic arising from the additional impact that heavy vehicles have on the life of road pavements. For example, the life of road pavements are typically measured as a function of usage. This is known as an Equivalent Standard Axle (ESA) which is equivalent to a small truck.

The life of a road pavement varies typically between 4×10^5 to 1×10^6 ESA's. In other words, a road will require total rehabilitation (rebuilding) after 4,000,000 to 10,000,000 ESA's have traversed it.

A standard T44 articulated semi-trailer vehicle is equivalent to 3.26 ESA's. Therefore, it will reduce the road pavement life at roughly 3 times the rate of a standard ESA. However, not all the traffic generated by industrial development will be semi-trailers (eg, a proportion may be light vehicles of employees). Consequently, it has been assumed that one third of industrial traffic comprises vehicles in excess of 1 ESA. Therefore, industrial traffic will have a 33% surcharge on top of the per trip levy to account for this additional road damage arising from heavy vehicles.

Based on the adopted trip generation figures in Table 4.1, the Section 94 contributions are as follows:

Table 4.4: Contributions – Roads Upgrading and Traffic Management

Land Use	Contribution Rates ¹
Residential housing	\$560.00/trip OR \$4,126.10/ standard housing ⁴ .
Commercial	\$373.10/trip ⁴ .
Retail	\$373.10/trip ⁴ .
Industrial	\$498.13/trip ⁴ .
Other uses	As per relevant trip generation rates

Notes:

1. Other land uses will be levied according to the traffic generated by the use (refer Table 4.1)
2. A standard dwelling is a detached 3 bedroom dwelling with an occupancy of 2.9 persons. This may comprise a detached house, semi-detached dwelling, townhouse, etc.

3. Contribution is based on the trip generation rates shown in Table 4.1. If no rate is given, Council will determine a suitable rate based on traffic surveys, previous experience or accepted standards.
4. The contribution rates have been updated reflecting the Council-adopted rate for the 2015/2016 financial year.

The contributions will be sought for the following types of development that generates urban roads demand and leads to demand for improvement or upgrading of existing or roads and traffic management measures within the urban area:

- Residential development
- Industrial development
- Commercial development
- Retail development
- Neighbourhood centre development.
- Other development as appropriate.

This Plan does not levy contributions on any development application for a change of use with a cost of works value equal to or less than \$100,000. Dubbo City Council will provide by way of subsidy to the Plan the expected shortfall in contributions to ensure works included in the Plan can continue to be delivered.

The contribution is proposed to be imposed according to the demand generated (viz urban roads demand) by each of the uses. This will be based on urban roads figures that are generated from the *Dubbo Expanded Urban Area Traffic Management and Road Contributions Study, 1998*.

Development that creates demand for road upgrading will be assessed on the basis of the traffic that it generates.

4.3 Car Parking

4.3.1 Nexus Issues

Dubbo CBD and Orana Mall are the only centres where there are larger retail and commercial centres and, consequently, where there is significant demand for car parking.

The link between the expected types of development in the CBD area and the need for additional car parking required to meet that need is based upon:

- Commercial and retail development that supports the existing and projected population, as well as travellers and tourists
- Assessment of the capacity of existing car parking facilities
- Analysis of the extent of car parking to meet the needs generated by the additional retail and commercial floorspace growth.

A major resource in establishing nexus is the *Dubbo CBD Traffic and Parking Study Final Report* (PPK, 1998), the *Dubbo Expanded Urban Area Traffic Management and Road Contribution Study* (PPK, 1998), previous Council reports and studies, and various documents produced by the NSW Roads and Traffic Authority.

4.3.2 Car Parking Demand

Demand for car parking is a function of increased population growth and new retail/commercial development. Table 4.5 shows the projected retail/commercial development anticipated in the CBD (land zoned B3 Commercial Core in the Dubbo Local Environmental Plan 2011) where Council provides car parking and demand for additional off street (Council provided) is expected.

Table 4.5: Car Parking Demand¹

Location	Additional retail floorspace (m ²) (2001-09)	Additional commercial floorspace (m ²) (2001-09)	Car Parking Demand ¹ (2001-09)
Dubbo CBD	18,000	3200	472 Spaces

Notes:

1. Based on estimates provided in *Dubbo CBD Traffic and Parking Study*, PPK Environment & Infrastructure 1998.
2. Equates to 75 percent of total demand.

The CBD is relatively large for the size of the urban area and has a large external catchment extending beyond the city to surrounding rural areas. Demand for improved management of on-street parking to increase turnover of short-stay spaces (an additional 363 short term spaces are required) has also been identified as a requirement to accommodate new development within these centres. On-street parking is currently often at capacity under present arrangements in core precincts of the CBD.

The provision of additional off-street spaces will satisfy the needs for additional parking within the CBD, by allowing re-allocation of on street spaces to short term arrangements in the core retail precinct. This relates to car parking demand generated by commercial/retail development.

A multi-level car parking structure is proposed to meet the overall demand for additional car parking in the CBD over to 2016 (in conjunction with proposed parking management measures). However, this facility is not required in the short term (ie, within the next 5 years) and an interim surface carpark is proposed on the same site. The proposed car park site has been acquired by Council in anticipation of future demand. 113 of the proposed total 472 spaces will be provided by the interim surface carpark.

4.3.3 Apportionment of Works

The existing car parking facilities are adequate for the existing development in the applicable centres. As the proposed works are solely to cater to future development, there will be no apportionment for these facilities and incoming development will be fully responsible for the future works.

4.3.4 Evaluation and Costing of Improvements

The following standard rates have been applied to the development of car parking (exclusive of land costs):

- Ground level - \$1,500 per space
- Multilevel - \$15,000 per space

Table 4.6 outlines the potential costs for the various options discussed above.

Table 4.6: CBD Car Parking Acquisition and Construction Costs¹

Area	Works	New Development Responsibility (%)	Apportioned Cost (\$ '000) ¹	Number of new spaces
Dubbo CBD	3 Storey Parking Structure	100	7,080	472
	Land Acquisition	100	450	-
	Intermediate surface carpark ²	100	180	113
Total		100	7,710	472

Notes:

1. All costs are preliminary and subject to detailed review after concept plans prepared. Based on Rawlinsons Cost Guide, 2002.
2. Intermediate surface carpark to be provided prior to multi-level structure being constructed. Includes construction and contract administration

The formula for car parking in Dubbo CBD is:

$$\text{Contribution} = \frac{\text{TC}}{\text{NC}}$$

Where:

TC is the total capital cost of the work for new spaces including land acquisition
 NC is the total number of additional car parking spaces created in facility

Thus,

$$\begin{aligned} \text{Contribution} \quad C &= \frac{\$7,710,000}{472} \\ &= \$16,334.75/\text{space} \end{aligned}$$

Based on the works schedule for the area, the Section 94 contributions are as follows:

Table 4.7: Contributions – Car Parking Facilities

Catchment	New spaces	Contribution Rates ¹ (per space)
Dubbo CBD	472	\$16,334.75

Note:

1. includes works and land acquisition

The contributions will be sought for the following types of development that generates car parking demand and leads to demand for improvement or upgrading of existing or future car parks and parking management measures within the urban area:

- Commercial development
- Retail development.
- Other land uses where appropriate.

The contribution is proposed to be imposed according to the demand generated (viz car parking demand) by each of the uses. This will be based on car parking figures that are adopted by Council in the current parking policy code or any subsequent parking policy or DCP.

4.4 Administration

The preparation and ongoing administration of the Contributions Plan requires the provision of additional resources to ensure that this Plan is effective and achieves the intended purpose. It is appropriate that Council recovers this cost.

The purpose of the Administration Levy is to ensure that the provisions of this Contributions Plan are implemented in an efficient and sustainable manner having due regard to the information available to the Council at the time, the provisions of this Plan and legal parameters.

The costs for the administration of the Section 94 Plan includes:

- Provide advice to applicant and the general public regarding the operation the plan.
- Administration of the Contributions Plan and ensure that the contributions are used to provides the public facilities for which they were intended.
- Monitor the receipt and authorise the expenditure of cash contributions in respective trust accounts and the recoupment of costs already met.
- Assess any “works in kind” proposed in partial or full satisfaction of a contribution.

- Monitor the dedication and development of land contributions.
- Monitor and program works identified in the works schedule.
- Regularly review the works schedule in accordance with the levels of contribution received and expended, and seek Council's adoption of these.
- Regularly review the rates for contribution in accordance with construction costs, land valuations, levels of demand, population and demographic changes and recommend to Council amendments where necessary.
- Undertake additional investigations to cost facilities, review traffic studies and determine demands from specific land uses proposals.
- Determine the appropriate time for provision of public facilities having regard to the works schedule, the availability of funds, demand generated by development, the time funds have been held, expected additional funds, alternative funding sources and maintenance implications.
- Monitor the implications arising from development including the demands created for additional facilities for which contributions are not currently sought, the needs of specific one off developments, the costs of development and land acquisition, the extent and type of development and the effect of this on the works schedule.
- Advise Council of appropriate management, expenditure and policy implications regarding development contributions including those arising from legal decisions and State Government policy.
- Determine the extent of recurrent costs and assess the implications to council to provide these.
- Assess whether a credit or reassessment of the contribution may be appropriate and how that may be determined.
- Prepare and make available the necessary information required by the Regulations including the Contributions Register, input to Councils annual financial report and the annual statement for the Contributions Plan in force.
- Seek legal advice, provide evidence and attend to Land and Environment Court hearings on appeals relating to the imposition of contributions.

These costs are the direct result of the administration of the Section 94 Contributions Plan. As these are a cost to the Council, the Council has the ability to recover some or all of these costs through Section 94 levies. Only that proportion of the costs that are borne by Council that are the direct result of administration of Section 94 are included. These have been capitalised across the life of this Plan.

The cost of assistance in plan review/preparation, studies to ascertain demand and to ensure fair and equitable apportionment as well as the costs for obtaining independent valuation and legal documents associated with works in kind are all costs to the Council in the administration of the Section 94 Contributions Plan. The costs of professional fees are less predictable and, therefore, the costs of these works have been capitalised over the life of the Plan.

4.4.1 Apportionment of Works

The future administration of the Section 94 functions is solely for future development. The capital costs associated with the administrative centre have been apportioned and separated from other costs associated with the centre that house Councils other functions. There is no apportionment of the capital costs associated with salaries, administrative and professional costs and incoming development will be responsible for these costs.

4.4.2 Calculation of Contributions

The costs for the administration of the Section 94 CP is as follows:

- Salaries and administrative costs - \$25,000 per annum x 5 years = \$125,000
- Professional costs - \$50,000 per annum x 5 years = \$250,000

The formula for the administrative contribution is as follows:

$$C = \frac{S + P}{NT}$$

Where: C is the Section 94 levy expressed as a per person contribution
 S is the salaries and administrative cost
 P is the professional costs
 NT is the total number of new trips in the City

Thus,

$$C = \frac{125,000 + 250,000}{126,096}$$

$$= \$2.97/\text{trip}$$

Table 4.8 sets out the contributions for each development type.

The contribution will be sought for the following types of development that generates demand for the administration of the Section 94 Plan:

- Residential development of all types.
- Commercial and retail development in Dubbo CBD.
- Neighbourhood centre development.
- Industrial development.
- Other development as appropriate.

The levy will be imposed according to the demand generated by each of the uses. This will be based on the occupancy rates for various dwelling types as established by the Australian Bureau of Statistics census figures or by the additional gross floor area for commercial and retail development.

Table 4.8: Contributions – Administration

Development Type	Contribution (per trip)
Residential	\$5.30/trip
Commercial	\$5.30/trip
Retail	\$5.30/trip
Industrial	\$5.30/trip

Note: The administration component shown above is the Council-adopted rate for the 2015/2016 financial year.

5. Supporting Documents

This Plan has been supported by extensive assessment of population growth and development in the Dubbo local government area. This has allowed determination of the long term needs of the future population to fulfil the nexus and reasonableness criteria.

This Contributions Plan has been compiled with reference to the guidelines provided from the following essential documents:

- Department of Urban Affairs and Planning, *Section 94 Manual*, 1997
- DUAP Review of Section 94, 1999
- Urban Development Institute of Australia, *Review of Section 94, Submission to the Department of Urban Affairs and Planning*.
- Local Government and City Association of New South Wales, *Review of Section 94, Submission to the Department of Urban Affairs and Planning*.
- Dubbo City Council, *Dubbo City Local Environmental Plan 1998*
- Dubbo City Council, *Dubbo Section 94 Contributions Plan-Urban Roads* 1995, Dubbo City Council 1995
- Dubbo City Council, *Dubbo Section 94 Contributions Plan-Open Space and Recreational Facilities* 1998, Dubbo City Council 1998
- Dubbo City Council, *Dubbo Urban Development Strategy*, 1996
- Dubbo City Council, *Dubbo Local Environmental Plan 1998 – Urban Areas*
- Dubbo City Council, *Standards for Off Street Parking of Motor Vehicles*,
- PPK Environment & Infrastructure, *Dubbo Expanded Urban Area Traffic Management and Road Contributions Study*, 1998
- PPK Environment & Infrastructure, *Dubbo CBD Traffic and Parking Study*, 1998
- TEC, *A Traffic Management and Road Contribution Study*, 1993.
- Various Council reports.

APPENDIX A

ASSESSMENT OF GROWTH AND NEEDS: DUBBO CITY COUNCIL

A.1.1 Past Growth

Table A.1 indicates the past population growth in the City. Dubbo City has experienced growth of 1.5 percent per annum over in the period 1991 to 1996 (the last census for which complete data are available). Dubbo City experienced a 0.68 percent per annum increase in population, from 1996-2001, which represents a decline in the growth rate of the previous intercensal period. In addition to the population increase, the number of households has increased further due to declining occupancy rates. Figure A.1 shows these trends as well as the proportion of the total population under 17 years of age (as this figure decreases, average dwelling occupancy also decreases) and the total number of migrants.

At the 2001 census Dubbo City Council had a total population of 37,479. An Estimated Residential Population for December 2001 has been made by the Australian Bureau of Statistics (which includes usual residents who were outside the Local Government Area on census night) and places the permanent population of Dubbo at 37,998 (refer Table A.1).

Table A.1: Total Population (ABS, 1996)

Year	Population (excluding rural areas)	Annual Average Growth Rate (%)
1981 (ABS)	27,760	-
1986 (ABS)	28,594	1.34
1991 (ABS)	32,107	1.96
1996 (ABS)	35,876	1.50
2001 (ABS) ¹	37,998	0.68

Source: ABS, 1996, 2002; Dubbo City Council, 2001

Notes:

- 2001 population figure based on ABS Estimated Residential Population figure for December 2001, using preliminary Census counts from the 2001 Census.

A.1.2 Housing Trends

Table A.2 provides a profile of housing statistics for Dubbo City in 1996. Dubbo LGA is characterised by a large number of separate private dwellings and a smaller number of low to medium density housing types while other dwellings (such as caravan parks and improvised homes) accounts for a smaller proportion round 7.0% of the stock. The average occupancy rate for Dubbo LGA is 2.74 persons/dwelling (ABS, 2002) and is reflective of the NSW State average of 2.67 persons/dwelling.

Table A.2: Housing Stock and Occupancy Rates, Dubbo City 1996

	Occupied Dwellings	Unoccupied Dwellings	Total	No. in occupied dwellings	Occupancy Ratio
Separate House	10379	577	10956	30704	2.96
Semi-detached/terrace/ townhouse	582	70	652	1136	1.95
Flat, Unit, or apartment	1148	178	1326	1852	1.61
Other	378	22	400	742	1.96
Not Stated	191	108	297	511	2.67
TOTAL	12678	953	13631	34945	2.76

Source: ABS, 1996.

Occupancy levels have stabilised and it is assumed that the current occupancy levels for most forms of housing will continue in the short term. The low occupancy levels for units is likely to rise slightly as this form of medium density housing is increasing as an alternative housing type.

Based on the above table, the following occupancy rates have been adopted for the purposes of this Plan:

- 1-bedroom unit 1.0 person
- 2-bedroom unit 1.3 persons
- 3-bedroom unit 2.5 persons
- 3-bedroom dwelling 2.9 persons
- Subdivision 2.9 persons

The occupancy rates for dwelling types are to be reviewed on a five-yearly basis to reflect changes in household structure over time. This will ensure that contributions remain appropriate over the planning horizon to 2016.

A.1.3 Future Population and Housing Growth

The population of the city is expected to grow over the longer term, and growth rates are expected to increase again following the flatter period of recent growth. Dubbo Council has prepared forecasts of future dwelling activity within the City, from which estimates of population growth can be drawn. Based on these strategies a population capacity for the urban area can be established. Council has indicated that the population capacity of future residential areas is approximately 25-35,000 persons.

Growth in the Dubbo City area will be based on an assumed level of development of current residential land with subdivision potential together with increased densities through medium density housing such as semi-detached and multi-unit/mixed use development in areas where permitted under existing development controls. Council maintains a 10 year development 'pipeline' to ensure an adequate and affordable supply of land to accommodate expected development, and monitors take-up of subdivided land to ensure that additional land is available on a timely basis. At present, the future residential areas provide for around 20 years supply.

The types of development that will occur to house the capacity residential population include detached dwellings, infill development, townhouses and medium density development. For the purposes of this CP, the following breakdown of these forms of housing have been determined based on projected dwelling approvals and with reference to differential occupancy rates for urban and rural areas:

- Detached dwellings – 82% of total new housing stock
- Townhouses, terraces, semi-detached – 9% of total new housing stock
- Medium density/apartments – 9% of total new housing stock

The following areas are expected to experience the most significant growth in the next twenty years:

- Eastern edge of urban area, east of Sheraton Rd, bounded by the Railway line to the North and Mitchell Highway to the south
- South east of CBD, in the block bounded by Boundary Rd, Margaret Crescent, Hennessy Lane and Wheelers Lane
- South east of CBD, bounded by Mitchell Highway to the north, Wheelers Lane to the west and Sheraton Road to the east
- South eastern edge of Urban boundary - large area to the east of Wheelers Lane, south of Boundary Rd
- Western edge of Urban area, north of Minore Road
- West of Delroy Gardens, bounded to the west by Joira Rd and south of Minore Road

- North of Thompson Street bounded by Bunglegumbie Road and Macquarie River

It is likely that projected population growth will continue and it is envisaged that the growth pattern over the short to medium term will essentially remain linear. The land currently zoned for residential development can potentially accommodate some 10,000 lots, equivalent to approximately 20 years growth. Consequently, the Section 94 Plan can be applied with reasonable accuracy.

Future development is expected to comprise detached, low-density residential development in newer developing areas (refer Table A.3). This table shows catchment areas to be developed for road works purposes and allows the works schedule for the Plan to be targeted to priority areas. It also allows the works schedule to transparently demonstrate the extent and spatial distribution of growth.

Development in the commercial, retail, industrial, agricultural and tourist sectors is also expected to continue. Again, this allows demonstration of nexus and apportionment to be demonstrated in the Plan.

Council has determined that it will be necessary to plan for the total population capacity (ie 60-70,000 persons) so that facilities with long lead times (eg second crossing) can be accommodated in the planning period (2002 –2016). Should population growth occur more slowly or quickly, it will mean that facilities will be required earlier or later than assumed in this Plan. Should these scenarios occur, a review of the Plan would be necessary.

There is a relatively even distribution of the population within all age groups which is expected to continue. It is predicted that the proportion of people aged less than 18 years and immigrants will grow by around 0.5% per annum as opportunities for youth increases (especially the quantum and quality of education opportunities) while increased industrial and tourism development will increase immigration by around the same amount.

This residential development will create demand for provision or upgrading the following facilities and services:

- Roads and traffic management facilities
- Car parking facilities

A.1.4 Commercial Development

The LGA has commercial centres that provide for the needs of residents and those visiting the area. The main areas of commercial and retail development with potential for future growth are:

- *Dubbo CBD* – This is the main regional commercial centre for the Orana Region. The CBD commercial area is generally bounded by Bligh Street, Cobra Street, Darling Street and the Main Western Railway Line. The total gross floor area within the 3(a) zone is approximately 160,800 square metres, of which 62,100 square metres is retail space and 58,450 square metres is commercial (PPK, 1998).
- *Neighbourhood Centres*- Dubbo has a number of neighbourhood centres including highway ‘strip’ developments that cater for local needs and highway servicing/bulky goods needs.

The types of uses that will occur to accommodate development will include retail shops, small shopping centres, commercial offices and other similar floorspace in the CBD. The additional floorspace and its location is set out in Table A.3.

This development will create demand for provision or upgrading the following facilities and services:

- Car parking facilities and parking management facilities

- Urban Roads improvements

The extent to which the above development will create the demand for each of these facilities and services is outlined in following sections. With respect to road upgrading, it is recognised that there will be dual purpose trips between residential properties and retail, commercial and industrial development. This has been recognised in the calculation of the levies through a reduction in the overall levy.

Table A.3: Commercial Development Figures¹.

Location	Development Type	Floorspace ²		
		Existing	Additional to 2016	Total 2016
Dubbo CBD	Commercial	58,444	3200	61,644
	Retail	62,089	18,000	80,089
	Other	40,288	-	40,288
	Total	160,821	21,200	182,021
Neighbourhood Centres	Commercial/Retail	53,062	23,850	76,912

Source: PPK, 1998

Note:

1. The above figures do not commit Council to approval of any particular development
2. Floorspace is calculated using Gross Floor Area

A.1.5 Industrial Development

The Dubbo Industrial Areas Development Strategy (1997) notes that the size of Dubbo's industrial sector is deficient in terms of both the economic base and employment profile relative to other regional centres. Industrial activity has been primarily concentrated in the service sector with little manufacturing activity, including processing of agricultural produce from the region. Forty percent of all industries in Dubbo employed less than five persons at the time of the 1996 Census.

Table A.4: Industrial Development – Including ICAs

Area	Uses	Area	Proportion (%)
ICA 1	Zoned Special Business	41ha	8.6
	Zoned Light Industry	56ha	11.7
	Zoned Special Industry ¹	204ha	42.8
	Future Industry	176ha	36.9
	Total	477ha	100
ICA 2	Zoned General Industry ²	86ha	
	Zoned General Industry	125ha	50
	Zoned light Industry	18ha	7.2
	Zoned institution ³	15ha	6
	Future Industry	92ha	36.8
	Total	250ha	100
ICA 3	Special Industry ⁴	64ha	7.3
	Future Industry	812ha	92.7
	Total	876ha	100
ICA 4	Future Industry	136ha	100
	Total	136ha	100

Source: Dubbo City Council

Notes:

1. Existing Quarry
2. Existing Correctional Centre
3. Existing businesses operating
4. Existing Boral Quarry

These historical factors have contributed to a latent demand for industrial use within the region which is beginning to be realised. In recognition of this situation, Council has identified a number of "Industrial

Candidate Areas” (ICAs) to develop for industrial purposes. These ICAs will significantly increase the amount of zoned and serviced industrial land available within Dubbo to cater for anticipated growth within the industrial sector over the development period to 2016 (refer Table A.5).

Due to Dubbo's good transport accessibility, transport-related industries are likely to play a significant part in future growth, as reflected in the Industrial Areas Development Strategy. Location of such industries within Dubbo will place increased demands on the transport and traffic management infrastructure.

In 1996, Dubbo had 1,249,493m² of gross floorspace in industrial zones, of which 586,600 m² is considered traffic-generating. By 2016, this was expected to increase to 1,410,593 m², of which approximately 700,000 m² would be traffic generating. This represents an average growth rate of 1.7 percent per annum over the development period, and includes likely development of the Industrial Candidate Areas over this period.

Table A.5: Industrial Floorspace Development Projections¹.

Floorspace	1996			2016	
	Inside	Outside	Total	Additional	Total
General Industrial	351,6558	186,190	537,845	159,600	697,445
Retail in Industrial Areas	48,976	-	48,976	1,500	50,296
Sub-Total	400,451	186,190	586,641	161,100	747,741
Non- Trip Generating Areas	120,911	541,941	662,852	-	662,852
TOTAL	521,362	728,131	1,249,493	161,100	1,410,593

Source: PPK, 1998

Note:

1. Floorspace is calculated using Gross Floor Area

There is an existing amount of retail use within industrial zones in Dubbo, which has arisen from historic circumstances, and which is expected to remain static, or to decline (by changing use to industrial). As these uses are long-established, the amount of retail floorspace has been held static to account for other non-conforming retail uses establishing on these sites.

A.1.6 Major Institutions

The major institutions in the study area consist of the airport, the University campus's (ie Uni and Medical school), Orana Community College, Western College of Education, all Dubbo High schools, Dubbo Base Hospital, Lourdes Hospital, Dubbo Private Hospital, the Saleyards and Dubbo Zoo. These special zones will also generate traffic and have been taken into account for the traffic assessments.

A.1.7 Population and Employment Growth

Table A.6 outlines the population and employment growth in the period to 2016 in the Dubbo LGA. This growth will be significant and will lead to additional traffic on the existing road network.

The figures provide the population capacities for future residential areas. This development may occur over a 10-15 year period depending on the rate of development growth.

Growth in employment is based on the existing zoned areas and development projections made in previous reports (PPK, 1998) to the year 2016.

Table A.6: Population and Employment Growth

Development Type	Additional Floorspace (m ²)	Number of Additional Residential Dwellings	Future Population	Future Employees ³ .
Residential	N/A	10,000	30,470	N/A
Industrial	161,000	N/A	N/A	2,012
CBD Retail and Commercial ¹ .	21,200	N/A	N/A	1,060
Neighbourhood Centres	23,850	N/A	N/A	596
Total ² .	206,050	10,000	30,470	3,668

Source PPK, 1998.

Notes:

1. Rates adopted are 1 employee per – 20 m² for commercial, 40 m² for retail and 80 m² for industrial development
2. Future population based on capacity of future residential areas.
3. Employee numbers based on projection to 2016 by PPK.

A.1.8 Traffic Studies

To address potential impacts on the road network arising from the above growth, Dubbo Council has undertaken many studies into the management of traffic within the City of Dubbo. These include:

- 1991 Investigations: in 1991 Council undertook a traffic study to establish a road hierarchy and truck route, and in 1992/93 to determine a Section 94 Contribution Plan for urban roads within Dubbo as well as providing a Traffic Management Plan for the Central Business District (CBD).
- TEC Study: In June 1993, the consultants TEC completed a report titled “A Traffic Management and Road Contribution Study”. This report identified required roadworks to meet the traffic demands up until the year 2011 and formed the basis of Council’s Section 94 contributions policy which came into force on the 17 October 1994.
- PPK Study: In 1995 Council determined that it was an appropriate time to review and update the Traffic Study and Section 94 Contribution Plan to more fully relate to the provisions of the Environmental Planning and Assessment Act and Council’s future planning strategies for the distribution of urban, retail, commercial and industrial land. This traffic study was completed in 1998 and subsequently adopted by Council in March 1999. This plan is being used as the basis for a review of the Section 94 plan for urban roads and parking within the CBD.

The following sections summarise these investigations. For details, refer to the studies noted above.

A.1.9 Existing Transport Network

To ascertain the potential impact of future growth on the traffic network, it is necessary to identify the existing network and deficiencies (if any).

The road network in the Dubbo local government study area comprises an arterial and state road system augmented by collector roads, with local roads as the lowest category in the hierarchy. While these investigations are primarily concerned with arterial roads and those major roads which provide a major traffic function, all roads having a ‘local distributor’ road status or higher have been included in the descriptions and assessment.

The existing road network in the Dubbo LGA is shown in Figure A.2. This describes the road system and indicates the following road types:

- Arterial roads

- Major collector (or sub-arterial) roads
- Local distributor roads

Major collector roads typically carry 5,000-20,000 vehicles while local distributor roads carry 2,000-10,000 vehicles. Local roads in residential areas typically carry less than 2,000 vehicles per day.

The sealed pavement widths (from which the number of effective traffic lanes was determined) and traffic controls, for streets within the Dubbo City area have been illustrated in the PPK report together with the locations of all traffic controls, together with one-way restrictions, at all intersections. This report also provided daily volumes along each street within the study area.

Peak period traffic counts were undertaken within the Study area to determine the areas where major traffic facilities would be required. Public transport facilities (Dubbo Coaches) operate along three primary routes in the Dubbo urban area.

The road network within the Dubbo CBD has been described in detail in previous reports (PPK, 1998). Wingewarra Street provides an access to the CBD from the east. Darling Street is the predominant north-south approach. All through traffic on the Newell and Mitchell Highways bypasses the Dubbo CBD.

The heaviest flows within the Dubbo CBD occur in Talbragar Street between Brisbane Street and Darling Street, with flows up to 1,158 vehicles per hour two way during the weekday afternoon peak hour period. North of Wingewarra Street, Darling Street carries over 800 vehicles per hour, and up to 1,217 vehicles per hour two-way north of Talbragar Street. Macquarie Street carries traffic volumes in excess of 800 vehicles per hour south of Talbragar Street.

A.1.10 Public Transport

Dubbo Coaches provides the only bus service in Dubbo which operate along three primary routes in the Dubbo urban area shown in Figure 5.1. Each of these routes have stops in the Dubbo CBD and at Orana Mall, which is indicative of the relative importance of Orana Mall has acquired in the movement of people within Dubbo. The CBD is serviced by all buses in a circuit comprising Macquarie Street, Talbragar Street, Darling Street and Bultje Street.

A.1.11 Existing Road Hierarchy

Based on the through traffic analysis, the location of existing major traffic generators, and the existing inter-connections of roads, the following describes the road hierarchy that existed for the earlier traffic studies.

A.1.1.1 Arterial Roads

All major routes to and through Dubbo including State Highways have been classified as Arterial Roads and are listed below:

- Golden Highway (Cobbora and Dunedoo Roads);
- The Mitchell Highway (SH7) including Cobra Street/Victoria Street;
- The Newell Highway including Erskine Street/Bourke Street/Whylandra Street; and
- Wheelers Lane - between Cobbora Road and Mitchell Highway.

A.1.1.2 Sub-Arterial Roads

The following roads have been classified as Sub-Arterial Roads:

- Brisbane Street - from Erskine Street to Bourke Street;
- Birch Avenue - from Wingewarra Street to Wheelers Lane;

- Boothenba Road;
- Boundary Road;
- Bunglegumbie Road - from Nulla Road to Thompson Street;
- Bunglegumbie Road - from Mitchell Highway to Troy Bridge Road;
- Burraway Road;
- Darling Street - from Macquarie Street to Erskine Street;
- Fitzroy Street;
- Macquarie Street - from Hennessy Lane to Darling Street;
- Mogriguy Road;
- Myall Street - from Cobbora Road to the east;
- Obley Road;
- Old Dubbo Road;
- Purvis Lane - from Newell Highway to Yarrandale Road;
- Thompson Street;
- Troy Bridge Road;
- Wheelers Lane - from Mitchell Highway to Boundary Road;
- Wingewarra Street - east of Darling Street; and
- Yarrandale Road.

A.1.1.3 Collector Roads

The Collector Roads in the Road Hierarchy are as follows

- Alcheringa Street;
- Aruma Street;
- Baird Drive - from Ironbark Close to Whylandra Street;
- Beni Drive;
- Beni Forest Road;
- Birch Avenue;
- Bligh Street;
- Brennan Road - from Spears Drive to Linda Drive;
- Buninyong Road North;
- Buninyong Road South;
- Bushland Drive;
- Colony Crescent - from Sheraton Road to Waverly Drive;
- Davidson Drive;
- Douglas Mawson Road;
- Dungary Road;
- Durraween Lane;
- East Street - from Alcheringa St to North Street;
- Eden Park Road;
- Eulomogo Road - from Mitchell Highway (west) to Mitchell Highway (east);
- Fairview Street;
- Harefield Road;
- Hennessy Lane - from Old Dubbo Road to Wheelers Lane;
- High Street;
- Hume Street;
- Jaira Road - from Minore Road to north of Blackbutt Road;
- Linda Drive - from Aruma Street to Brennan Road;
- Lonsdale Road - from Dungary Road to Sappa Bulga Road;
- Macquarie Street - from Cobra Street to Darling Street;
- Margaret Crescent;

- Minore Road;
- Murrayfield Drive - from Websdale Drive to Eden Park Road;
- Murrayfield Drive - from Homestead Drive to St Georges Terrace;
- Myall St from Brisbane Street to Fitzroy Street;
- North Street - from Victoria Street to Minore Road;
- Old Mendooran Road - from Jones Creek Road to Dunedoo Road;
- Palmer Street;
- Pine Knoll Drive;
- Rosedale Road - from Mitchell Highway to Minore Road;
- Sandy Beach Road - from Bligh Street to Macquarie Street;
- Sappa Bulga Road;
- Spears Drive - from Brennan Road to Bunglegumbie Road;
- St Georges Terrace;
- Tamworth Street;
- Waverly Drive;
- Websdale Drive - from Murrayfield Drive to Myall Street;
- Welchman Street;
- Wheelers Lane - from Boundary Road to Hennessy Road;
- White Street
- Whitewood Road;
- Windsor Parade;
- Wingewarra St - west of Darling St; and
- Yulong Street - from Mitchell Highway to Aruma Street.

A.1.1.4 Local Roads

All other streets in the city of Dubbo are classified as Local Roads.

A.1.12 Traffic Growth

Population growth is a clear indicator of vehicular traffic growth since more residents leads to greater traffic volumes on roads. This growth creates the need for improved road or, at times, new roads. The population projections undertaken in previously indicate that there will be almost 60% increase in population (population base of around 60,000). This population growth will be accommodated in a number of development precincts largely on the fringes of Dubbo.

The volume and characteristics of traffic growth and demand is directly related to land use. Publications such as the *RTA Guide to Traffic Generating Development* clearly demonstrates the nexus between development and traffic increases. It also provides an indication of the magnitude of traffic generation by land use type. Commercial developments (particularly larger shopping centres) have a high traffic generating capacity.

The impact of additional traffic has a range of consequences:

- Impact on road efficiency
- Impact on amenity and safety
- Reduction of the life of road pavements
- Increased public expenditure

Traffic impacts accumulate over time and may not be obvious for single developments. The benefit of a contributions policy is that it takes a holistic view of future traffic development and overcomes financing constraints imposed by incremental decision making.

The most effective tool for assessment of city wide traffic impacts is to examine the impact of development on the road network and equitably assign the costs of development of the network. This can be done through the establishment of a computer based traffic model that simulates the volume and distribution of future traffic growth.

Dubbo City Council has undertaken a number of studies into the future transport needs of the City. In particular, a traffic model has been prepared for the City area which sets out the future traffic generation by development in the city to the year 2016. A program of works to cater to this traffic growth has also been developed. This work has also included prediction of future car parking requirements in and around the CBD to cater for future growth.

A.1.1.5 Traffic Zones and Assumptions

The locations of all major traffic generators in Dubbo including residential areas, commercial centres, industrial areas, hospitals, and places of special interest were identified in the PPK report. Traffic zones were assigned to residential collector districts and to industrial land uses, neighbourhood centres, the Airport, major educational institutions and Hospitals. External cordon zones were also established to allow external traffic to be identified. The parking areas within the City Centre were also represented by traffic zones.

This approach is required for traffic modelling purposes. Given the size of Dubbo the use of these zones is useful for planning of the road network but less useful for the Section 94 Plan. A simpler and more equitable approach is to adopt the entire city as one catchment and levy equally across the city.

A.1.1.6 Major Traffic Generators

The locations of all major traffic generators in Dubbo including residential areas, commercial centres, industrial areas, hospitals, and places of special interest were identified. Traffic zones were assigned to all the major traffic generators in the Dubbo study area as summarised in Table A.8.

Each residential collector district was represented by one or more traffic zones which are outlined in the PPK report. Similarly, traffic zones were allocated to industrial land uses, neighbourhood centres, the Airport, major educational institutions and Hospitals. The external cordon zones represent the major approach routes to Dubbo. The parking areas within the City Centre were also represented by traffic zones.

Table A.8: Traffic Zones: Dubbo City Council

Type of Traffic Generator	Traffic Zones
Dubbo C8D	1-70
Residential-Urban	71-150
Residential-Rural	151-190
Industrial	191-240
Neighbourhood Centres	241-260
Special Zones	261-280
External Station	281-290
Dummy Zones	290-300

Source: PPK, 1998

A.1.13 Medium Term Road Hierarchy

A medium (20 years) and long term (ultimate population of 100,000) road hierarchies were developed in 1991 (TEC, 1991) and confirmed in 1998 (PPK, 1998).

Over the next 20 years, the future growth in residential land use is expected to largely occur south-east, and to a lesser extent south west and along the Mitchell Highway, west of the urban area as described below:

- South east of Dubbo CBD (traffic zones 95, 125, 129, 130, and 132);
- To the south west of the CBD (traffic zones 140, 142 and 145); and
- North west of CBD (traffic zone 148).

Additional industrial development is expected to occur to the north-west of the CBD, in the Yarrandale/Boothenba and Brocklehurst areas, in the vicinity of the airport and south of the Mitchell Highway, along the eastern approach to the City.

7.3.2 Development of Medium Term Road Hierarchy

The road hierarchy suitable for the medium term (20 years) was developed to cater to traffic growth and varies from the short term hierarchy in the following aspects.

Arterial Roads

- Brisbane Street, from Bourke Street to Erskine Street, reclassified from a Sub-arterial; and

Sub-Arterial Roads

The Sub-arterial Roads for the medium term are the same as in the short term with the following amendments:

- Minore Road from North Street to Joira Road;
- New river crossing between Baird Street and Bligh Street (see section 8.5.2);
- Bligh Street between new river crossing and Macquarie Street; and
- Macquarie Street between Bligh Street and Darling Street.
- Bourke Street from Brisbane Street to Erskine Street has been re-classified from Arterial;
- New road between the Newell Highway and Joira Road;
- Joira Road from south of Grangewood to Blackbutt Road has been re-classified from local; and
- Blackbutt Road from Newell Highway to Joira Road has been re-classified from local.

A.1.14 Heavy Vehicle Network

The following works were identified in the 1998 Traffic Study to facilitate the establishment of a Truck Route Network.

- Extension of Mountbatten Drive to Sheraton Road to provide direct access to the industrial area without intrusion onto residential streets;
- Restricted Access and LATM to White Street, Cobbora Road and Welchman Street.
- the installation of traffic signals at the intersection of White Street and Cobbora Road;
- the implementation of a LATM scheme banning the use of local streets, particularly the northern end of Welchman Street, by heavy vehicles;
- Roundabout Brisbane/Erskine Streets.
- Roundabout at Cobbora Road with Wheelers Lane and Yarrandale Road.
- Direct Link Road between Yarrandale Road and Wheelers Lane.
- Provision of Seagull intersections at numerous intersections along the Mitchell and Newell Highways.
- Upgrading the Obley Road/Newell Highway intersection to achieve a "T" junction layout; alternatively a roundabout.

A.1.15 Road Upgrading Requirements

The following works have been identified as being required to address the traffic growth in the Dubbo area to 2016. These works include traffic management measures as well as road upgrading requirements. These works are a direct consequence of development that is predicted to occur in this period.

Table A.9: Road Upgrading Needs

WORKS	ROADS		COST (\$ '000)
Road Widening/Upgrades	<ul style="list-style-type: none"> • Cobbora Road • Wheelers Lane • Victoria Street/Whylandra Street traffic signals • Minore Road • Wingewarra Street • Newell Highway deviation • Richardson Road upgrading • Coreena Road upgrading 	<ul style="list-style-type: none"> • Boothenba Road Upgrading • Newell Highway widening • Mitchell Highway widening • Boundary Road widening • Fitzroy Street widening • Sheraton Road widening • Troy Bridge Road Upgrade • Cobra Street widening 	12,995
New Roads	<ul style="list-style-type: none"> • New river crossing • Cobra Street to Bligh Street link • Bligh Street extension • Realignment of Mendooran Road 	<ul style="list-style-type: none"> • Wheelers Lane/Yarrandale Road Link • Internal loop roads to industrial areas 	12,190
Level Crossings	<ul style="list-style-type: none"> • Wheelers Lane • Sheraton Road • Muller Street • Mendooran Road 	<ul style="list-style-type: none"> • Cobbora Road • Purvis Lane • Yarrandale Road 	2,813
Traffic Management	<ul style="list-style-type: none"> • Murrayfield/Websdale • Wheelers Lane • Myall/Buninyong/Whitewood • Gipps Street - Edwin/Myall • Sheraton Road 	<ul style="list-style-type: none"> • Victoria/Cobra Street • Myall/Darling Street • Windsor Parade • Minore Road/Joira Road 	43
Intersection improvements	<ul style="list-style-type: none"> • Whylandra Street/Thompson Street • Bligh Street/Wingewarra Street • Bultje Street/Bligh Street • Fitzroy Street/Cobra Street • Cobbora Road/White Street • Newell Highway/ Minore Road • Erskine Street/Brisbane Street • Newell Highway/Baird Street • Cobbora Road/Wheelers Lane • Baird Street extension/Bligh Street • Bligh Street/Macquarie Street 	<ul style="list-style-type: none"> • Newell Highway/Obley Road • Wingewarra Street/Darling Street • Newell Highway/ Camp Road • Mitchell Highway intersections • Airport roundabout • Newell Highway/Mogriguy Road • Boothenba Road/Golden Highway • Newell Highway/Boothenba Road • Mitchell Highway/Eulomogo Road 	19,258
TOTAL			47,299

Notes:

3. The works include \$630,000 of uncollected works that remain from the 1995 Section 94 Plan.
4. All costs are preliminary and subject to detailed review after concept plans prepared.

A.1.16 Implementation of Road Hierarchy

A.1.1.7 Approach for Implementation

The approach to management of traffic, on each road of the street network within Dubbo depends on its function and that road's physical characteristic. For local access streets, with abutting residential land use, the emphasis should be on the provision of a safe and pleasant environment for residents. Traffic measures should be aimed at discouraging through traffic and possibly excluding it from some areas entirely.

There will be substantial growth (about 62,400 m² GFA) in and around the existing industrial areas in traffic zones 198 and 230 (part of Candidate Area 3):

- within candidate area 2 (traffic zone 232, 46,000 m² GFA) located on the Mitchell Highway at and around Rosedale Road; and
- within candidate area 1 (traffic zone 233, 20,000 m² GFA) located on the Mitchell Highway, between South Buninyong Road and Lidscomb Road.

A.1.1.8 B-Double and Road Train Truck Routes

Since the formulation of a truck route network for Dubbo (TEC, 1991), a number of roads have been designated by Council and the RTA as B-Double and Road Train routes. These roads are as listed below.

Road Trains routes

All heavy vehicles including road trains and B-Double can use the following roads:

- Mitchell Highway, west of Thompson Street;
- Thompson Street;
- Erskine Street;
- Cobbora Road, between Fitzroy Street and Yarrandale Road;
- Yarrandale Road;
- Boothenba Road, between the Saleyards and Yarrandale Road;
- River Street, between Bourke Street and Fitzroy Street;
- Fitzroy Street, between River Street and Purvis Lane; and
- Newell Highway, between Purvis Lane and Erskine Street.

B-Double Routes

All heavy vehicles, including B-Double, but excluding road trains, can use the following roads:

- Jannali Road;
- Depot Road;
- Darling Street, south of Newell Highway;
- Hawthorn Street;
- Wheelers Lane, between Cobbora Road and Mitchell Highway;
- Douglas Mawson Road;
- Cobbora Road, east of Yarrandale Road;
- Newell Highway, south of Thompson Street;
- Fitzroy Street, between River Street and Erskine Street;
- Phillip Street;
- King Street;
- Macquarie Street, east of Darling Street;

- Mitchell Highway, east of Thompson Street; and
- Newell Highway, north of Purvis Lane.

A.1.1.9 Access to Industrial Areas

Heavy vehicles including road trains accessing the Saleyards and other industrial areas to the north from the west should be required in the medium to long term (15 to 25 years), to travel along Bunglegumbe Road between the Mitchell Highway and Newell Highway, and along Boothenba between the Saleyards and the Newell Highway. This route will require upgrading to achieve this objective.

Access to the industrial areas in west Dubbo will be via the Mitchell Highway. Access to the northern industrial areas will be restricted to the Newell Highway (Bourke Street) and Brisbane Street.

Access to the Abattoir and Saleyards area will be via the Newell Highway, Purvis Lane, Yarrandale Road and Boothenba Road. The south eastern industrial area located in Hawthorn Street will be accessed by the Mitchell Highway only. The major eastern industrial areas will generally be accessed via Sheraton Road, Wheelers Lane, Myall Street and Cobbora Road. More specifically:

- area 1 by Douglas Mawson Road and Mountbatten Drive; and
- area 2 by Myall Street and White Street, to minimise truck access along Welchman Street.

A.1.1.10 CBD Bypass

One of the major problems in Dubbo is the present conflict between heavy vehicles travelling through the CBD and local vehicular and pedestrian movements.

From a traffic and planning point of view, it is important that heavy vehicles, with no origin/destination within the CBD, be diverted away from the Business area. Towards this end, trucks travelling in an east/west direction should travel along the Mitchell Highway only.

In the short term, trucks travelling between the north and areas to the west of the Macquarie River could use Bourke Street or Brisbane Street and the Erskine Street river crossing and Whylandra Street. For trucks travelling in a north/east direction, they should use the Mitchell Highway, Sheraton Road or Wheelers Lane and Yarrandale Road.

A.1.17 Car Parking

Council prepared an inventory of floor space by major land use for each block within the Dubbo CBD. According to PPK there is currently about 160,800 m² of Gross Floor Area in the CBD of Dubbo, of which about 62,100 m² is retail space. Commercial establishments utilise about 58,450 m².

A survey of all businesses within the Dubbo CBD found that approximately 3,583 people are employed in the Dubbo CBD (south of the Railway line), in about 460 separate workplaces. This number comprises 2,323 full-time staff and 1,260 part-time staff. Of these employees, about 38 and 22 percent are employed in either office or retail land uses respectively.

About 90 percent of employees travel to work by car. About five percent walk to work. Significantly, only one percent of CBD employees utilise the bus service for their journey to work.

A.1.1.11 Existing Parking Requirements

There was an overall requirement of 3,784 spaces, 1896 short stay spaces and 1,888 long stay spaces, within the Centre, resulting in an overall surplus of 1808 spaces within the Centre. All precincts experience an overall parking surplus. The parking situation for the Study Area as a whole appears to be adequate.

Table A.10: Dubbo CBD Parking Type

Zone Description	Traffic Zones
On-Street Parking - existing and future vacant	1-38
Major Off-Street Parking Areas - existing and future vacant	39-58
Future Potential	59-70

Source: PPK, 1998

There are currently some 5592 spaces in the CBD. The number and type of spaces in each traffic zone are included in the traffic reports (PPK, 1998).

The numbers of spaces required to meet the demand of the potential growth in retail and commercial land uses were estimated using the rates in Table A.11 derived for the CBD (PPK, 1998a).

Table A.11: Dubbo CBD Parking Requirements

	Retail	Commercial
Requirements	3.11 spaces/100 m ² GFA	2.2 spaces/100m ² GFA
	4.15 spaces/100 m ² GFA	
Short Stay	60%	35%
Long Stay	40%	65%

Source: PPK, 1998

Overall an additional 633 spaces would be required to cater for the potential growth in the CBD. The expected number and type of spaces is detailed in Appendix 5c by traffic zone.

A deficit of about 685 short stay spaces was identified which is easily accommodated by the available surplus of 2493 long-stay spaces. The demand for short stay spaces is however in excess of the available supply.

A.1.1.12 Parking Strategy

Using the projected future levels of development in commercial and retail floor space, together with the recommended parking rates (PPK, 1998), the future parking requirements for commercial and retail land use were determined for the growth strategy. By the year 2016, some 633 spaces will be required to meet the potential growth in the CBD, 57 percent of which would be short stay and 43 percent long stay spaces.

Council has expended approximately \$450,000 to purchase a site for off street parking is a strategic location close to the CBD (Heyer site). This will be used for the short term as a ground level parking area to cater to short term needs. Once the demand requires, Council will construct a multi-level car park. The proposed car park site has been acquired by Council in anticipation of future demand. 113 of the proposed total 472 spaces will be provided by the interim surface carpark.

Where a development cannot provide the required car parking spaces on site, a contribution will be charged for the number of spaces that are deficient.

The following standard rates have been applied to the development of car parking (exclusive of land costs):

- Ground level - \$1,500 per space
- Multilevel - \$15,000 per space

