



WOLLONGONG CITY COUNCIL

WEST DAPTO DEVELOPMENT CONTRIBUTIONS PLAN

2020

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WOLLONGONG CITY COUNCIL
WEST DAPTO DEVELOPMENT CONTRIBUTIONS PLAN (2020)

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Part 1 Summary schedules

The West Dapto Development Contributions Plan (2020) enables Council to levy contributions for local public infrastructure required as a result of development. The following tables provide a summary of the cost of infrastructure to be delivered through the Plan and the contribution rates that will be levied.

Table 1 Summary – Cost of infrastructure by category

Infrastructure category	Cost of land	Cost of works	Total cost
Open Space and Recreation	\$38,517,247	\$37,313,078	\$75,830,325
Community Facilities	\$1,757,500	N/A	\$1,757,500
Transport	\$40,586,803	\$695,385,574	\$735,972,377
Stormwater Management	\$23,763,348	\$104,391,842	\$128,155,190
Total Cost of Infrastructure	\$104,624,898	\$837,090,494	\$941,715,392
Administration			\$12,556,357
Total Cost to Plan			\$954,271,749

Table 2 Summary – Contribution rates by development type

Type of development	Levy basis	Contribution rate [#]
Residential		
<i>Standard Rate</i>		
Subdivision	per lot	\$51,428.10
Dwelling House, Dual Occupancy and other dwellings*	per dwelling	\$51,428.10
<i>Multi Unit Housing Rates*</i>		
4+ bedrooms	per dwelling	\$46,606.72
3 bedrooms	per dwelling	\$40,178.21
2 bedrooms	per dwelling	\$35,356.82
0-1 bedrooms, secondary dwellings	per dwelling	\$27,321.18
Non-Residential		
Commercial, e.g. development in B1, B2, B4 zones	per hectare [^]	\$371,189.35
Industrial and other, e.g. development in IN2, IN3, SP2 zones	per hectare [^]	\$126,513.05

[#] Contribution rates in this Plan are as at 30 June 2020 and indexation will apply from that date.

* Refer to clause 2.8 for further clarification on which rate applies to a specific type of dwelling.

[^] The non-residential 'per hectare' rate is calculated on the land area of the subject site.

Table 3 Summary – Contribution rates by infrastructure category

Infrastructure category	Residential	Non-Residential	
	Standard Rate*	Commercial	Industrial & Other
Open Space and Recreation	\$4,225.06	\$0.00	\$0.00
Community Facilities	\$97.92	\$0.00	\$0.00
Transport	\$40,013.89	\$301,654.61	\$60,773.60
Stormwater Management	\$6,408.54	\$64,388.24	\$64,702.60
Administration	\$682.69	\$5,146.50	\$1,036.85
Total	\$51,428.10	\$371,189.35	\$126,513.05

* Refer to **Table 20** for the Multi Unit Housing contribution rates by infrastructure category.

Part 2 Administration and Operation of the Plan

2.1 Introduction

West Dapto has been established as a priority urban release area in various state and regional planning policies including the *Illawarra Urban Development Program* (NSW Government), *Growth Centres Commission* (2008) and the *Illawarra-Shoalhaven Regional Plan* (NSW Government, 2015).

The *West Dapto Vision* (Wollongong City Council, 2018) anticipates that the West Dapto Urban Release Area will provide around 19,500 dwellings and will house a population of about 56,500 people once fully developed over fifty plus years.

This contributions plan establishes the local infrastructure needed to support this development and ensures it is strategically planned and delivered, as well as providing an equitable funding source. It has been prepared pursuant to the provisions of Part 7 of the EP&A Act, Part 4 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), the *Development Contributions Practise Note* (Department of Infrastructure, Planning and Natural Resources, 2005), *Local Infrastructure Contributions Practise Note* (NSW Department for Planning and Environment, 2019) and relevant Ministerial Directions issued under Section 7.17 of the EP&A Act.

2.2 The name of this contributions plan

This contributions plan is called the *West Dapto Development Contributions Plan (2020)* (the Plan) and levies contributions under Section 7.11 (previously Section 94) of the *Environmental Planning and Assessment Act 1979 No 203* (EP&A Act).

2.3 Section 7.11 development contributions

Development contributions are collected from developers to help fund the provision, extension or augmentation of public amenities and public services to be provided in the future, or towards the recoupment of the cost already incurred in providing public amenities or public services.

Section 7.11 of the EP&A Act enables a consent authority to impose a condition requiring the dedication of land free of cost or a monetary contribution where:

- The development will or is likely to require the provision of or increase the demand for public amenities and public services within the area; and
- The dedication or contribution is reasonable; and
- The contribution is allowed by and determined in accordance with a contributions plan.

2.4 Commencement of this Plan

Pursuant to clause 31(4) of the EP&A Regulation, a notice was published on council's website advising that this Plan takes effect from 14 December 2020.

2.5 Land to which this Plan applies

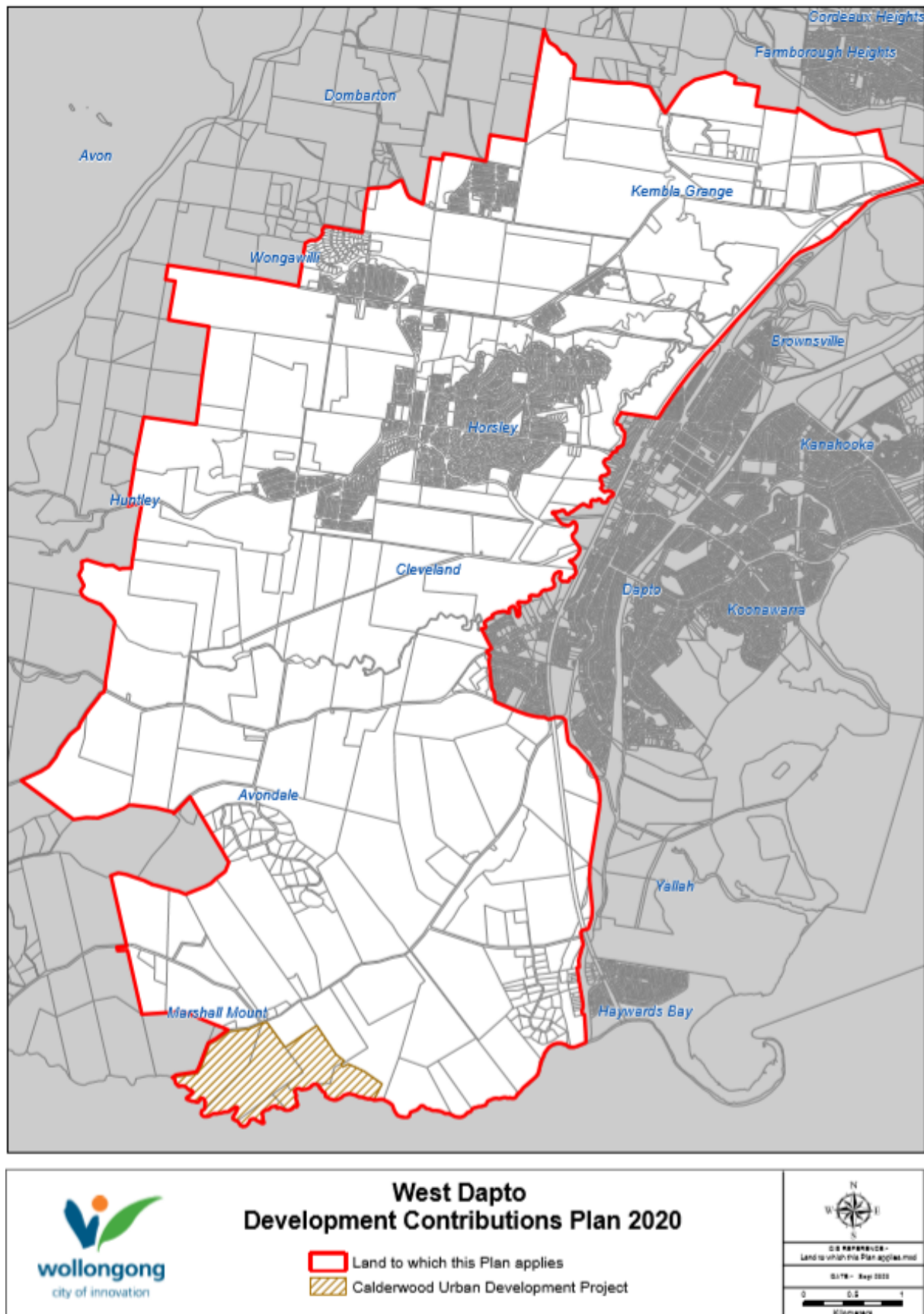
This Plan applies to all land within the West Dapto Urban Release Area as shown at **Figure 1**.

2.6 Purpose of this Plan

The purpose of this Plan is to:

- a. Authorise Council, an accredited certifier or other consent authority to impose conditions requiring contributions under Section 7.11 of the EP&A Act when determining an application on land to which this Plan applies;
- b. Identify the infrastructure requirements as a result of the anticipated development;
- c. Provide a framework for the equitable calculation, collection and management of contributions;
- d. Ensure that each development makes a reasonable contribution towards the provision of infrastructure;
- e. Ensure that the existing community is not burdened by the cost of infrastructure required as a result of future development;
- f. Ensure Council's management of development contributions complies with relevant legislation and guidelines.

Figure 1 Land to which this Plan applies



2.7 Application of this Plan

This Plan applies to all development applications, complying development certificates or other applications determined under the EP&A Act on land to which this Plan applies.

2.8 Development to which this Plan applies

The following types of development will be levied a contribution under this Plan:

- Residential development

Includes the subdivision of land and/or the construction of any type of Residential Accommodation. The rates applying to specific types of dwellings are:

Standard Rate:

- boarding houses
- dual occupancies
- dwelling houses
- group homes and hostels
- rural workers' dwellings
- semi-detached dwelling

Multi Unit Housing Rate:

- attached dwellings
- multi dwelling housing
- residential flat buildings
- secondary dwellings*
- self-contained dwellings
- shop top housing

- Non-residential development

Includes the subdivision of land and/or the construction of any non-residential development, including but not limited to:

- Commercial development including business, office and retail premises
- Industrial development including general, heavy and light industry
- Educational establishments
- Health services facilities
- Tourist and visitor accommodation, caravan parks
- Recreation facilities including indoor and outdoor

- Mixed use development

Where the development includes both residential and non-residential components the contribution will be levied based on the individual uses and both a residential and non-residential contribution will apply.

Note: Unless otherwise stated in this Plan, definitions are as per the Wollongong Local Environmental Plan 2009, the EP&A Act, EP&A Regulations or other relevant legislation.

* All secondary dwellings will be levied the 0-1 bedroom multi unit housing rate.

2.9 Relationship to other contributions plans

This Plan repeals the following contributions plan:

- West Dapto Development Contributions Plan (2017) – Amendment 1

Previous versions of contributions plans that applied to all or part the land to which this Plan applies are:

- West Dapto Release Area Section 94 Development Contributions Plan (2017)
- West Dapto Release Area Section 94 Development Contributions Plan (2015)
- West Dapto Release Area Section 94 Development Contributions Plan (2011)
- West Dapto Release Area Section 94 Development Contributions Plan (2010)
- Wollongong Section 94A Contributions Plan (2006 to 2014)
- Horsley Section 94 Contributions Plan (1993), as amended.

The *Wollongong City-Wide Development Contributions Plan* applies to the remainder of the Wollongong local government area.

2.10 Relationship to special infrastructure contributions

This Plan does not affect the determination, collection or administration of any special infrastructure contribution (SIC) levied under sections 7.22 to 7.26 of the EP&A Act in respect to development on land to which this Plan applies.

Applicants should refer to details issued by the Department of Planning, Industry and Environment in relation to whether a SIC applies to development within the West Dapto Urban Release Area.

2.11 Monetary contributions

Monetary contributions will be the most common method of payment. The contribution amount stated in the consent will be subject to indexation until the date of payment. It is therefore necessary to contact Council and obtain the current indexed contribution amount prior to payment.

The following payment methods are available:

Method	How	Payment Type
Online	http://www.wollongong.nsw.gov.au/applicationpayments Refer to condition or contact Council for payment reference number	<ul style="list-style-type: none"> • Credit Card
In Person	Wollongong City Council Administration Building - Customer Service Centre Ground Floor 41 Burelli Street, WOLLONGONG	<ul style="list-style-type: none"> • Cash • EFTPOS • Bank Cheque

2.12 Non-cash contributions

In instances where an Infrastructure Item is located on or adjacent to a development site, it may be appropriate for the developer to dedicate land and/or provide a material public benefit (i.e. works) in full or partial satisfaction of the otherwise payable monetary contribution. This is known as non-cash contributions, or works in kind, and is facilitated through the application process under Sections 7.11(5) and/or 7.11(6) of the EP&A Act.

The developer should contact Council early in the application process (i.e. pre-lodgement meeting) to discuss the proposal. In assessing requests for works in kind the following will be considered:

- whether it has been demonstrated (through plans, detailed designs and other supporting information) that the works will be delivered to a suitable standard;
- whether it is proposed that all or part of an infrastructure item will be provided;
- the timing of completion in regards to the indicative timing for delivery as stated in this Plan;
- the estimated value of land to be dedicated and/or estimated cost of works to be delivered;
- the amount of full or partial offset being sought (noting that the amount of any offset will be limited to the cost of the Infrastructure Item as stated in this Plan unless a design change is required and agreed to by Council or in other limited circumstances that are considered reasonable);
- details of the future dedication, handover and management arrangements.

The acceptance of works in kind and any associated offset will be determined on a case by case basis.

Depending on the value and nature of the proposed works in kind, the process will be facilitated through the development consent or in some cases may require a formal works in kind agreement.

2.13 Planning agreements

Section 7.4 of the EP&A Act states that a planning agreement is a voluntary agreement between a planning authority and a developer, under which the developer agrees to make contributions towards a public purpose. This may include the dedication of land, a monetary contribution, any other material public benefit or a combination of these. A planning agreement may exclude the application of Section 7.11 to the entire development or to part of the development that is subject to the agreement.

The provisions of Sections 7.4 to 7.10 of the EP&A Act and clauses 25B to 25H of the EP&A Regulation prescribe the contents, form, subject matter and procedures for making planning agreements.

Further information can also be found in Council's Planning Agreements Policy.

2.14 Timing for payment of contributions

The timing requirement will be set out in the condition, in accordance with the following policy:

- A Development Application involving construction – prior to the issue of a Construction Certificate;
- A Development Application involving subdivision – prior to the issue of a Subdivision Certificate;
- A Development Application involving building construction and subdivision (i.e. dual occupancies) – prior to the issue of either a Construction Certificate or Subdivision Certificate;
- A Complying Development Certificate – before any building or subdivision work authorised by the certificate commences.

Where a development is phased and it is reasonable for the contributions to be paid in phases, the applicable contribution for each phase must be clearly documented in the condition, otherwise the full contribution must be paid in accordance with that condition, or the condition formally amended.

2.15 Deferred or periodic payment

A request for a deferred or periodic payment of contributions may be considered in limited circumstances. For a deferred or periodic payment to be considered, the applicant must provide a written request and satisfy that:

- Compliance with the condition is unreasonable or unnecessary in the circumstances; and
- There are valid reasons for deferred or periodic payment; and
- Deferred or periodic payment of the contribution will not prejudice the timing or the manner of the provision of public facilities included in the works program; and
- No prejudice will be caused to the efficiency and operation of this Plan.

If the request for a deferred or periodic payment is accepted, the details must be set out in the condition (and will require a modification if the application had already been determined). The applicant will be required to provide a bank guarantee on the following terms:

- a) The bank guarantee is issued for the amount of the total contribution, or the amount of the outstanding contribution, plus an amount equal to thirteen (13) months interest.
- b) Any charges associated with establishing or operating the bank security are payable by the applicant.
- c) The bank guarantee must carry specific wording identifying the exact obligation to which it relates (e.g. section 7.11 development contributions for development of Lot x DP xxx under Development Consent No. xxx)
- d) The bank unconditionally pays the guaranteed sum to the Council if the Council so demands in writing not earlier than 12 months from the provision of the guarantee or completion of the work.
- e) The bank must pay the guaranteed sum without reference to the applicant or landowner or other person who provided the guarantee, and without regard to any dispute, controversy, issue or other matter relating to the development consent or the carrying out of development.
- f) The bank's obligations are discharged when payment to the Council is made in accordance with this guarantee or when Council notifies the bank in writing that the guarantee is no longer required.
- g) Where a bank guarantee has been deposited with Council, the guarantee shall not be cancelled until such time as the original contribution and accrued interest are paid.

2.16 Construction certificates and the obligation of Certifiers

In accordance with clause 146(b) of the EP&A Regulation, a Certifier must not issue a construction certificate for building or subdivision work where the development consent imposes a condition in accordance with this Plan, unless the condition has been complied with.

In accordance with clause 142(2) of the EP&A Regulation, the Certifier must ensure that copies of receipt(s) confirming that contributions have been fully paid are provided to the Council.

2.17 Complying development and the obligation of Certifiers

In accordance with sections 4.28(9) and 7.21 of the EP&A Act and clause 136K of the EP&A Regulation, applications for a complying development certificate are also subject to the provisions of this Plan, and the Certifier (whether Council or an Accredited Certifier) must impose a condition requiring the payment of a Section 7.11 contribution in accordance with the requirements of this Plan.

The condition must include the contribution amount calculated in accordance with this Plan and require payment before any building or subdivision work authorised by the certificate commences. Further information on how to calculate and condition contributions is available on Council's website and from Council's customer services. The following template condition should be used:

Development Contributions

Pursuant to Section 4.28(9) of the Environmental Planning and Assessment Act 1979 and the West Dapto Development Contributions Plan (2020), a monetary contribution of \$[INSERT AMOUNT], subject to indexation, must be paid to Wollongong City Council before any building or subdivision work authorised by this certificate commences.

This amount has been calculated on the basis of [####] residential lots/dwellings OR [####] hectares.

As the contribution amount is subject to indexation until the date of payment, contact Council for the current indexed amount prior to payment. The contribution can be paid online at <http://www.wollongong.nsw.gov.au/applicationpayments> (contact Council for the payment reference number) or by cash, EFTPOS or bank cheque at 41 Burelli Street, Wollongong.

In accordance with clause 27(1A) of the EP&A Regulation, the Certifier must ensure that the contribution has been fully paid before any building or subdivision work authorised by the certificate commences and submit receipt(s) confirming full payment with the complying development certificate.

2.18 Credit for existing development

A credit may be provided in limited circumstances. For example, where a contribution has been paid at subdivision, a credit will be given and the construction of a single dwelling on that lot will not be levied a further contribution. The construction of a dual occupancy on a single lot will be granted one credit for the existing lot and will be levied one contribution for the additional (second) dwelling. For non-residential development a credit will only be provided where a contribution under this plan has previously been levied and paid for based on the land area the subject of the development.

2.19 Savings and transitional arrangements

An application that has been submitted, but not determined, prior to the adoption of this Plan shall be determined in accordance with the provisions of the plan that applies at the date of determination of the application. That is, the plan in force as at the date of determination will apply.

Any modifications to an existing approval shall be determined in accordance with the plan that applied at the date of the original determination.

2.20 Pooling of contributions

This Plan authorises monetary Section 7.11 contributions paid for different purposes to be pooled and applied (progressively or otherwise) for those purposes. The indicative timing of infrastructure delivery and priorities for the expenditure of levies is provided at **Tables 9, 10, 11, 15, 16 and 17**.

2.21 Ministerial directions

A Direction issued by the NSW Minister for Planning and Public Spaces under Section 7.17 of the EP&A Act will prevail over the provisions of this Plan. Current Ministerial Directions relative to this Plan include:

- *Environmental Planning and Assessment (Local Infrastructure Contributions - Timing of Payments) Direction 2020*
Development contributions levied on certain developments (i.e. over \$10,000,000 and that don't include torrens subdivision) can be paid prior to the issue of an Occupation Certificate.
- *Environmental Planning and Assessment (Local Infrastructure Contributions) Direction 2012 (amended 2013, 2016, 2017, 2018, 2018 and 2019)*
Establishes a contributions cap on residential development in the West Dapto Urban Release Area of \$30,000 per lot or dwelling, and provides that an IPART reviewed contributions plan can levy above this amount. In accordance with correspondence from the Department of

Planning, Industry and Environment dated 23 September 2020, this Plan is considered an *IPART reviewed contributions plan* and is not subject to the contributions cap.

- *Environmental Planning and Assessment Act 1979 - issued 14 September 2007*
A contribution cannot be imposed on development for the purposes of any form of seniors housing as defined in the *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* where the development consent is granted to a social housing provider as defined in the *SEPP (Housing for Seniors or People with a Disability) 2004*.
- *Planning Circular No D6 – Crown Development Applications and conditions of consent 1995*
Contributions levied on Crown development should be in accordance with the matrix table, which provides a guideline on appropriate categories of contributions for each Crown activity.

Further details on current Section 7.17 Directions can be found at www.planning.nsw.gov.au.

2.22 Exemptions

Requests for a full or partial exemption can be made in writing for the following types of development:

- a. An application by or on behalf of Council for community infrastructure such as libraries, community facilities, child care facilities, recreational facilities or car parks.
- b. An application by or on behalf of the NSW Government for public infrastructure such hospitals, police stations, fire stations, social housing developments and public transport infrastructure.
- c. Residential Care Facility developments carried out under the *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004*.
- d. Community Facilities that will be owned or controlled by a public authority or non-profit community organisation.
- e. Development carried out by an emergency services organisation for that purpose.
- f. Any other development for which an exemption is considered warranted, where the decision is made by a resolution of the Council at a Council meeting or by a delegated council officer.

For a full or partial exemption request to be considered, it must be supported by a written submission that provides justification for the exemption and demonstrates that it meets the above criteria.

2.23 Indexation of base contributions rates

The contribution rates stated in this Plan are 'base' rates and have been calculated as at 30 June 2020. In accordance with clause 32(3)(b) of the EP&A Regulation the contribution rates stated in this Plan will be indexed quarterly using Consumer Price Index, All Groups Sydney (CPI) based on the following formula:

$$\text{Indexed contribution rate} = C_{BR} \times (CP1 / CP2)$$

Where:

- C_{BR}** is the base contribution rate as set out in this Plan
- CP1** is the most recently published CPI
- CP2** is the June 2020 quarter CPI

Contribution rates will be indexed quarterly and are available from Councils website. In the event that the current index is lower than the index for the previous quarter, no adjustment will be made.

2.24 Indexation of contributions levied

The contribution amount stated in a condition is current as at the date of determination and subject to indexation until the date of payment. The contribution payable will be indexed quarterly using Consumer Price Index; All Groups, Sydney (CPI) based on the following formula:

$$\text{Contribution at time of payment} = C_{DC} \times (CP1 / CP2)$$

Where:

- C_{DC}** is the contribution amount as set out in the development consent
- CP1** is the most recently published CPI at the time of payment
- CP2** is the CPI at the time the application was determined

The current amount payable can be obtained by contacting Council. In the event that the current index is lower than the index for the previous quarter, no adjustment will be made for that quarter.

2.25 Refunds

Requests for the full or partial refund of contributions will be considered in limited circumstances and must be made in accordance with the following process:

- The development consent or complying development certificate must not have been acted on and must be formally surrendered;
- The current landowner must submit a written request to Council;
- The request for a refund must be made within 12 months of the payment.

A delegated council officer may approve requests for refunds, in part or full, that are made in accordance with the above provisions, or on other circumstances considered reasonable.

2.26 Review and monitoring of plan

This Plan will be subject to regular review in accordance with the provisions of clause 33A of the EP&A Regulation. The purpose of such a review is to ensure that:

- Levels of infrastructure provision are consistent with population trends and community needs;
- Contribution rates are updated to reflect changes to construction costs and land values; and
- The works program remains responsive to development trends.

The following variables will be monitored to ensure the Plan remains current:

- The rate of lot production and dwelling construction;
- The costs of constructing infrastructure and acquiring land; and
- Actual and anticipated household types, occupancy rates and population.

Any changes to the Plan, apart from indexation and minor typographical corrections, will be placed on public exhibition in accordance with the requirements of the EP&A Act and EP&A Regulation.

2.27 Contributions register

In accordance with clause 34 of the EP&A Regulation a contributions register is maintained for this Plan and is available on councils website. This register includes the following details:

- a) details of each consent for which a Section 7.11 condition has been imposed;
- b) the nature and extent of the contribution required by the condition;
- c) the name of the contributions plan the condition was imposed under;
- d) the date any contribution was received and its nature and extent.

2.28 Accounting for Contributions

In accordance with clause 35 of the EP&A Regulation and the *Local Government Code of Accounting Practice and Financial Reporting* (Office of Local Government), council maintains accounting records of contributions and distinguishes these from other accounts through the use of separate restricted accounts. Funds held are invested in accordance with Council's *Investment* Policy.

At the end of the each financial year, council includes a Statement of Developer Contributions in its Annual Financial Statements that includes the following information:

- a) opening and closing balances of money held by the Council for the accounting period;
- b) total amounts received by way of monetary contribution under this Plan;
- c) total amount spent in accordance with this Plan; and
- d) outstanding obligations of the Council to provide works for which contributions have been received.

2.29 Definitions and acronyms

Generally, terms used in this Plan should be taken to have the same meaning as in the Wollongong Local Environmental Plan 2009 or other relative legislation. Specific terms used in this Plan are:

Bedroom	means a room designed or intended for use as a bedroom or any room capable of being adapted to or used as a separate bedroom.
Certifier	means a council or an Accredited Certifier.
Contribution	means the dedication of land, the making of a monetary contribution or the provision of a material public benefit, as referred to in Section 7.11 of the EP&A Act.
Contribution per person	means the contribution rate derived in calculating the residential per lot/dwelling contribution rate. The contribution per person rate is not used to calculate the contribution payable for a development.
Contributions Plan	means a contributions plan adopted by a Council in accordance with the EP&A Act and EP&A Regulation.
Council	means Wollongong City Council.
CPI	Consumer Price Index, All Groups CPI, Sydney (series ID A2325806K) as published by the Australian Bureau of Statistics.
DPIE	NSW Department of Planning, Industry and Environment
Essential Works List	means the list of items as published by the NSW Department of Planning and Environment to which this Plan is limited.
EP&A Act	Environmental Planning and Assessment Act 1979.
EP&A Regulation	Environmental Planning and Assessment Regulation.
GFA	Gross floor area.
ha	Hectare of land area.
Infrastructure Item	means any public amenity or service, as referred to in section 7.11 of the EP&A Act, that is included in Schedules 1 to 5 of this Plan and for which contributions are levied for under this Plan.
IPART	Independent Pricing and Regulatory Tribunal.
m²	Square metres of land area
Multi Unit Housing Rate	means the residential contribution rate that applies to secondary dwellings and residential development involving the construction of 3 or more dwellings (whether attached or detached) on one or more lots of land (refer to clause 2.8 for a full list of residential accommodation /dwelling types to which this rate applies).
Non-residential development	Includes commercial, industrial and other non-residential development (see also clause 2.8).
Plan	means this West Dapto Development Contributions Plan (2020)
Recoupment	means the recovery of the cost of public amenities and services that have already been provided in anticipation of development.
Residential development	means the development of any land where dwellings are permissible.
SIC	Special Infrastructure Contributions (section 7.24 of the EP&A Act).
Standard Rate	means the residential contribution rate that applies to the subdivision of land and/or the construction of dual occupancies and other dwellings (refer to clause 2.8 for a full list of residential accommodation types to which this rate applies).
WCC	Wollongong City Council.

Part 3 Expected development and demand for infrastructure

3.1 Existing Development

This contributions plan was first adopted in 2010. At that time the area was significantly rural, however some development had occurred under the provisions of previous and since repealed contributions plans. This includes the Horsley release area and some industrial and other minor developments.

The Horsley release area was largely developed between 1993 and 2010, and in 2011 had a population of approximately 7,015 people and 2,292 dwellings (id profile community, 2019). The local infrastructure requirements for this area were delivered under the *Horsley Section 94 Development Contributions Plan (1993)* (as amended). The Horsley Section 94 Plan was repealed in 2010 when this contributions plan was first adopted. The area of Horsley is now generally established, with some remaining growth expected to occur as infill development. These assumptions are included in this Plan (stages 1-2) to ensure that adequate provision is made for any additional population in Horsley.

In addition, existing development as at 2010 when this plan was first prepared and adopted (and is therefore excluded from the growth projections in this Plan) include:

- Approximately 100 hectares of industrial land within Stages 1-2;
- Two residential developments within Stages 1-2;
- Two residential developments at Stage 4 Avondale;
- Approximately 4.4 hectares of industrial land within Stage 5;
- Approximately 4 hectares of residential land in Stage 5.

3.2 Expected development – residential

The majority of development within the West Dapto Urban Release Area will be residential, which is expected to house around 57,000 people in almost 20,000 dwellings once fully developed.

Whilst the demographic characteristics of the area will develop and evolve over time, the projected population change and future characteristics are expected to be generally reflective of new release areas. These characteristics are indicative in nature and include:

- Remaining rural populations of West Dapto are likely to be displaced by the population attributed to the expected development in those precincts.
- A high proportion of first and second time buyers in their late 20s to 30s, with young children or about to start a family.
- A proportion of empty nesters is expected which may increase over time given the proposed diversity in housing, community facilities and public transport network.
- Over time, the peaks in the age distribution associated with a predominance of young families will reduce and the population will become more diverse.
- Low levels of single person households and group households are estimated.
- Most dwellings are likely to be owner-occupied (around 90%).
- The numbers of young children aged 0-4 are likely to increase over the first ten years of each major stage and then decline. The number of children aged 5-11 is likely to be higher than the number of 0-4 year olds, whereas the proportion of 12-17 year olds is likely to be less than younger age groups.
- Adults aged 25-39 are likely to be the biggest age group.
- The proportion of older people is likely to initially be low and then increase over time.
- Over time, it can be expected that the population profile will come to more closely approximate that of an established area with a variety of age and household characteristics, particularly if there are a range of housing types and affordability available in the release area.

The anticipated population projections are shown at **Table 4** (note that Stages 1-2 includes an assumed additional 77 people at Horsley).

Table 4 Residential development assumptions – population

Stage	Actual	Forecast				Total
	2010/11 to 2017/18	2018/19 to 2027/28	2028/29 to 2037/38	2038/39 to 2047/48	2048/49 to 2057/58	2010/11 to 2057/58
Stages 1 and 2	3,119	9,450	3,894	1,950	0	18,413
Stage 3	0	4,071	3,772	5,577	589	14,009
Stage 4	0	1,149	3,111	3,525	4,866	12,651
Stage 5	0	1,889	4,120	3,850	2,501	12,360
Total	3,119	16,559	14,897	14,902	7,956	57,433

A diverse range of housing types will be delivered through a mixture of density and lot sizes as well as a mixture of dwelling types including single dwellings, dual occupancies, townhouses and apartments. The projected dwellings that have informed this Plan are shown at **Table 5** (note that Stages 1-2 includes 31 dwellings at Horsley). These projections will be continuously monitored and reviewed to account for the changing nature of housing types, designs and densities that will occur over time.

Table 5 Residential development assumptions – dwellings

Stage	Actual	Forecast				Total
	2010/11 to 2017/18	2018/19 to 2027/28	2028/29 to 2037/38	2038/39 to 2047/48	2048/49 to 2057/58	2010/11 to 2057/58
Stages 1 and 2	1,075	3,257	1,342	672	0	6,346
Stage 3	0	1,403	1,300	1,922	203	4,828
Stage 4	0	396	1,072	1,215	1,677	4,360
Stage 5	0	651	1,420	1,327	862	4,260
Total	1,075	5,707	5,134	5,136	2,742	19,794

The Calderwood Urban Development Project (Calderwood) is a State Significant Site with approval to develop approximately 4,800 dwellings over 700 hectares of land. 103 hectares of the site is within the Wollongong LGA and is included in the land to which this Plan applies (see Figure 1). The anticipated population and dwellings within Calderwood are excluded from the assumptions in this Plan.

To secure contributions from Calderwood, Council has entered into a Planning Agreement for the provision of monetary contributions towards road upgrades in the Wollongong LGA and the developer will deliver public open space in accordance with the approvals. In the event that a Planning Agreement does not apply to a specific future development application, this Plan will be used as the basis to levy and collect contributions.

3.3 Expected development – non-residential

Within the West Dapto Urban Release Area there are a range of non-residential land use zonings providing employment opportunities including commercial, industrial and special purpose. This non-residential land supports housing and employment and allows business and employers to base themselves within the physical and economic landscape of the release area. There is also minor housing potential within the commercial lands.

It is expected that traditional industries such as light industrial and retail will continue to play a significant part in the regional economy. Kembla Grange is identified in the Illawarra-Shoalhaven Regional Plan as a regionally important industrial land area that would benefit from additional infrastructure to support development. This Plan identifies key local infrastructure including local transport and stormwater management required to support the future development of this area.

The developable non-residential land expected to be developed between 2010 and 2060 is shown at **Table 6**.

Table 6 Non-residential development assumptions - hectares

Land Zone	Stages 1-2	Stage 3	Stage 4	Stage 5	Total
Commercial	9.21	6.2	4.12	3.16	22.69
Industrial & other	174.36	0	0	6.08	180.44
Total	183.57	6.20	4.12	9.24	203.13

3.4 Apportionment between residential and non-residential development

It is necessary to apportion the cost of providing infrastructure under this Plan between the residential and non-residential development. Based on the nexus between the expected development and infrastructure items for each of the categories of infrastructure, the following apportionment applies:

Open Space and Recreation - the need for public open space is generated wholly from residential development, and therefore these costs will be apportioned 100% to residential development.

Community Facilities - the need for community facilities is generated wholly from residential development, and therefore these costs will be apportioned 100% to residential development.

Transport - the need for transport items is generated by both residential and non-residential development and therefore these costs will be apportioned based on the adjusted land area.

Stormwater Management - the need for stormwater management is generated by all built form development and therefore these costs will be apportioned based on the unadjusted land area.

Administration - the need to prepare and administer this Plan is generated by both residential and non-residential development, and these costs will be apportioned based on the adjusted land area.

To recognise the varying levels of land intensification and demand on transport infrastructure it is reasonable to adjust the land area when calculating the apportionment. A rate of 100% for residential, 75% for commercial and 15% for industrial has been applied. This calculation and the resulting adjusted and adjusted apportionment between residential and non-residential land uses are shown at **Table 7**.

Table 7 Apportionment between residential and non-residential land uses

Land Use	Total land area (ha)	Unadjusted Apportionment	Adjustment factor (Transport & Administration)	Adjusted Apportionment (Transport & Administration)
Residential	1,778.22	89.75%	1.00	97.58%
Commercial	22.69	1.14%	0.75	0.93%
Industrial & other	180.44	9.11%	0.15	1.49%
Total	1,981.35	100.00%		100.00%

The apportionment between land uses by infrastructure category is shown at **Table 8**.

Table 8 Apportionment between residential and non-residential land uses by category

Category of Infrastructure	Residential Development	Non-residential – Commercial	Non-residential – Industrial & other	Total
Open Space and Recreation	100%	0%	0%	100%
Community Facilities	100%	0%	0%	100%
Transport	97.58%	0.93%	1.49%	100%
Stormwater Management	89.75%	1.14%	9.11%	100%
Administration	97.58%	0.93%	1.49%	100%

3.5 Infrastructure requirements

The development of West Dapto will require significant state and local infrastructure to support the needs of the future population. The NSW Government will provide state and regional infrastructure, and Council will be required to plan, deliver and fund local infrastructure. This Plan considers the local infrastructure requirements.

A number of studies have informed the local infrastructure requirements (as listed at clause 3.8).

These studies have been prepared, reviewed and updated over the past decade and have identified that the expected development will generate an increased demand for the following infrastructure:

- Open space and recreation – local active and passive recreation such as parks, playgrounds and both formal and informal sports fields;
- Community facilities – community centres and libraries;
- Transport – infrastructure that will support safe and convenient travel such as new roads, bridges and intersections, public transport facilities and shared use pathways;
- Stormwater management – water cycle management facilities as a result of the extra stormwater runoff generated by impervious surfaces associated with urban development;

In accordance with the Ministerial Direction dated 18 December 2018 the Infrastructure Items included in this Plan are limited to those that are included in the Essential Works List. Contributions will also be sought towards the direct costs of plan preparation, management and administration

The local infrastructure required to support the future population and development in the West Dapto Urban Release Area for each of the above categories is detailed in Part 4 of this Plan.

The location of each infrastructure item included in the Plan is shown by category on the maps in Part 4 (**Figures 3 to 14**) and a comprehensive map is provided in Part 5 (**Figures 15 to 22**). Part 5 of this Plan provides a set of schedules that detail the costs of each infrastructure item (**Schedules 1 to 5**).

It should be noted that the majority of infrastructure items in this Plan are based on high-level strategic planning and therefore the provision standards, proposed location, design and delivery timeframe are indicative and subject to change as more detailed planning and design is undertaken.

3.6 Cost of infrastructure items

The construction costs for infrastructure items included in this Plan were derived from either the actual construction costs, the services of a qualified quantity surveyor, expertise of Council staff or the IPART Local Infrastructure Benchmark Costs (Final Report, 2014).

The land acquisition costs are based on a recent land valuation (MMJ, August 2018) and a rate for various types of land uses have been applied to relevant infrastructure items based on the land use.

At the time this Plan was prepared, the planning for most of the infrastructure had been carried out at a strategic level only. That is, there are only a small number of items that have been constructed or that have had detailed designs upon which a detailed cost estimate could be prepared. As a result, a contingency allowance has been added to the estimated construction costs for Open Space and Recreation (20%), Transport (20%) and Stormwater Management (30%).

The contingency allowance is considered reasonable given the early stage of planning of most items included in the Plan and is in accordance with (or less than) IPART recommendations (2014). Where an item has been constructed and the actual cost known, no contingency is included.

A reasonable allowance for design (5%) and project management (5%) has also been included for most items.

3.7 Timing of infrastructure delivery

The West Dapto Urban Release Area has been divided into five areas, or stages. These stages are a reference to area (only) and do not represent a sequential staging of the development. Stages 1 and 2 were zoned for urban development in 2010, Stage 5 in 2018 and part of Stage 3 in March 2019. Therefore, the infrastructure planning is further progressed, and delivery will be required sooner, for these stages.

A number of factors will determine the actual delivery timeframes including the rate of development, rate of contributions income, preparation of detailed design and where required the approvals process.

The infrastructure items will form part of Councils capital works budget, which is reported annually to council and publicly available. Similarly, any adjustments to the budget will be reported to council.

The anticipated timing of infrastructure delivery is shown at **Tables 9, 10, 11, 15, 16 and 17**. The Staging Plan is shown at **Figure 2**.

3.8 Supporting Documentation

The following strategic documents informed the preparation of this Plan:

- West Dapto Vision 2018 (Wollongong City Council, 2018)
- Places for People: Wollongong Social Infrastructure Planning Framework 2018-2028 (Wollongong City Council, 2018)
- Mullet Creek Flood Model Update (BMT WBM, 2018)
- Illawarra-Shoalhaven Regional Plan (NSW Government, 2015)
- Duck Creek Flood Study (BMT WBM, 2012)
- Mullet Creek Flood Model Update Mapping Compendium (BMT WBM, 2018)

The following documents were completed after Council's adoption of the NSW Growth Centres Commission recommendation in 2008:

- Mullet and Brooks Creek Floodplain Risk Management Study and Plan (Bewsher, 2010)
- Road Infrastructure (Section 94) Estimates Review (GHD, 2010)
- Mullet Creek, West Dapto Extension of Flood Model (Bewsher, 2011)
- Marshall Mount and Yallah Road Upgrade – Strategic Concept design (SMEC, 2015)
- West Dapto Development Area Mullet Creek Flood Modelling (Bewsher December, 2009)
- TRACKS Land Use/Transport models
- West Dapto Urban Release Area – Integrated Transport Plan (Aecom, October 2010)
- West Dapto Urban Release Area Stages 1 & 2 – Road Network Infrastructure needs Study – Transport Modelling & Analysis (WCC, Oct 2010)
- Yallah Marshall Mt Precinct Draft Structure Plan and Infrastructure Costs Report (WCC, 2015)
- Mullet and Brooks Creeks Flood Study (Bewsher, 2010)

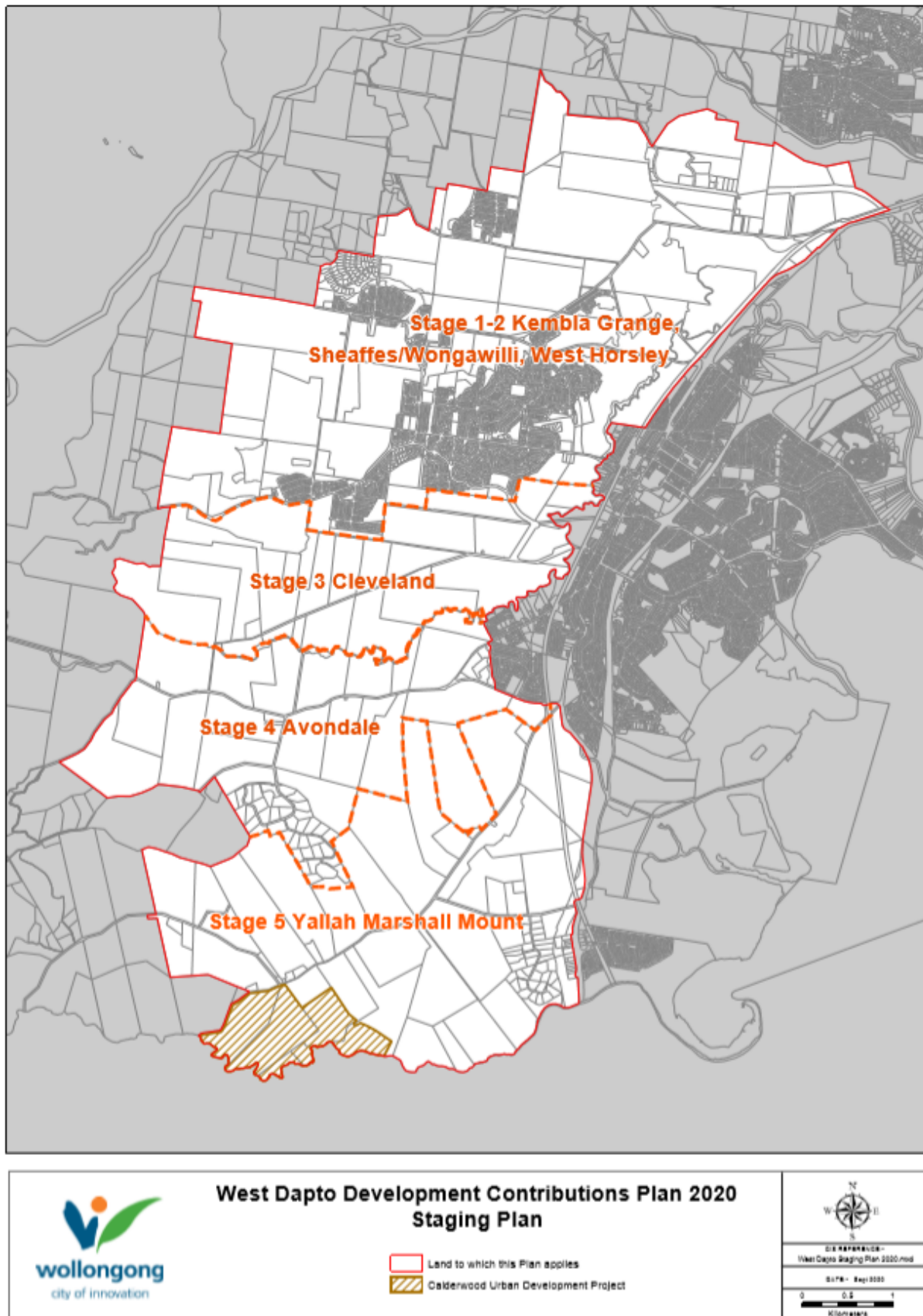
The following documents were prepared as part of the NSW Growth Centres Commission Review:

- West Dapto Market Assessment and Demographics Peer Review (Colleen Coyne Property Research Pty Ltd, 2008)
- West Dapto Land Value Assessment (Hill PDA, 2008)
- West Dapto Release Area Urban Design Analysis (Urbis, 2008)
- West Dapto Review – Flooding & Stormwater Strategy (Bewsher Consulting Pty Ltd, 2008)
- West Dapto Retail Study Peer Review (SGS Economics & Planning, 2008)
- West Dapto Masterplan Traffic & Transport Review (Urbanhorizon Pty Ltd, 2008)
- West Dapto Release Area Access Review (Cardno, 2008)
- West Dapto Transport Link Review (Cardno, 2008)
- Peer Review (Urbanhorizon Traffic & Transport Report (Northrop, 2008)
- Flood Access Strategy for West Dapto (Molino Stewart Pty Ltd, 2008)
- Review of the West Dapto Section 94 Contributions Plan (Newplan, 2008)

The following documents were prepared for the original West Dapto Vision and Master Plan:

- West Dapto Local Environmental Study (Wollongong City Council, 2007).
- Social, Cultural and Recreation Needs Study (Elton Consulting, 2007)
- Energy and Communications Study (Maunsell Australia Pty Ltd, 2004)
- Water Cycle Management Study (URS, 2004)
- Transport Management and Access Plan (KBR Pty Ltd, 2007)
- West Dapto T-Map extension Study (Connell Wagner 2008)
- Infrastructure & Economic Assessment Report (GHD, 2006)

Figure 2 Staging Plan



Part 4 Infrastructure Items by category and contribution rates

4.1 Open Space and Recreation

4.1.1 Demand for Open Space and Recreation

The residential development and expected increase in population in West Dapto will result in additional demands for open space and recreation facilities, including:

- Parks and playgrounds;
- Ovals and fields for a variety of sports and other active recreation uses;
- Passive open space areas, including bushland; and
- Community recreation and leisure centres.

This Plan identifies the formal open space and recreation facilities required to support the future population. In addition, informal public open space areas such as the land surrounding detention basins, riparian corridors and bushland may be provided through subdivision developments.

4.1.2 Existing Open Space and Recreation

Within the existing Horsley release area there is approximately 176.2 ha of public open space (including 106 ha of natural areas), which was delivered through the now repealed *Horsley Section 94 Contributions Plan* and subdivision developments. These open space areas include:

- Reed Park (Bong Bong Road) includes 4 cricket fields / rugby league fields and 3 tennis courts;
- Dimond Bros Park (Bong Bong Road) includes a skate park;
- Horsley Park (Homestead Drive) includes a basketball court;
- Purrungully Woodland (Brindabella Drive) provides bushland reserve for passive open space;
- Integral Energy Recreation Park (Darkes Road) includes a running trail, passive recreation bushland, picnic facilities and a motor museum;
- The land surrounding a number of detention basins provides passive open space; and
- A network of shared use pathways provides connectivity between public open spaces.

4.1.3 Proposed Open Space and Recreation

There are a number of planning studies that have identified the need, type and quantum of open space and recreation for the urban release area and these have informed the preparation of this Plan.

Planning People Places – A Strategic Framework for Open Space, Recreation Facilities and Community Facilities (Suter & Associates, April 2006) provides an overall assessment of existing open space and recreation facilities currently provided in the wider area and future demand for facilities.

The *Social, Cultural and Recreational Needs Study* (Elton Consulting, 2007) establishes a set of principles for open space and recreation facilities as a result of the expected development including:

- A high demand for recreation facilities to be provided for all age groups;
- Ensuring that adequate public and active transport to open space areas is available;
- Flexible designs to allow for changing community needs, priorities and preferences; and
- A high demand for walking and cycle networks that provide linkages to other open spaces.

The *West Dapto Vision* (Wollongong City Council, 2018) establishes four inter-related open space principles: functionality; accessibility; connectivity, movement and flow; value and amenity. Based on these principles the following open space and recreation hierarchy is established:

Local open space will provide locally available open space to residents. These spaces will generally be 2ha in size and provide for both active and passive recreation. The design of local open space areas should be flexible, catering for diverse functions and provide an area suitable for one informal playing field as well as passive recreation embellishment such as playgrounds and seating.

Local open space areas are planned based on a catchment of around 400-600 metre walking distance, aiming to ensure that most residents will be within walking distance to local open space.

Neighbourhood open space will provide both active and passive recreational uses to a broader catchment area of around 2km. The active component would be in the form of formal sports fields to accommodate local sport training and competition and therefore may include multipurpose fields, amenities, lighting and car parking. The passive component would provide for a variety of passive recreation and also playgrounds that cater for a range of ages and abilities.

Neighbourhood open space will generally be around 4ha, with a minimum of 2ha for sporting fields.

District community leisure centres will cater to a broader population, including both within and outside the release area. These facilities may include swimming pools, indoor and outdoor active opportunities and may be co-located with other community facilities and/or open spaces areas.

City wide sports parks will provide high level sporting facilities that will cater to a broader population, including both within and outside the release area.

Further analysis of the exact quantum, location, levels of embellishment and design guidelines for each open space area will form part of the detailed planning process.

The open space provision included in this Plan, together with the existing open space already provided at Horsley, is in line with the generally accepted standard rate 2.83 ha per 1,000 persons.

4.1.4 Nexus and apportionment

The need for open space and recreation within the release area is generated wholly by residential development and therefore these costs will be apportioned 100% to residential development.

The following item has been identified to serve a population both within and outside of the West Dapto Urban Release Area, and therefore the cost has been apportioned as follows:

- OS01 City wide sports park (adjacent to Darkes Town Centre) – based on this city wide sports park catering to both the West Dapto and broader population, only 50% of the cost of this item is apportioned to the Plan.

4.1.5 Schedule and maps

A description of the open space and recreation items included in this Plan and their indicative location and delivery timeframes is provided at **Table 9**. The cost and apportionment is shown at **Schedule 1**.

The exact quantum, location and design of open space will be subject to detailed planning and design though the Planning Proposal, Neighbourhood Plan and Development Application processes. The proposed (indicative) locations for open space are provided at **Figure 3**.

4.1.6 Contribution rate formula

The formula used to calculate the residential per person contribution rate for open space and recreation is:

$$\text{Contribution per person} = \frac{\text{Cost of Item x Apportionment}}{\text{Demand}}$$

Where:

Cost of Item Total actual or estimated cost attributed to this Plan (from **Schedule 1**)

Apportionment Portion of total cost attributed to residential development (from **Table 8**)

Demand Number of persons (from **Table 4**)

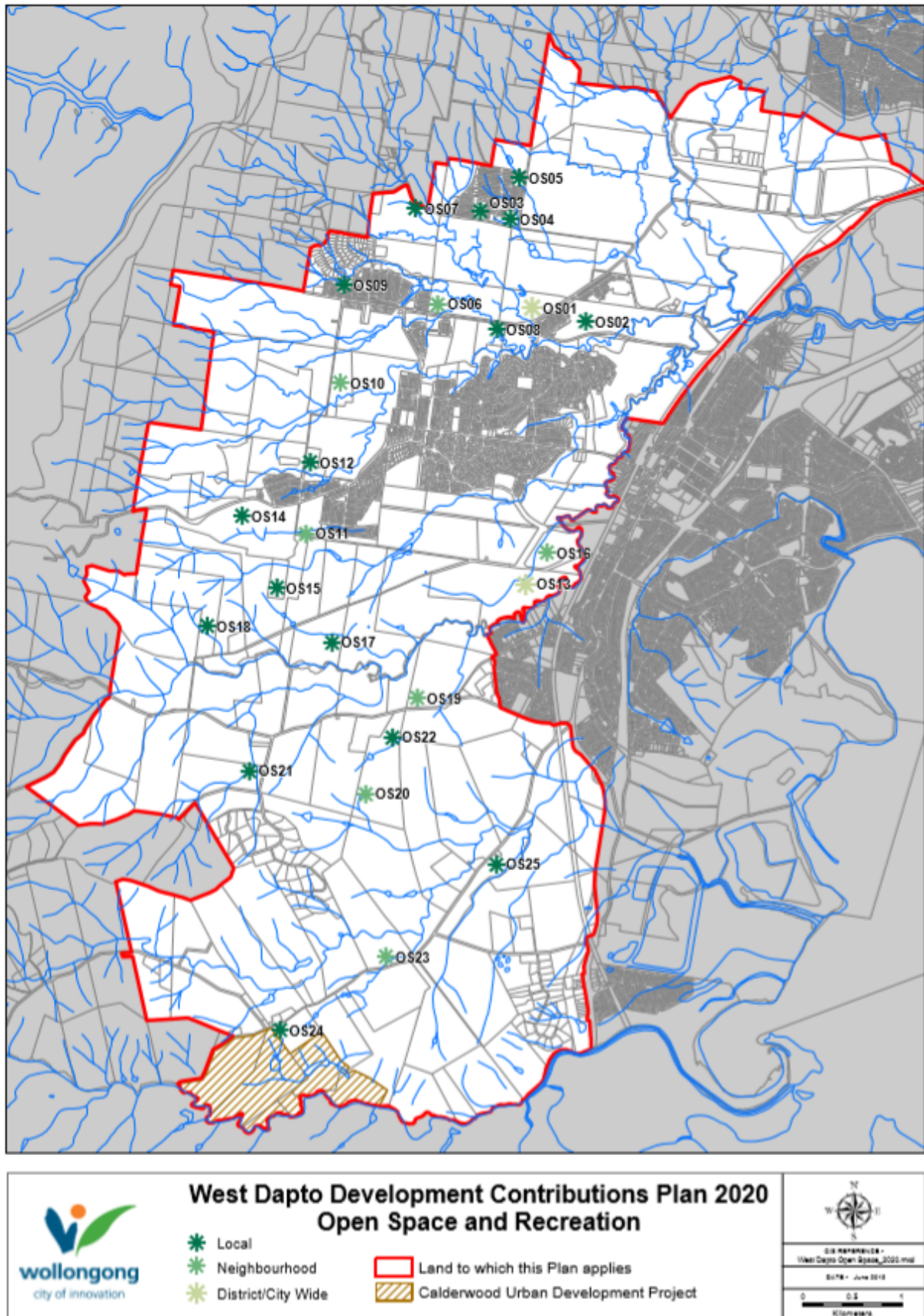
$$\begin{aligned} \text{Contribution per person} &= \frac{\$75,830,325 \times 100\%}{57,433} \\ &= \$1,320.33 \end{aligned}$$

Table 9 Open Space and Recreation

Reference	Infrastructure Item	Indicative location	General Description	Indicative land area (ha)	Indicative Timing
Stage 1-2 Darkes Town Centre					
OS01	City wide sports park	Adjacent to Darkes Town Centre and conservation land	City wide competitive sporting facilities including 2 AFL/cricket fields or 4 rugby fields and passive recreation	9.40	2021/22 - 2025/26
OS02	Local park	On ridge to east of Darkes Town Centre	Passive open space including path ways and seating	10.23	2019/20 – 2022/23
Stage 1-2 Sheaffes - Wongawilli					
OS03	Stane Dyke Park	Within residential area - northern end of Saddleback Cres & corner of Paynes Rd	Local park providing active and passive open space including 1 informal playing field	2.09	Completed – 2018/19
OS04	McPhail Reserve	Within residential area - corner of Sheaffes & Paynes Roads	Local park providing passive open space including path ways and seating	2.81	Completed – 2018/19
OS05	Mogomorra Park	Within residential area along Sheaffes Road and to the west of Local Park OS04	Local park providing passive open space including play equipment and seating	1.71	Completed – 2019/20
OS06	Neighbourhood park	Adjacent to Wongawilli Village Centre - along West Dapto Road	Active (2ha formal playing fields) and passive (2ha) open space	4.00	2019/20 – 2022/23
OS07	Local park	Within residential area - western end of Sheaffes Road	Active and passive open space including 1 informal playing field	2.00	2021/22 – 2025/26
OS08	Local park	Within residential area - along West Dapto Road & south of the railway line	Active and passive open space including 1 informal playing field	2.00	2021/22 – 2025/26
OS09	Bankbook Park	Within residential area - along Bankbook Drive	Local Park providing passive open space including play equipment and seating	1.79	Completed – 2018/19
Stage 1-2 West Horsley					
OS10	Neighbourhood park	Adjacent to Jersey Farm Village Centre	Active (2ha formal playing fields) and passive (2ha) open space	4.00	2026/27 - 2028/29
OS11	Neighbourhood park	Adjacent to Bong Bong Town Centre	Active (1-2ha formal playing fields) and passive (1-2ha) open space	3.00	2036/37 - 2040/41
OS12	Local park	Within residential area - along Haynes Lane	Active and passive open space including 1 informal playing field	2.00	2021/22 - 2025/26

Reference	Infrastructure Item	Indicative location	General Description	Indicative land area (ha)	Indicative Timing
Stage 3 Cleveland					
OS13	Community leisure and recreation centre (part only)	Southern side of Cleveland Road adjacent Daisy Bank Drive	Active open space including 12 Netball Courts and 8 Tennis Courts	N/A	2036/37 – 2040/41
OS14	Local Park	Within residential area - south of the western end of Bong Bong Road	Active and passive open space including 1 informal playing field	1.50	2026/27 – 2030/31
OS15	Local Park	Within residential area - north of the western end of Cleveland Road	Passive open space including embellishment	1.00	2026/27 – 2030/31
OS16	Neighbourhood park	Adjacent to Community Leisure & Recreation Centre	Active (2ha formal playing fields x 4) and passive (2ha) open space	4.00	2036/37 – 2040/41
OS17	Local Park	Within residential areas - south of Cleveland Road	Active and passive open space including 1 informal playing field	2.00	2046/47 – 2050/51
OS18	Local Park	Within residential areas - northern side, far western end of Cleveland Road	Active and passive open space including 1 informal playing field	2.00	2046/47 – 2050/51
Stage 4 Avondale					
OS19	Neighbourhood park	Adjacent to Huntley Village Centre and residential area	Active (2ha formal playing fields) and passive (2ha) open space	4.00	2045/46 – 2050/51
OS20	Neighbourhood park	Adjacent to Avondale Village Centre and residential area	Active (2ha formal playing fields) and passive (2ha) open space	4.00	2045/46 – 2050/51
OS21	Local park	Within residential areas - along Avondale Road & west of South Avondale Road	Active and passive open space including 1 informal playing field	2.00	2046/47 – 2051/52
OS22	Local park	Within residential areas - southern side along Avondale Road	Active and passive open space including 1 informal playing field	2.00	2046/47 – 2051/52
Stage 5 Yallah - Marshall Mount					
OS23	Neighbourhood park	North side along Marshall Mount Road & adjacent to Marshall Mount Town centre	Active (2ha formal playing fields) and passive (2ha) open space	4.00	2031/32 - 2035/36
OS24	Local park	Within residential areas - along the western end of Marshall Mount Road	Active and passive open space including 1 informal playing field	2.00	2031/32 - 2035/36
OS25	Local park	Within residential areas - along the northern end of Marshall Mount Road	Active and passive open space including 1 informal playing field	2.00	2031/32 - 2035/36

Figure 3 Map – Open Space and Recreation



4.2 Community Facilities

4.2.1 Demand for Community Facilities

Community facilities support the delivery of services, build inclusive, capable communities and activate suburbs. Community facilities can include community centres, libraries, neighbourhood centres, childcare facilities, youth centres and performing arts centres and are considered by the NSW Government as essential infrastructure when planning for new communities (2018).

Goal 3 of the *Illawarra-Shoalhaven Regional Plan* (DPE, 2015) promotes 'a region with communities that are strong, healthy and well connected'. In implementing this goal, Council plans for social infrastructure to address community needs and seeks to include sites for social infrastructure as part of planning for new residential development.

The residential development in the West Dapto Urban Release Area will result in additional demands for a range of community facilities to meet the expected future population needs, including:

- child care centres and facilities;
- community meeting rooms;
- library spaces; and
- spaces for organised activities, cultural events and private functions.

4.2.2 Existing Community Facilities

The following existing community facilities are currently located in the area covered by the Plan:

- Horsley Community Hall (Bong Bong Road, Horsley) was constructed to serve the existing Horsley community, and cannot be expanded to serve the future population.
- The Wongawilli Community Hall (Wongawilli Road, Wongawilli) is a small facility that serves the local rural population. The Hall in its current form cannot serve the expected future population.
- Marshall Mount Progress Association Hall (Marshall Mount Road, Marshall Mount) is a small privately owned facility.

The Dapto Ribbonwood Centre and Library is located in Dapto, to the east and outside of the area covered by this Plan.

4.2.3 Proposed Community Facilities

The requirements for community facilities were initially determined through the *Social, Cultural and Recreational Needs Study* for the West Dapto Urban Release Area prepared by Elton Consulting (July 2007) with further revision undertaken by the Growth Centres Commission (2008).

The West Dapto Vision (WCC, 2018) promotes the concept of a community hub that incorporates co-location and multi-purpose, joint use design, and that these uses are best provided for in a multipurpose community centre that can incorporate a variety of large and smaller spaces suitable for a range of social, leisure and cultural activities.

In 2018 Council adopted *Places for People: Social Infrastructure Planning Framework* (SIPF), part of (WCC, 2018), which further establishes the community facilities requirements for West Dapto. The SIPF identifies that the planning and delivery of social infrastructure must ensure that the provision keeps pace with population growth and the diverse needs of existing and future communities.

The key strategies to provide for the incoming community needs of West Dapto are as follows:

- A sub-district level multipurpose community centre and library (with optional childcare facility) is to be centrally located in Stages 1-2.
- Two neighbourhood level multi-purpose community centres are proposed to be located in stages 1-2 and one each in stages 3 and 5. Both the stage 3 and 5 centres will service stage 4.
- Each of the multipurpose community centres may have a different focus such as art, recreation, technology or health, with the specific focus to be determined when emerging community characteristics and needs are more clearly recognised.
- The multipurpose community centres will provide the function of a community resource hub.

- The hierarchy and population sizes within the SIPF framework provides that the sub-district facility will cater to a catchment of 20,000-30,000 people, while the neighbourhood level centres will cater to a catchment of around 1,000 - 5,000 people.
- Each of the multi-purpose community centres will include cultural components within them.
- A multipurpose childcare facility is an option for the sub-district centre. This may contain a full range of childcare options from long day care, pre-school, occasional care and playgroups.

4.2.4 Nexus and apportionment

The need to provide the community facilities identified in this plan is generated wholly by the residential development of the West Dapto Urban Release Area. It is therefore appropriate that the full cost of providing the land required for these centres is apportioned to residential development.

4.2.5 Schedule and maps

Details on each of the community facilities required to support the development of West Dapto is provided at **Table 10**. This includes the type, location and size of each of the proposed facilities.

There are both land acquisition and construction costs to deliver these items to the community, however as this Plan is limited to infrastructure in the Essential Works, List, the construction costs for these items are not included in this Plan and will need to be funded through other sources. In addition, Wongawilli Hall is an existing owned council facility and therefore council does not need to acquire additional land to deliver the upgrade to this facility.

The cost of land that is included in this Plan is shown at **Schedule 2**.

Indicative locations for the proposed multi-purpose community centres are shown in **Figure 4**.

4.2.6 Contribution rate formula

The formula used to calculate the residential per person contribution rate for community facilities is:

$$\text{Contribution per person} = \frac{\text{Cost of Item x Apportionment}}{\text{Demand}}$$

Where:

Cost of Item Total actual or estimated cost attributed to this Plan (from **Schedule 2**)

Apportionment Portion of total cost attributed to residential development (from **Table 8**)

Demand Number of persons (from **Table 4**)

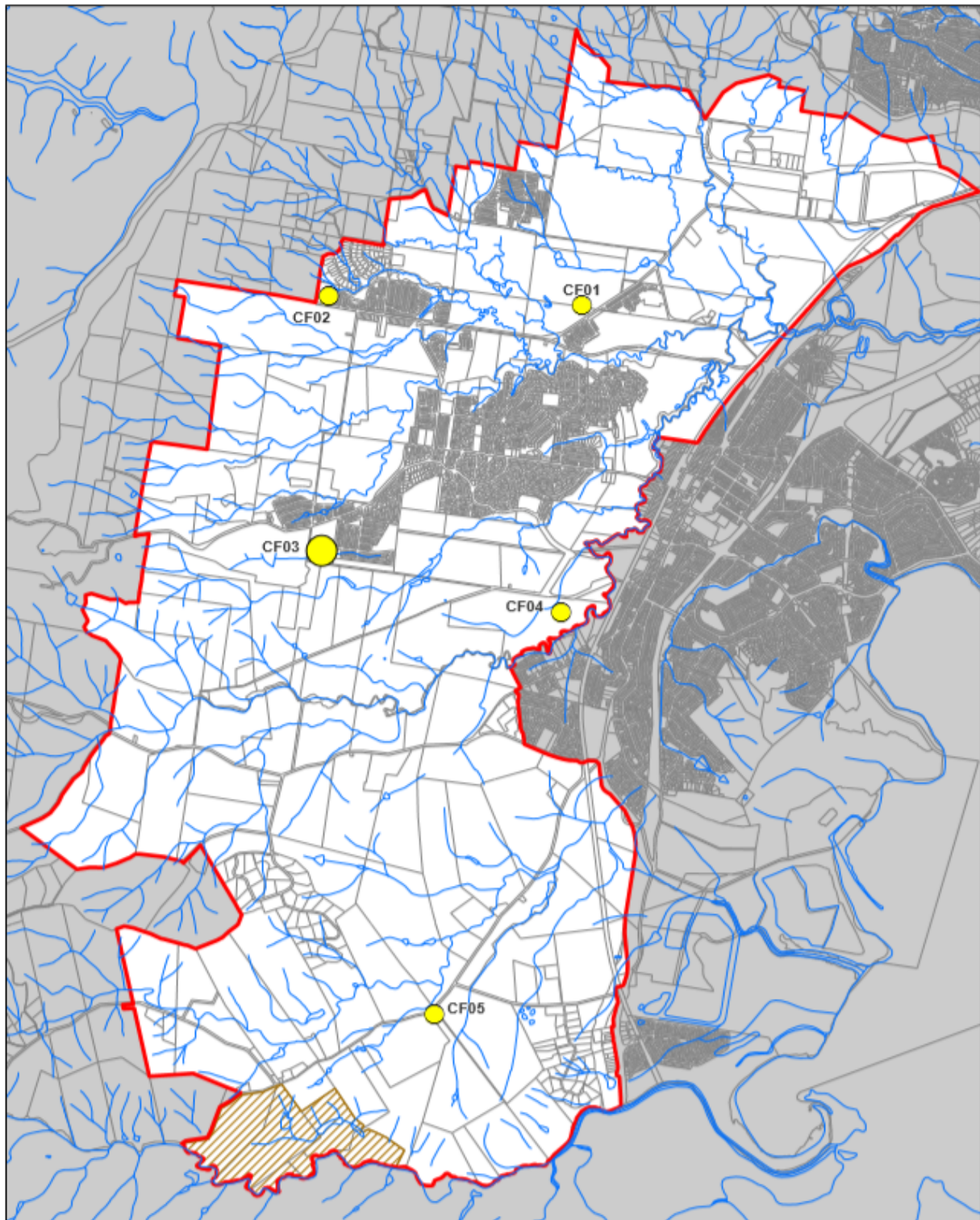
$$\begin{aligned} \text{Contribution per person} &= \frac{\$1,757,500 \times 100\%}{57,433} \\ &= \$30.60 \end{aligned}$$

Table 10 Community Facilities

Reference	Infrastructure Item	Indicative location	General Description	Gross floor area	Land area	Indicative Timing
Stage 1-2 Kembla Grange, Sheaffes-Wongawilli, West Horsley						
CF01	Neighbourhood multi-purpose community centre	Darkes Town Centre	New facility	1,500m ²	3,500m ²	2020/21 – 2023/24
CF02	Neighbourhood community centre	Wongawilli Hall – western end of Wongawilli Road	Upgrade and extension to existing community hall.	350m ²	N/A	2020/21 – 2020/21
CF03	Sub-district multi-purpose community centre and library	Bong Bong Town Centre	New facility with optional child care centre.	3,600m ²	10,000m ²	2020/21 – 2023/24
Stage 3 Cleveland						
CF04	Neighbourhood multi-purpose community centre	Co-located with Community Leisure & Recreation Centre	New facility	350m ²	1,500m ²	2041/42 – 2045/46
Stage 5 Yallah Marshall Mount						
CF05	Neighbourhood multi-purpose community centre	Marshall Mount Town Centre	New facility	1,500m ²	3,500m ²	2021/22 – 2024/25

Note: As this Plan is restricted to infrastructure in the Essential Works List, only the land component of Community Facilities is included in the Schedule.

Figure 4 Map – Community Facilities



4.3 Transport

4.3.1 Demand for Transport

A key principle of the *Illawarra-Shoalhaven Regional Plan* (DPE, 2015) is to integrate transport and land use planning, and support improvements in active transport (walking and cycling), public transport and transport infrastructure (including freight).

Wollongong City Council has developed a local government area wide traffic model to assist in establishing the required transport networks to service the future population of the West Dapto Urban Release Area. This model, combined with practical planning experience establishes the need for infrastructure works resulting from the development of the West Dapto Urban Release Area, namely:

- Capacity improvements to existing road and intersection infrastructure;
- Intersection treatment upgrades (e.g. priority controls, roundabouts, or traffic signals);
- Bridging structures over creek lines, railway corridors and major roads;
- Bus accessible routes through West Dapto with connections to Dapto Town Centre and the regional road network; and
- Optimising public transport routes and infrastructure.

The majority of the existing road network in the West Dapto release area is dominated by east west road alignments (following topographic ridgelines) and was largely developed to cater for rural traffic volumes only. The works identified in this Plan are considered necessary to facilitate development, whilst ensuring an acceptable level of access, safety and convenience for all road users within the release area.

Based on the traffic modelling, the major road network proposed for the West Dapto Release Area consists of three road types; major collectors, minor collectors and sub-arterial. All of these road types are suitable to cater for bus routes. The proposed road network has taken into consideration the heavily constrained nature of the release area, including flooding and existing road and rail corridor infrastructure. The future road network will be designed to provide flood accessible routes for the residential areas, including the provision of bridges over watercourses and railway corridors.

4.3.2 Existing Transport

The existing Horsley residential area has an urban standard road network to service it, whilst the remaining West Dapto Area generally relies on existing roads that are predominantly a rural standard.

The development of West Dapto will require a full upgrade to the transport network; existing roads will need to be significantly upgraded from rural to urban standard, and new roads will be required along with a high level of public and active transport provision, as limited bus services are currently in operation.

4.3.3 Proposed Transport

Through the revised Structure Plan that informed the *West Dapto Vision* (2018), an integrated transport system is proposed that caters for private vehicles as well as freight, public transport, pedestrians and cyclists. Road types have been developed based on a functional hierarchy, where the road designs support the transport modes in various ways. The road network has been developed to cater for planned land use and deliver a safe, connected and efficient transport framework that compliments the natural environment and facilitates sustainable transport outcomes.

The establishment of efficient and attractive public transport options for West Dapto is imperative to achieve sustainable growth outcomes. Bus routes have been considered when planning road types, and the provision of bus shelters and kiosks will support public transport options.

Active Transport, including walking and cycling, will be an important component of the future West Dapto transport system, contributing significantly to achieving the vision of a 'sustainable' community.

Transport infrastructure is a major component of this Plan and includes:

- A total of 52.75km of funded road network, including the construction of new roads and the significant upgrade of existing rural roads to an urban standard. A detailed list of the roads including length and number of lanes is provided at **Table 12**.

- A total of 65 bridges (over watercourses) and six rail crossings to support the road network. A list of bridges and rail crossings including length and type is included at **Table 13**.
- A total of 62 funded intersections including roundabouts and signalised (traffic lights) intersections. Details of each intersection, including the adjoining sections of road and the type of intersection, are provided at **Table 14**.
- Public transport, including 218 bus shelters and eight bus kiosks, as shown at **Table 15**.
- Approximately 42km of shared use paths and five shared use path bridges that will provide whole of release area connectivity. Note, a sixth pedestrian bridge included in the West Dapto Vision 2018 is shown as PB6 at **Figure 9**. This bridge is not currently included in Schedule 3 but may be included in the future. Further details on active transport items are provided at **Table 16**.

As each stage is developed the required transport infrastructure will be planned and delivered. To date, the following transport items have been provided in full:

- TR05 Smiths Lane.

In addition, the following sub-items have been completed in part, or are currently under construction:

- TR02 West Dapto Road rail crossing (IN11 constructed, WDR1 partially constructed);
- TR04 Paynes Road (half road constructed);
- TR06 Wongawilli Road upgrade (under construction);
- TR08 Shone Avenue (S1, S2, S3, S4, B31 and IN25 constructed);
- TR10 Bong Bong Road (BB6, BB7, BB8, IN30 and IN63 constructed);
- TR13 Cleveland Road (C1, C2 and B45 constructed);
- TR20 Iredell Road (NR20 constructed);
- TR22 Fairwater Drive (F1, F3 and B38 constructed. IN31 and IN32 under construction);
- TR23 Fowlers Road Extension and the railway overpass bridge (under construction);
- TR25 Western Ring Road – Shone Avenue to Yallah Road (NR30, NR32 and IN49 under construction);
- TR32 Stages 1-2 Shared use pathway (various sections partly constructed).

4.3.4 Nexus and apportionment

The new transport network is required wholly to support the urban development. All of the roads are specifically required to support the West Dapto Urban Release Area development and are apportioned 100% to the Plan, with the exception of three roads that also have an apportionment to the adjoining Calderwood development. The items and apportionment to Calderwood (by section) are:

- TR16 Yallah Road – B63 (13%), B64, Y4 and IN62 (34%) – overall cost apportionment to Calderwood (24.25%);
- TR17 Marshall Mount Road – MM1 (92%), IN56 (88%), IN57 (86%), B65 (68%), IN55 (34%), B67 (35%), B66 (35%) – overall cost apportionment to Calderwood (55.73%);
- TR29 Marshall Mount Town Centre Bypass (NR59 – NR61) – IN61 (34%), NR56, NR57, NR58, B68 and B69 (77%) - overall cost apportionment to Calderwood (75.34%).

The need to provide transport infrastructure as identified in this Plan is predominately generated by the residential development of West Dapto. The future employment (non-residential) development within the proposed industrial and business zonings will also generate demand for this critical infrastructure. It is therefore appropriate that the costs be apportioned between residential and non-residential land uses based on the adjusted land areas, as shown at **Table 8**.

4.3.5 Schedule and maps

Details on each transport item including indicative delivery time frames are provided at **Tables 11 to 16**. Each road item includes a number of road sections, bridges and intersections, as shown at **Table 11**. Further details, including map references, are provided for road sections (**Table 12**), Bridges and Rail Crossings (**Table 13**) and Intersections (**Table 14**).

The proposed location of transport items (where appropriate to map) is shown at **Figures 5 to 12**. Details on the cost and apportionment for each transport item are provided at **Schedule 3**.

4.3.6 Contribution rate formula – Residential

The formula used to calculate the residential per person contribution rate for transport infrastructure is:

$$\text{Contribution per person} = \frac{\text{Cost of Item} \times \text{Apportionment}}{\text{Demand}}$$

Where:

Cost of Item Total actual or estimated cost attributed to this Plan (from **Schedule 3**)

Apportionment Portion of total cost attributed to residential development (from **Table 8**)

Demand Number of persons (from **Table 4**)

$$\begin{aligned} \text{Contribution per person} &= \frac{\$735,972,377 \times 97.58\%}{57,433} \\ &= \$12,504.34 \end{aligned}$$

4.3.7 Contribution rate formula – Non-residential

The formula used to calculate the non-residential contribution rate for transport infrastructure is:

$$\text{Contribution per hectare} = \frac{\text{Cost of Item} \times \text{Apportionment}}{\text{Demand}}$$

Where:

Cost of Item Total actual or estimated cost attributed to this Plan (from **Schedule 3**)

Apportionment Portion of total cost attributed to non-residential development (from **Table 8**)

Demand Total land area (zoned) in hectares (from **Table 6**)

Commercial development:

$$\begin{aligned} \text{Contribution per hectare} &= \frac{\$735,972,377 \times 0.93\%}{22.69} \\ &= \$301,654.61 \end{aligned}$$

Industrial and other development:

$$\begin{aligned} \text{Contribution per hectare} &= \frac{\$735,972,377 \times 1.49\%}{180.44} \\ &= 60,773.60 \end{aligned}$$

Table 11 Transport – Summary of road items

Reference	Infrastructure Item	Location (Stage)	Road Sections	Bridges & Rail crossings	Intersections	Indicative Timing
Existing Roads						
TR01	West Dapto Road	1-2	WD1 to WD17	B15, B16, B17, B18, B19, B20, B21, B22, B23	IN10, IN12, IN13, IN14, IN15, IN16, IN17, IN18	2020/21 - 2030/31
TR02	West Dapto Road Rail Crossing	1-2	WDR1	N/A	IN11	2010/11 – 2031/32
TR03	Sheaffes Road	1-2	SH1 to SH3	N/A	IN7, IN20, IN21	2021/22 - 2025/26
TR04	Paynes Road	1-2	P1 to P4	B10, B27	IN6	2026/27 - 2030/31
TR05	Smiths Lane	1-2	N/A	B28	N/A	Completed – 2015/16
TR06	Wongawilli Road	1-2	W1, W2, W3	B29	N/A	2018/19 - 2020/21
TR07	Darkes Road	1-2	D1 to D6	B24, B25, B26, DRC	IN22, IN23	2027/28 - 2031/32
TR08	Shone Avenue	1-2	S1 to S5	B30, B31	IN19, IN24, IN25, IN26	2012/13 – 2026/27
TR09	Bong Bong Road rail crossing	1-2	N/A	BBRC, B32	N/A	2045/46 - 2050/51
TR10	Bong Bong Road	1-2	BB1 to BB8	B33	IN27, IN28, IN29, IN30, IN63	2035/36 - 2040/41
TR11	Reddalls Road	1-2	R1	N/A	N/A	2027/28 - 2031/32
TR12	Wyllie Road	1-2	WY1	N/A	N/A	2031/32 - 2035/36
TR13	Cleveland Road	3	C1 to C12	B45, B46, B47, B48, B49, B50, B51	IN36, IN37, IN38, IN39, IN40	2013/14 - 2031/32
TR14	Avondale Road	4	A1 to A6	B53, B54, AVRC	IN41, IN43, IN44, IN45, IN46	2040/41 – 2050/51
TR15	Huntley Road	4	H1 to H3	B52	IN58, IN59, IN60	2035/36 - 2040/41
TR16	Yallah Road	5	Y1 to Y4	B63, B64	IN62	2031/32 - 2035/36
TR17	Marshall Mount Road	5	MM1 to MM6	B65, B66, B67	IN55, IN56, IN57	2031/32 - 2055/56
New Roads						
TR18	Northcliffe Drive extension - east	1-2	NR1 to NR12, R2, R3	B1, B3, B4, B5, B6, B7, B8, B9	IN1, IN2, IN5, IN3, IN4	2031/32 - 2035/36

TR19	Northcliffe Drive extension - west	1-2	NR13 to NR19	B11, B12, B13, B14	IN8, IN9	2025/26 - 2034/35
TR20	Iredell Road	1-2	NR20	B34	N/A	2025/26 - 2029/30
TR21	Brooks Reach to Cleveland (east)	1-2	N/A	B41	N/A	2025/26 – 2030/31
TR22	Fairwater Drive	3	F1 to F3	B38	IN31, IN32	Completed - 2012/13
TR23	Fowlers Road Extension	3	NR21 to NR25	B36, B37	IN33, IN34, IN35	2016/17 - 2022/23
TR24	Eastern Link Road (Bong Bong Road to Fowlers Road)	3	NR26, NR27	B35	N/A	2046/47 - 2050/51
TR25	Western Ring Road - Shone Avenue to Yallah Road	1-5	NR28 to NR44	B56, B57, B58, B59, B60, B61, B62	IN47, IN48, IN49, IN50, IN51, IN52, IN53, IN54	2021/22 - 2050/51
TR26	Brooks Reach to Huntley Link	3	NR45 to NR49	B42, B43, B44	IN42	2035/36 - 2055/56
TR27	Eastern Link Road (Fairwater Drive to Avondale Road)	4	NR50 to NR53	B39, B40	N/A	2046/47 - 2050/51
TR28	Eastern spine road - Western Ring Road to Huntley Road	4	NR54, NR55	B55	N/A	2046/47 - 2050/51
TR29	Marshall Mount Town Centre Bypass (Marshall Mount Road to Yallah Road)	5	NR56 to NR58	B68, B69	IN61	2035/36 - 2040/41

Table 12 Transport – Road sections

Road Item Reference	Infrastructure item	Map References	Lanes	Length (m)
Existing roads				
TR01	West Dapto Road	WD1 to WD17	2 lanes / 4 lanes	5,008
TR02	West Dapto Road Rail Crossing	WDR1	2 lanes	87
TR03	Sheaffes Road	SH1 to SH3	2 lanes	1,455
TR04	Paynes Road	P1 to P4	2 lanes / 4 lanes	788
TR05	Smiths Lane	N/A	2 lanes	93
TR06	Wongawilli Road	W1, W2, W3	2 lanes	336
TR07	Darkes Road	D1 to D6	2 lanes	1,554

Road Item Reference	Infrastructure item	Map References	Lanes	Length (m)
TR08	Shone Avenue	S1 to S5	2 lanes / 4 lanes	1,365
TR10	Bong Bong Road	BB1 to BB8	2 lanes	1,288
TR11	Reddalls Road	R1	2 lanes	490
TR12	Wyllie Road	WY1	2 lanes	480
TR13	Cleveland Road	C1 to C12	2 lanes / 4 lanes	4,862
TR14	Avondale Road	A1 to A6	2 lanes / 4 lanes	3,302
TR15	Huntley Road	H1 to H3	4 lanes	1,169
TR16	Yallah Road	Y1 to Y4	4 lanes	1,720
TR17	Marshall Mount Road	MM1 to MM6	2 lanes	5,600
New roads				
TR18	Northcliffe Drive extension - Princes Hwy to Paynes Road	NR1 to NR12, R2, R3	4 lanes	4,148
TR19	Northcliffe Drive extension - Sheaffes Road to West Dapto Road	NR13 to NR19	4 lanes	1,108
TR20	Iredell Road	NR20	2 lanes	500
TR22	Fairwater Drive	F1 to F3	2 lanes	758
TR23	Fowlers Road Extension	NR21 to NR25	4 lanes	1,227
TR24	Eastern Link Road (Bong Bong Road to Fowlers Road)	NR26, NR27	2 lanes	615
TR25	Western Ring Road - Shone Avenue to Yallah Road	NR28 to NR44	4 lanes	7,419
TR26	Brooks Reach to Huntley Link	NR45 to NR49	2 lanes	2,109
TR27	Eastern Link Road (Fairwater Drive to Avondale Road)	NR50 to NR53	2 lanes / 4 lanes	1,390
TR28	Eastern spine road - Western Ring Road to Huntley Road	NR54, NR55	2 lanes	1,425
TR29	Marshall Mount Town Centre Bypass (Marshall Mount Road to Yallah Road)	NR56 to NR58	2 lanes	2,300

Table 13 Transport – Bridges and rail crossings

Road Item Reference	Map Reference	Road Name	Link Description	Lanes	Length (m)	Width (m)	Type
Bridges over watercourses for existing roads							
TR01	B15	West Dapto Road (2 x Mullet Creek tributaries)	Wyllie Road to Reddalls Road	2	10	14	Culvert
TR01	B16	West Dapto Road (2 x Mullet Creek tributaries)	Wyllie Road to Reddalls Road	2	10	14	Culvert
TR01	B17	West Dapto Road (between WD5-WD6)	Reddalls Road to Sheaffes Road	2	8	14	Culvert
TR01	B18	West Dapto Road (between WD6-WD7)	Reddalls Road to Sheaffes Road	2	34	14	super T over 20m upgrade
TR01	B19	West Dapto Road (tributary n/o Sheaffes Road)	Reddalls Road to Sheaffes Road	4	10	21	Culvert
TR01	B20	West Dapto Road (tributary n/o Darkes Road)	Sheaffes Road to Darkes Road	4	10	21	Culvert
TR01	B21	West Dapto Road (3 x Mullet Creek tributaries)	Darkes Road to Shone Avenue	2	15	14	super T over 20m upgrade
TR01	B22	West Dapto Road (3 x Mullet Creek tributaries)	Darkes Road to Shone Avenue	2	10	14	Culvert
TR01	B23	West Dapto Road (3 x Mullet Creek tributaries)	Darkes Road to Shone Avenue	4	22	21	super T over 20m upgrade
TR04	B10	Paynes Road	Sheaffes Rd to Paynes Rd (North)	2	10	14	Culvert
TR04	B27	Paynes Road	Paynes Road (west of Northcliffe Drive Extension)	2	6	14	Culvert
TR05	B28	Smiths Lane	North of West Dapto Road	2	93	14	super T over 20m new
TR06	B29	Wongawilli Road	Shone Avenue to Smiths Lane	4	6	21	Culvert
TR07	B24	Darkes Road (Mullet Creek western tributary)	West Dapto Road to Princes Hwy	2	29	14	super T over 20m upgrade
TR07	B25	Darkes Road (Mullet Creek eastern tributary)	West Dapto Road to Princes Hwy	2	12	14	Culvert

Road Item Reference	Map Reference	Road Name	Link Description	Lanes	Length (m)	Width (m)	Type
TR07	B26	Darkes Road (Mullet Creek eastern tributary)	West Dapto Road to Princes Hwy	4	16	21	Culvert
TR08	B30	Shone Ave (Robins northern tributary)	West Dapto Road to Bong Bong Road	2	47	14	super T over 20m upgrade
TR08	B31	Shone Ave (Robins Creek southern tributary)	West Dapto Road to Bong Bong Road	2	63	14	plank up to 20m upgrade
TR10	B33	Bong Bong Road	Between Horsley & Dapto	2	33	14	super T over 20m upgrade
TR13	B45	Cleveland Road (2 x Mullet Creek tributaries)	Princes Hwy to Daisybank Drive	2	27	14	plank up to 20m upgrade
TR13	B46	Cleveland Road (2 x Mullet Creek tributaries)	Princes Hwy to Daisybank Drive	2	20	14	super T over 20m upgrade
TR13	B47	Cleveland Road (2 x Mullet Creek tributaries)	NR46 to Western Ring Road	2	6	14	Culvert
TR13	B48	Cleveland Road (2 x Mullet Creek tributaries)	NR46 to Western Ring Road	2	6	14	Culvert
TR13	B49	Cleveland Road (Mullet Creek tributary)	Western Ring Road to Avondale Road	2	6	14	Culvert
TR13	B50	Cleveland Road (Mullet Creek tributary)	Western Ring Road to Avondale Road	2	32	14	plank up to 20m upgrade
TR13	B51	Cleveland Road (Mullet Creek tributary)	Western Ring Road to Avondale Road	2	6	14	Culvert
TR14	B53	Avondale Road (Mullet Creek tributary)	Western Ring Road to NR49	2	10	14	plank up to 20m upgrade
TR14	B54	Avondale Road (Mullet Creek tributary)	Cleveland Road to Western Ring Road	2	17	14	plank up to 20m upgrade
TR16	B63	Yallah Road (3 x Duck Creek tributaries)	Marshall Mount Road to Princes Hwy	4	50	21	RMS Plank
TR16	B64	Yallah Road (3 x Duck Creek tributaries)	Marshall Mount Road to Princes Hwy	4	16	27	Culvert

Road Item Reference	Map Reference	Road Name	Link Description	Lanes	Length (m)	Width (m)	Type
TR17	B65	Marshall Mount Road	Yallah Road to LGA boundary	2	63	14	RMS Plank
TR17	B66	Marshall Mount Road (2 x Duck Creek tributaries)	Yallah Road to Huntley Road	2	125	14	RMS Plank
TR17	B67	Marshall Mount Road (2 x Duck Creek tributaries)	Yallah Road to Huntley Road	2	63	14	RMS Plank
Bridges over watercourses for new roads							
TR18	B1	Northcliffe Drive Extension	Wyllie Road to Northcliffe Drive (existing)	4	11.5	21	Culvert
TR18	B3	Northcliffe Drive Extension	Northcliffe Drive (existing) to Wyllie Road	4	19	21	Culvert
TR18	B4	Northcliffe Drive Extension (2 x tributaries)	Reddalls Road to Wyllie Road	4	24	21	plank up to 20m new
TR18	B5	Northcliffe Drive Extension (2 x tributaries)	Reddalls Road to Wyllie Road	4	45	21	plank up to 20m new
TR18	B6	Northcliffe Drive Extension	Reddalls Road (east) to Reddalls Road (west)	4	11	21	Culvert
TR18	B7	Northcliffe Drive Extension (southern tributary)	Reddalls Road (west) to Paynes Road	4	127	21	super T over 20m new
TR18	B8	Northcliffe Drive Extension (northern tributary)	Reddalls Road (west) to Paynes Road	4	24	21	super T over 20m new
TR18	B9	Northcliffe Drive Extension (northern tributary)	Reddalls Road (west) to Paynes Road	4	45	21	super T over 20m new
TR19	B11	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road	2	6	14	Culvert
TR19	B12	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road (Bridge adjacent to ESA)	2	24	14	Culvert
TR19	B13	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road	2	96	14	Culvert
TR19	B14	Northcliffe Drive Extension	Sheaffes Road to West Dapto Road	2	24	14	Culvert
TR20	B34	Iredell Road	Western Ring Road to Bong Bong Road	2	70	14	super T over 20m new

Road Item Reference	Map Reference	Road Name	Link Description	Lanes	Length (m)	Width (m)	Type
TR21	B41	New road (not in Plan) (Brooks Reach east)	Brooks Reach to Cleveland Road	2	100	14	super T over 20m new
TR22	B35	Mullet Creek tributary	Bong Bong Road to Fowlers Road	2	50	14	super T over 20m new
TR22	B38	Fairwater Dr (Reed Creek tributary)	Sierra Drive to Fowlers Road Extension	2	48	14	super T over 20m new
TR23	B37	Fowlers Road Extension	Princes Hwy to Eastern Link Road	4	36	21	super T over 20m new
TR25	B56	Western Ring Road	Shone Avenue to Iredell Road	2	110	14	plank up to 20m new
TR25	B57	Western Ring Road	Iredell Road to Bong Bong Road	2	70	14	super T over 20m new
TR25	B58	Western Ring Road	Bong Bong Road to Cleveland Road (Stockland Stage 3)	2	68.4	14	super T over 20m new
TR25	B59	Western Ring Road	Avondale Road to Cleveland Road	2	33	14	super T over 20m new
TR25	B60	Western Ring Road	Avondale Road to Cleveland Road	2	65	14	super T over 20m new
TR25	B61	Western Ring Road	Avondale Road to Marshall Mount Road	4	63	21	RMS Plank
TR25	B62	Western Ring Road	Avondale Road to Marshall Mount Road	5	75	21	RMS Plank
TR26	B42	Brooks Reach to Huntley Link	Brooks Reach to Cleveland Road	4	70	21	super T over 20m new
TR26	B43	Brooks Reach to Huntley Link	Cleveland Road to Avondale Road	2	25	14	plank up to 20m new
TR26	B44	Brooks Reach to Huntley Link	Cleveland Road to Avondale Road	2	70	14	super T over 20m new
TR27	B39	Eastern Link Road (Daisybank Drive)	Fairwater Dr to Cleveland Road	2	6	14	plank up to 20m new
TR27	B40	Eastern Link Road	Avondale Road to Cleveland Road	2	24	14	super T over 20m new
TR28	B55	Eastern Spine Road	Avondale Rd to Western Ring Road	2	55	14	super T over 20m new
TR29	B68	Marshall Mount Town Centre Bypass	Marshall Mount Road to Yallah Road	2	12	44	Culvert
TR29	B69	Marshall Mount Town Centre Bypass	Marshall Mount Road to Yallah Road	2	45	14	RMS Plank

Road Item Reference	Map Reference	Road Name	Link Description	Lanes	Length (m)	Width (m)	Type
Rail crossings							
TR02	BBRC	Bong Bong Road	Eastern Link Road to Station Street	2	N/A	N/A	Level crossing upgrade
TR07	DRC	Darkes Road	West Dapto Road to Princes Hwy	3	N/A	N/A	Level crossing upgrade
TR09	B32	Bong Bong Road (switchback bridge over rail line)	Eastern Link Road to Station Street	2	16	14	Rail 3
TR14	AVRC	Avondale Road	Eastern Link Road to Princes Hwy	N/A	N/A	N/A	Level crossing upgrade
TR15	B52	Huntley Road (rail bridge)	Princes Highway to Marshall Mount Road	4	55	21	Rail 1
TR23	B36	Fowlers Road Extension (rail bridge)	Princes Hwy to Eastern Link Road	4	197	21	super T over 20m new

Table 14 Transport – Intersections

Road Item Reference	Map Reference	Road 1	Road 2	Intersection Treatment
Intersections for existing roads				
TR01	IN12	Wyllie Road	West Dapto Road	Small roundabout
TR01	IN14	Industrial Access Road	West Dapto Road	Small roundabout
TR01	IN15	Darkes Road	West Dapto Road	Large signals
TR01	IN16	New road (not in Plan) (south of Darkes Road)	West Dapto Road	Small roundabout
TR01	IN17	New road (not in Plan) (south of Darkes Road)	West Dapto Road	Large signals
TR01	IN18	Rainbird Drive / New road (not in Plan)	West Dapto Road	Large signals
TR01	IN13	Reddalls Road	West Dapto Road	Small roundabout
TR01	IN10	Northcliffe Drive Extension	West Dapto Road	Large signals
TR02	IN11	Princes Hwy	West Dapto Road	Large signals

Road Item Reference	Map Reference	Road 1	Road 2	Intersection Treatment
TR03	IN20	Sheaffes Road	New Road (not in Plan) (east of Paynes Road)	Small roundabout
TR03	IN21	Sheaffes Road	New Road (not in Plan) (west of Paynes Road)	Small roundabout
TR03	IN7	Sheaffes Road	Paynes Road	Large signals
TR04	IN6	Paynes Road	Northcliffe Drive Extension / Paynes Road	Large signals
TR07	IN22	Darkes Road	New Road (not in Plan)	Small roundabout
TR07	IN23	Darkes Road	Princes Hwy	Large signals
TR08	IN19	Shone Avenue	West Dapto Road	Large signals
TR08	IN24	Shone Avenue	Western Ring Road	Large signals
TR08	IN25	Horsley Drive	Shone Avenue	Small roundabout
TR08	IN26	Bong Bong Road	Shone Avenue	Small signals
TR10	IN27	Bong Bong Road	Station Street	Small signals
TR10	IN28	Bong Bong Road	Eastern Link Road	Small signals
TR10	IN30	Fairwater Drive (west)	Bong Bong Road	Small roundabout
TR10	IN29	Bong Bong Road	Sierra Drive	Mini roundabout
TR10	IN63	Bong Bong Road	Glenlee Drive	Small roundabout
TR13	IN37	Cleveland Road	New Road (not in Plan) (Brooks Reach east)	Large signals
TR13	IN40	Cleveland Road (dog-leg)	New Road (not in Plan)	Small roundabout
TR13	IN36	Cleveland Road	Eastern Link Road (Daisybank Drive)	Large signals
TR13	IN38	Cleveland Road	Brooks Reach to Huntley Link	Large signals
TR13	IN39	Cleveland Road	Western Ring Road	Large signals
TR14	IN41	Cleveland Road	Avondale Road	Small roundabout
TR14	IN45	Avondale Road	Brooks Reach to Huntley Link	Small roundabout
TR14	IN46	Avondale Road	Western Ring Road	Large signals
TR14	IN43	Avondale Road	Eastern Link Road (NR53)	Small signals

Road Item Reference	Map Reference	Road 1	Road 2	Intersection Treatment
TR14	IN44	Avondale Road	Huntley Road	Large signals
TR15	IN58	Huntley Road	Princes Hwy	Large signals
TR15	IN59	Huntley Road	Marshall Mount Road	Small signals
TR15	IN60	Huntley Road	Penrose Drive	Small signals
TR16	IN62	Yallah Road	Princes Hwy	Large signals
TR17	IN55	Yallah Road	Marshall Mount Road	Large signals
TR17	IN56	Marshall Mount Road	North Marshall Mount Road	Small signals
TR17	IN57	Marshall Mount Road	Marshall Mount Town Centre Bypass	Small signals
Intersections for new roads				
TR18	IN1	Northcliffe Drive extension	Church/Ian McLennan Park access	Large signals
TR18	IN2	Northcliffe Drive extension	Wyllie Road	Large signals
TR18	IN5	Northcliffe Drive extension	Industrial Access Road	Large roundabout
TR18	IN3	Northcliffe Drive extension	Reddalls Road (east)	Large signals
TR18	IN4	Northcliffe Drive extension	Reddalls Road (west)	Large roundabout
TR19	IN8	Northcliffe Drive extension	New Road (not in Plan)	Small roundabout
TR19	IN9	Northcliffe Drive extension	New Road (not in Plan)	Small roundabout
TR22	IN31	Fairwater Drive	Sierra Drive	Small roundabout
TR22	IN32	Fairwater Drive	Fowlers Road Extension & Eastern Link Road (Daisybank Drive)	Large signals
TR23	IN33	Fowlers Road Extension	Princes Hwy	Large signals
TR23	IN34	Fowlers Road Extension	Marshall Street	Large roundabout
TR23	IN35	Fowlers Road Extension	Eastern Link Road (NR27)	Large roundabout
TR25	IN47	Western Ring Road	New Road (not in Plan) (Jersey Farm Road)	Small signals
TR25	IN48	Western Ring Road	Iredell Road	Large roundabout

Road Item Reference	Map Reference	Road 1	Road 2	Intersection Treatment
TR25	IN49	Western Ring Road	Bong Bong Road	Large signals
TR25	IN50	Western Ring Road	New Road (not in Plan) (Brooks Reach west)	Small signals
TR25	IN51	Western Ring Road	New Road (not in Plan)	Large roundabout
TR25	IN52	Western Ring Road	New Road (not in Plan)	Large roundabout
TR25	IN53	Western Ring Road	Eastern Spine Road (NR55)	Large signals
TR25	IN54	Western Ring Road	New Road (not in Plan)	Large signals
TR26	IN42	Brooks Reach to Huntley Link	Stockyard Crescent	Small roundabout
TR29	IN61	Marshall Mount Town Centre Bypass	Yallah Road	Large signals

Table 15 Transport – Public transport

Reference	Infrastructure item	Indicative Location	Quantity	Indicative Timing
TR30	Bus shelters	Throughout release area, along concept bus routes	218	2019/20 – 2059/60
TR31	Bus transport kiosks	Throughout release area, along concept bus routes	8	2024/25 – 2059/60

Table 16 Transport – Active transport

Reference	Map Reference	Infrastructure Item	Indicative Location	Quantity	Indicative Timing
TR32	N/A	Shared use paths - Stage 1-2	Throughout Stages 1-2	18.33klm	2018/19 – 2047/48
TR33	N/A	Shared use paths - Stage 3	Throughout Stage 3	9.51klm	2021/22 – 2059/60
TR34	N/A	Shared use paths - Stage 4	Throughout Stage 4	9.51klm	2035/36 – 2059/60
TR35	N/A	Shared use paths - Stage 5	Throughout Stage 5	4.65klm	2031/32 – 2059/60
TR36	PB1 to PB5	Shared use path bridge crossings	Throughout Stages 1 - 5	5	2023/24 – 2059/60

Figure 5 Map – Transport (Sheet 1)

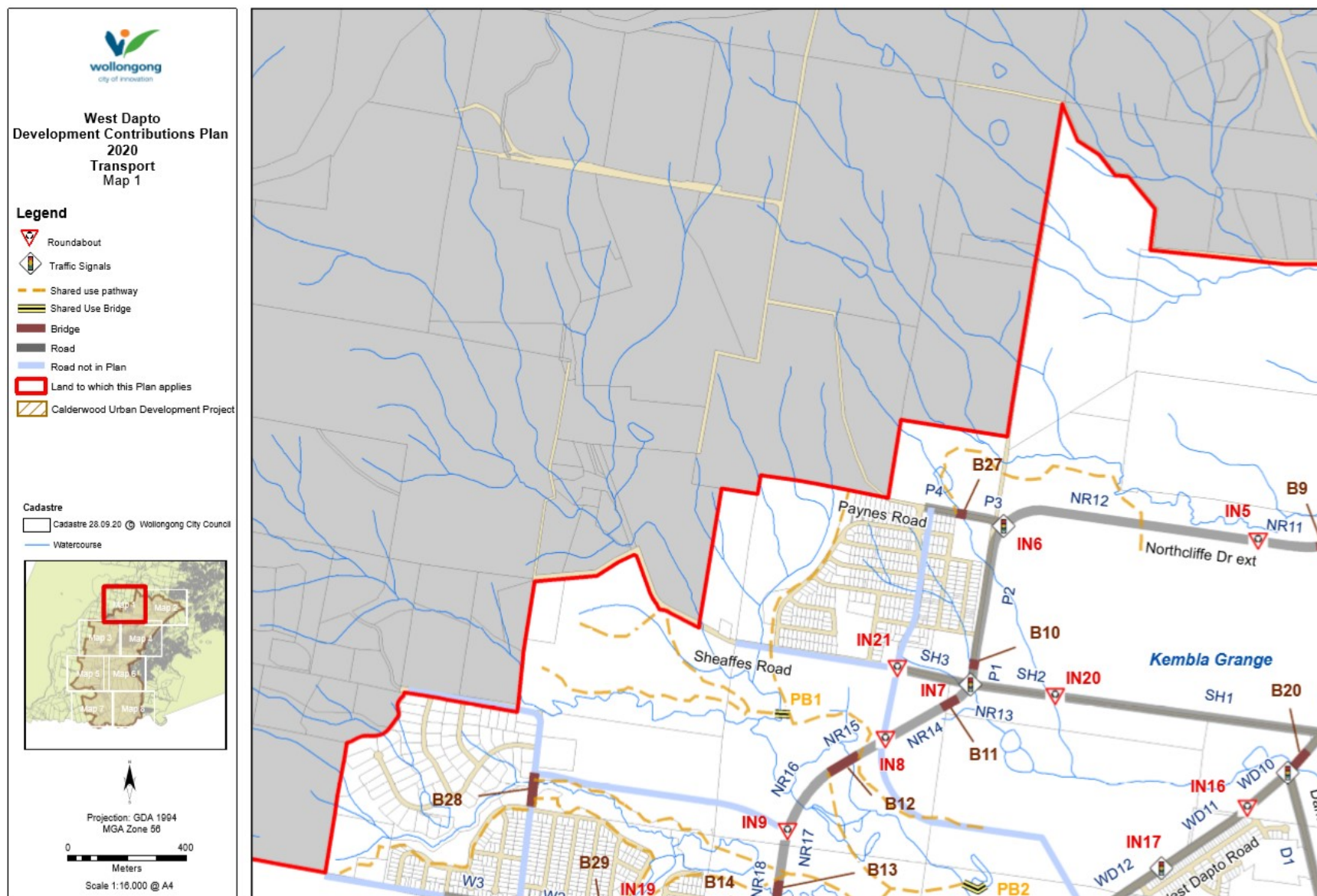


Figure 6 Map – Transport (Sheet 2)

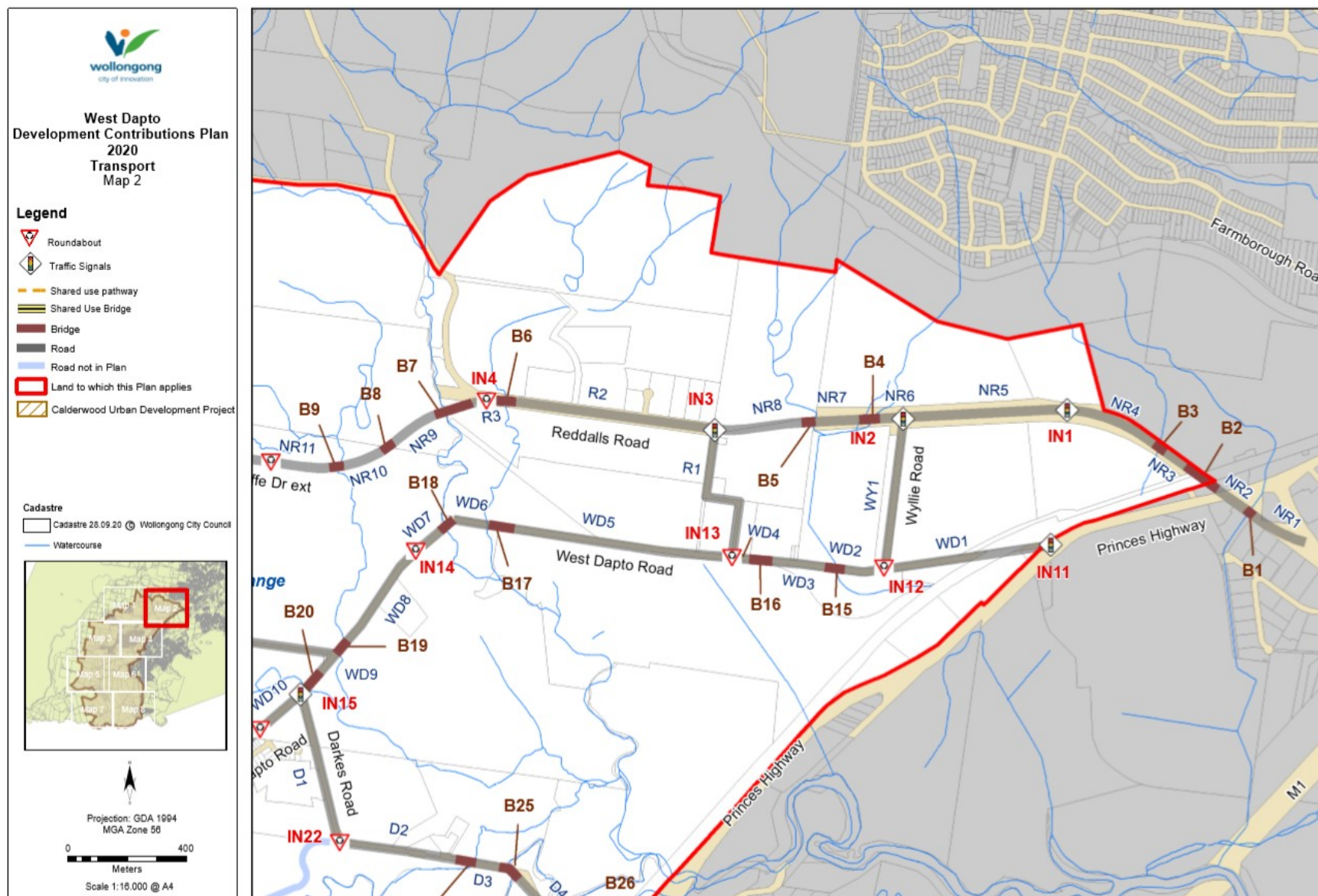


Figure 7 Map – Transport (Sheet 3)

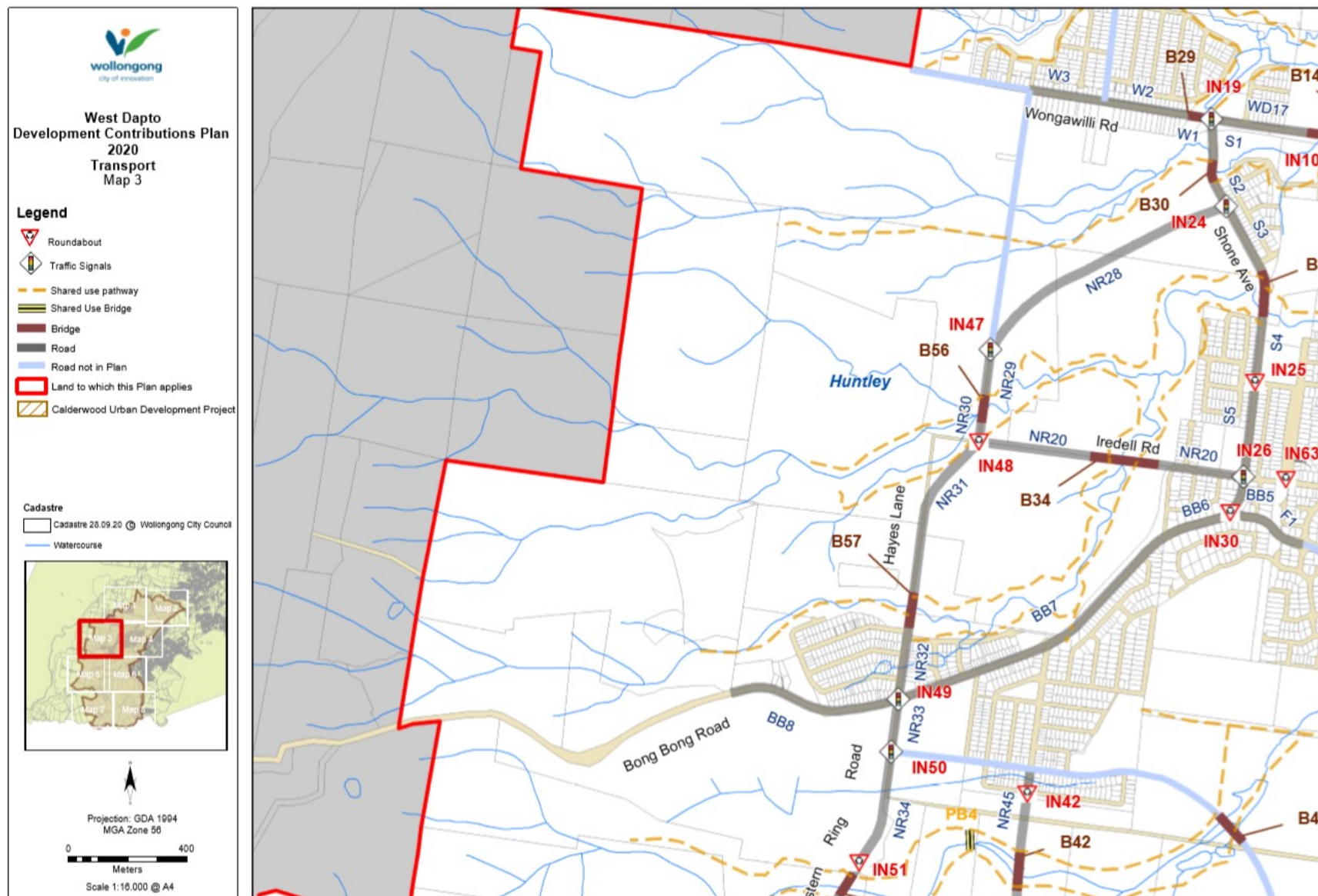


Figure 8 Map – Transport (Sheet 4)

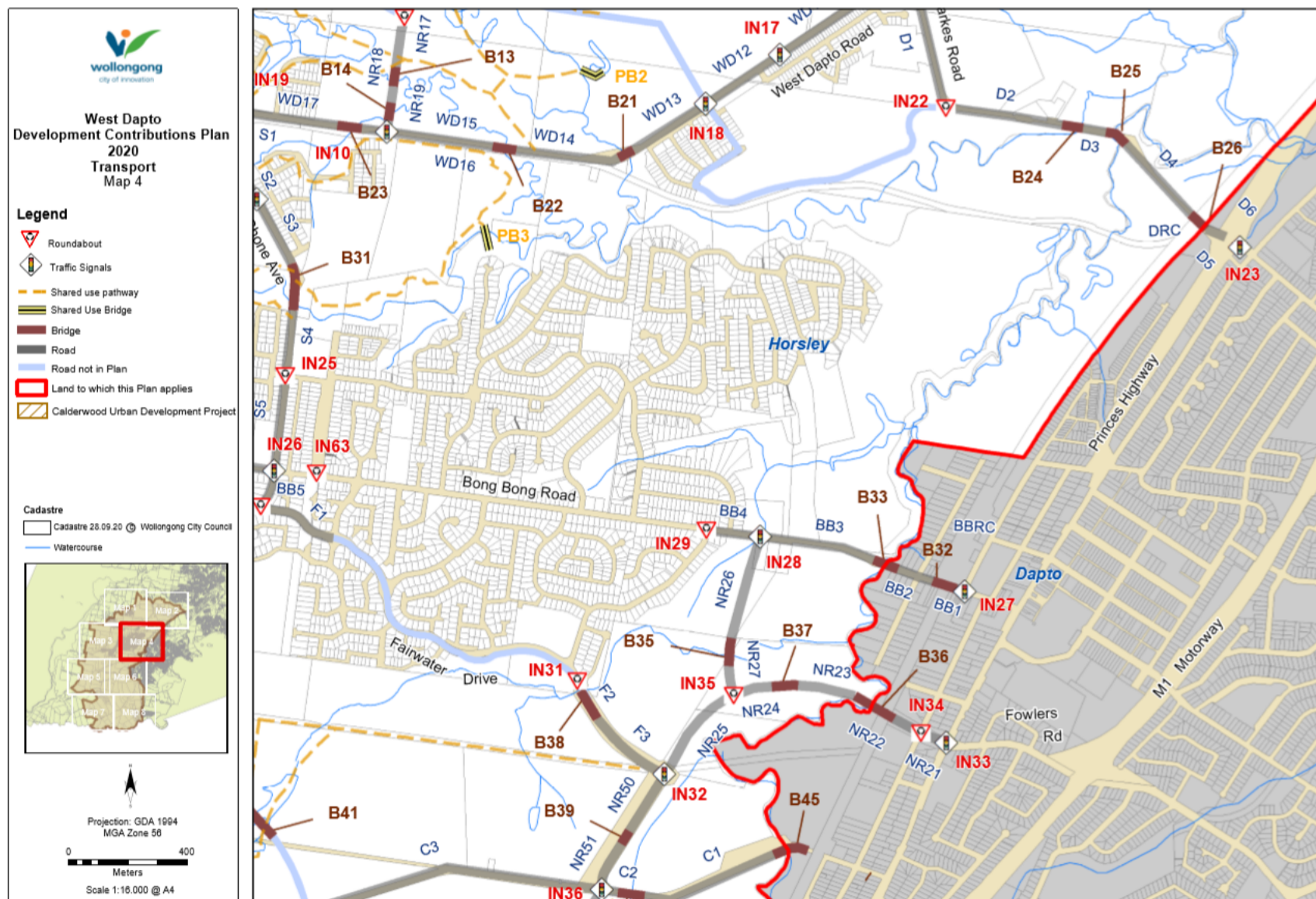


Figure 9 Map – Transport (Sheet 5)

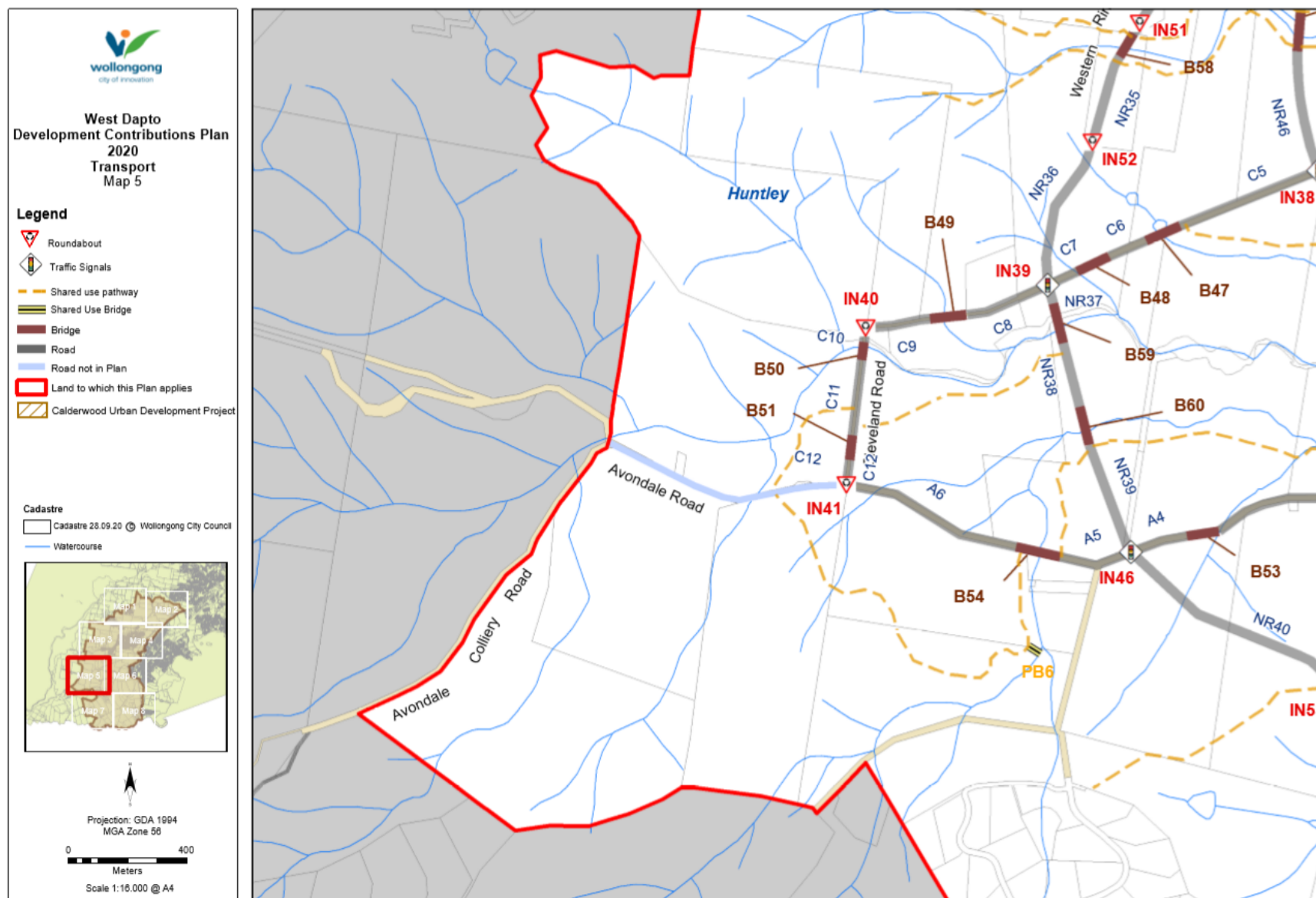


Figure 10 Map – Transport (Sheet 6)

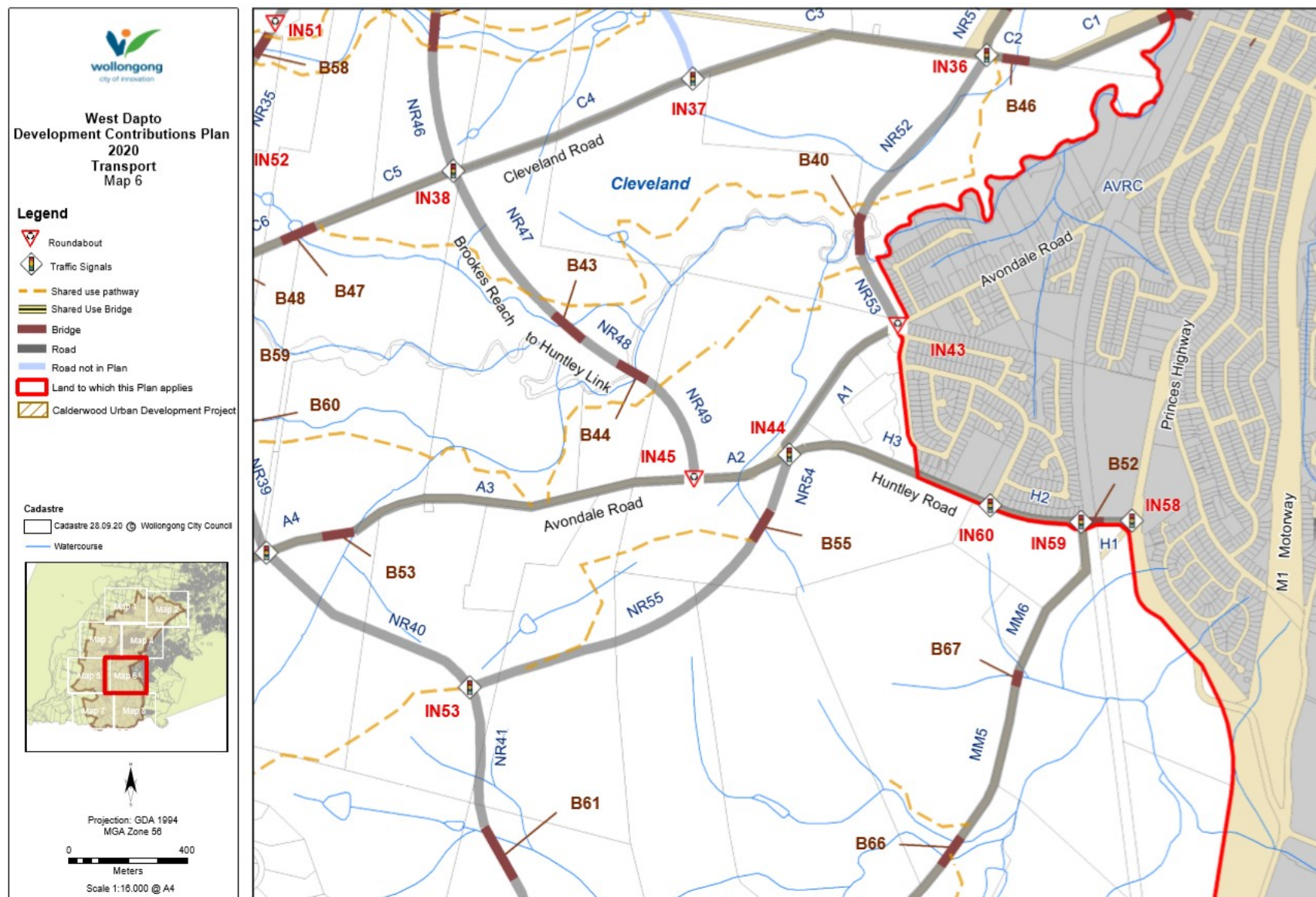


Figure 11 Map – Transport (Sheet 7)

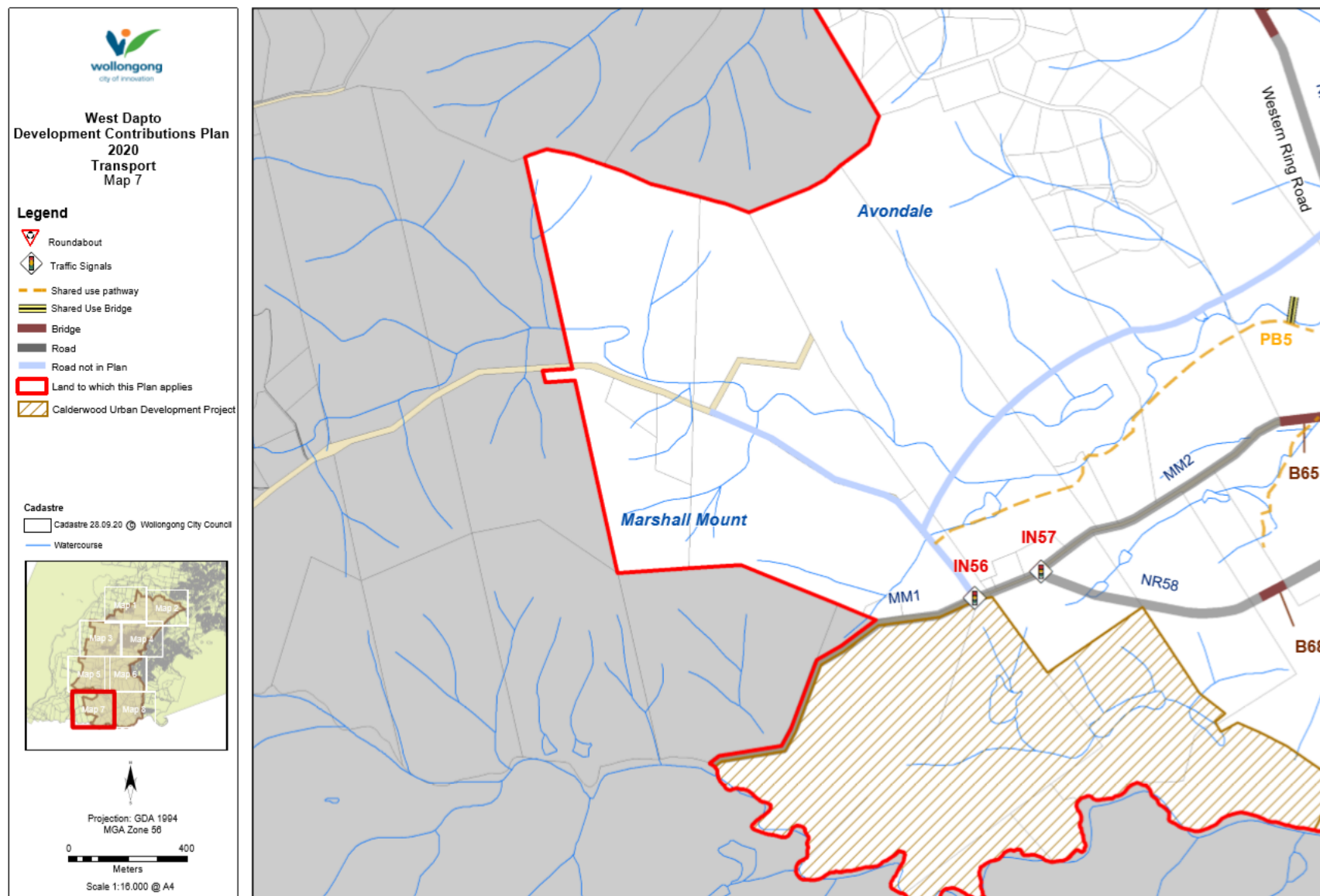
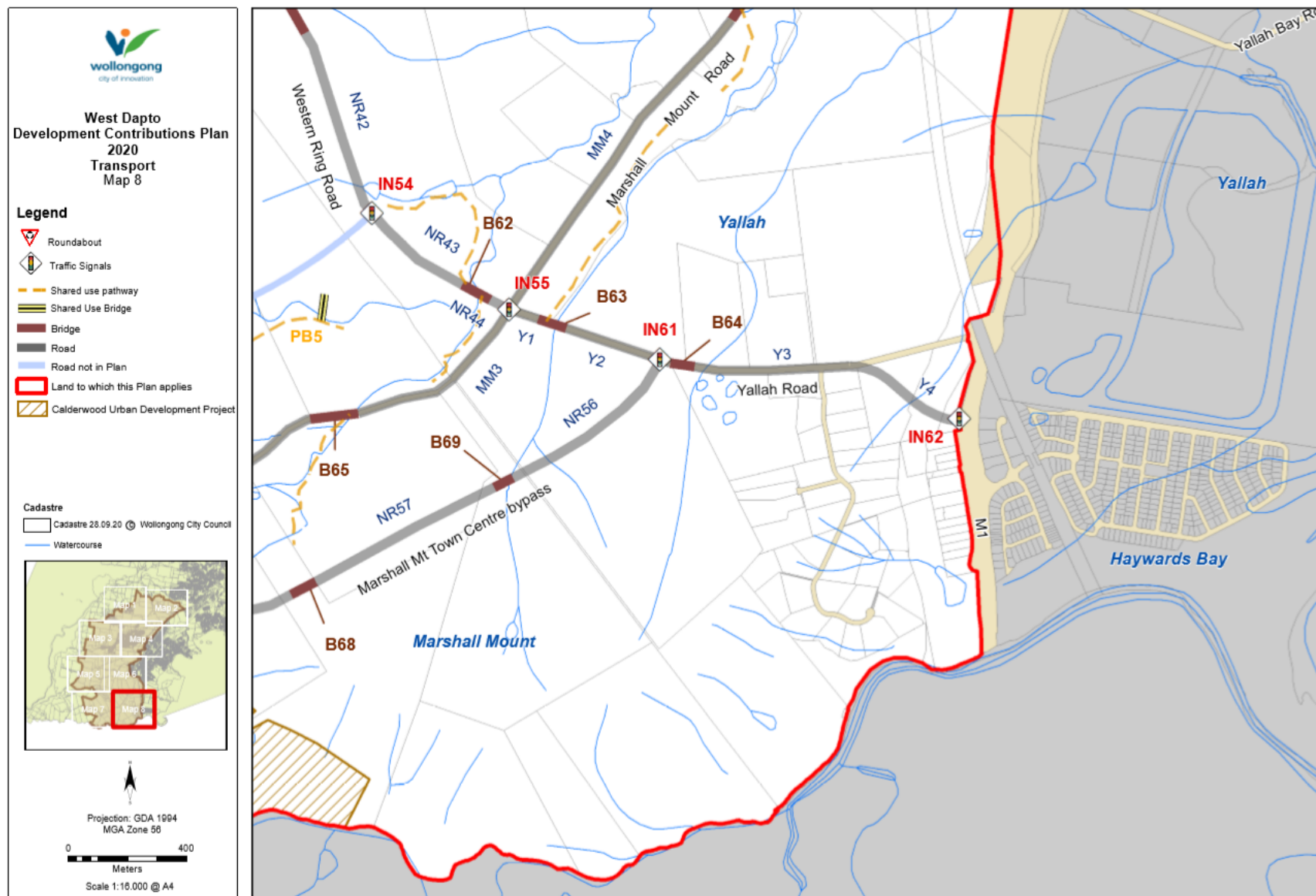


Figure 12 Map – Transport (Sheet 8)



4.4 Stormwater Management

4.4.1 Demand for Stormwater Management

The development of the West Dapto Urban Release Area will require significant investment in a new, comprehensive water cycle management system to cater for the increase of impervious surfaces that affect the hydrological cycle.

The flood studies and modelling carried out by Bewsher Consulting (2008, 2009, 2010 and 2011) identified the following objectives of stormwater management for the West Dapto Urban Release Area:

- Minimise the impact of flooding;
- Reduce the impacts of urbanisation on receiving streams, creeks and Lake Illawarra;
- Remove stormwater pollutants to improve overall storm water quality;
- Retain and enhance riparian habitats;
- Reduce potable water demand to conserve potable water supply; and
- Recognise the importance of stormwater as a valuable resource.

The stormwater management strategy for the release area focuses on minimising the impacts of the development on the total water cycle and maximising the environmental, social and economic benefits achievable by utilising responsible and sustainable stormwater management practices.

4.4.2 Existing Stormwater Management

Existing development in the release area provided site specific stormwater management solutions that do not have the capacity to meet the demand of the proposed additional development. The West Dapto Urban Release Area is primarily a greenfield release area and new stormwater infrastructure is required to meet the demand of the development.

4.4.3 Proposed Stormwater Management

To manage stormwater quantity and quality to acceptable levels, a multi treatment approach is proposed to detain and treat stormwater flows as a result of urban development. The devices that have been selected to mitigate the expected pollutant loads and stormwater volumes are conscious of land take requirements, future maintenance requirements, and to ensure water quality that discharges into Lake Illawarra meet the prescribed targets. Infrastructure to be provided under this Plan includes:

- Detention basins including wetlands;
- Gross pollutant traps;
- Enhanced storage areas; and
- Trunk drainage.

Further detail on each of these items is provided at **Table 17**.

4.4.4 Nexus and apportionment

The need to provide the stormwater management infrastructure included in this Plan is generated by both the residential and non-residential development of West Dapto. It is therefore appropriate that the costs be apportioned between residential and non-residential land uses based on the unadjusted land area as shown at **Table 8**.

4.4.5 Schedule and maps

Details on each stormwater management infrastructure item are provided at **Table 17**.

The sub catchment areas identified for detention basins (SM01) are shown at **Figure 13**.

The proposed locations of the enhanced storage areas (SM02 to SM06) are shown at **Figure 14**.

Trunk drainage (SM07) is not identified on a map due to the uncertainty of locations, which will be determined throughout the detailed planning and development application processes.

Detail on the cost and apportionment for stormwater management is provided at **Schedule 4**.

4.4.6 Contribution rate formula – Residential

The formula used to calculate the residential per person contribution rate for stormwater management is:

$$\text{Contribution per person} = \frac{\text{Cost of Item} \times \text{Apportionment}}{\text{Demand}}$$

Where:

Cost of Item Total actual or estimated cost attributed to this Plan (from **Schedule 4**)

Apportionment Portion of total cost attributed to residential development (from **Table 8**)

Demand Number of persons (from **Table 4**)

$$\begin{aligned} \text{Contribution per person} &= \frac{\$128,155,190 \times 89.75\%}{57,433} \\ &= \$2,002.67 \end{aligned}$$

4.4.7 Contribution rate formula – Non-residential

The formula used to calculate the non-residential contribution rate for stormwater management is:

$$\text{Contribution per hectare} = \frac{\text{Cost of Item} \times \text{Apportionment}}{\text{Demand}}$$

Where:

Cost of Item Total actual or estimated cost attributed to this Plan (from **Schedule 4**)

Apportionment Portion of total cost attributed to non-residential development (from **Table 8**)

Demand Total land area (zoned) in hectares (from **Table 6**)

Commercial development:

$$\begin{aligned} \text{Contribution per hectare} &= \frac{\$128,155,190 \times 1.14\%}{22.69} \\ &= \$64,388.24 \end{aligned}$$

Industrial and other development:

$$\begin{aligned} \text{Contribution per hectare} &= \frac{\$128,155,190 \times 9.11\%}{180.44} \\ &= \$64,702.60 \end{aligned}$$

Table 17 Stormwater Management

Reference	Infrastructure Item	Quantity	Description	Indicative Timing
SM01	Detention basins with wetlands and gross pollutant traps	54	<p>Detention basins will temporarily store floodwater from upper catchment areas during floods, releasing the water at a controlled rate. This treatment reduces the peak flows and levels downstream of the basin sites. There are 54 detention basins to be constructed within the release area. Wetlands will also be provided within the detention basin to provide secondary treatment to the stormwater prior to it flowing out of the detention basin.</p> <p>Gross pollutant trap (GPT) devices are to be provided at the outlet to stormwater pipes leading to stormwater detention basins. These systems operate as a primary treatment to remove litter, vegetative matter, free oils and grease and coarse sediment prior to discharge to downstream treatment devices. It is envisaged each detention basin will contain one GPT.</p> <p>Figure 13 provides a map of the 54 catchment areas and corresponding catchment number.</p>	2020/21 - 2059/60
SM02	Enhanced storage area – Forest Creek	12ha	<p>There are five proposed enhanced storage areas. Each will be on-line and largely confined to land zoned for riparian corridor. The design will involve embankments across the floodplain to the tops of the banks of the existing low flow channel, so that the ecological connectivity of the low flow channel and its habitat would not be comprised.</p> <p>The proposed location of the enhanced storage areas is shown at Figure 14.</p>	2026/27 – 2030/31
SM03	Enhanced storage area – Robins Creek	9ha		2036/37 – 2040/41
SM04	Enhanced storage area – Reed Creek	10.5ha		2036/37 – 2040/41
SM05	Enhanced storage area – Mullet Creek	14ha		2041/42 – 2045/46
SM06	Enhanced storage area – Duck Creek	19ha		2046/47 – 2050/51
SM07	Trunk drainage	25,000,000m ²	Trunk drainage will be provided to deliver stormwater between development areas and receiving waters where catchments generally exceed 15 hectares.	2020/11 - 2059/60

Figure 13 Map – Stormwater management detention basin catchment areas

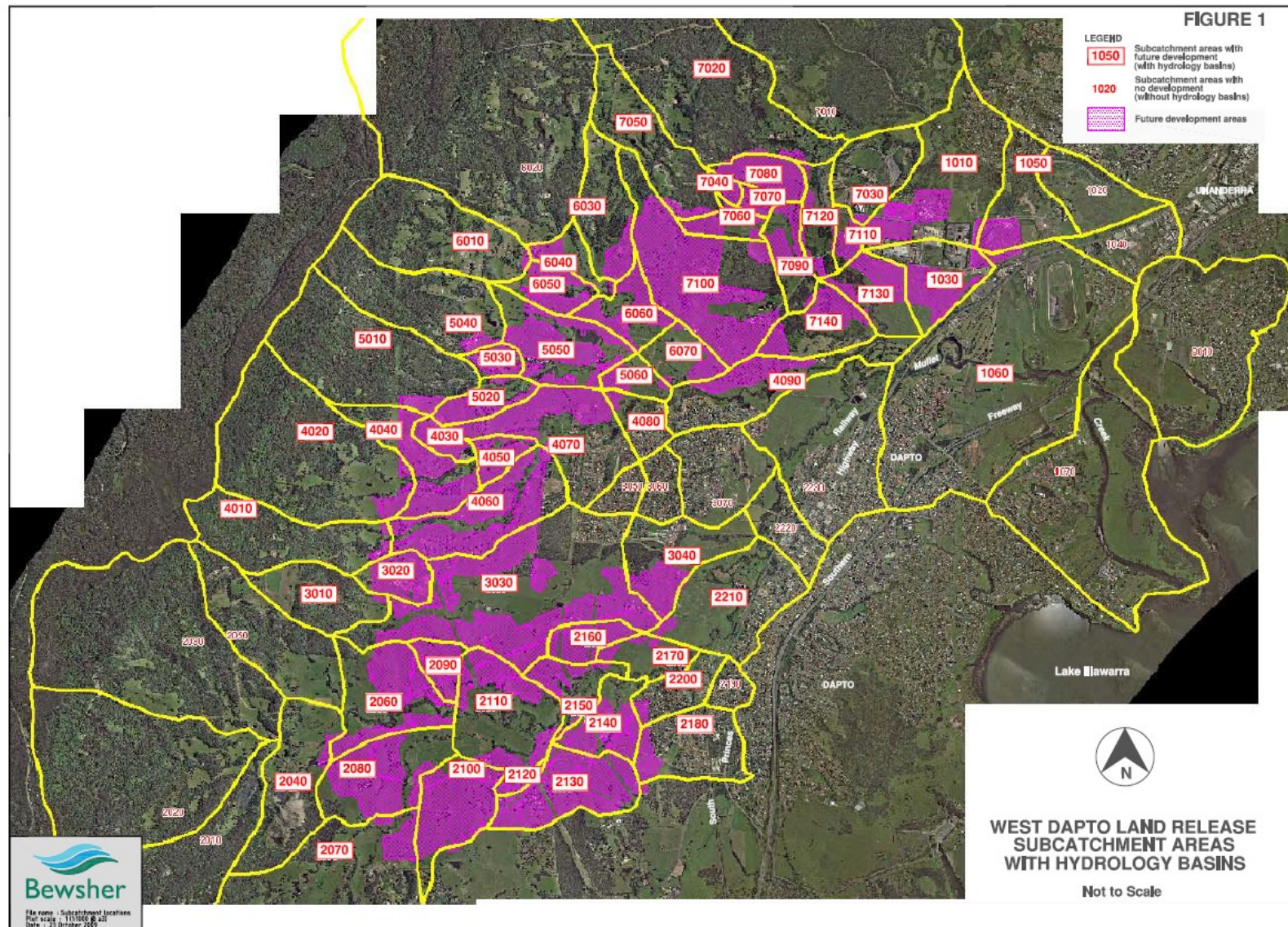
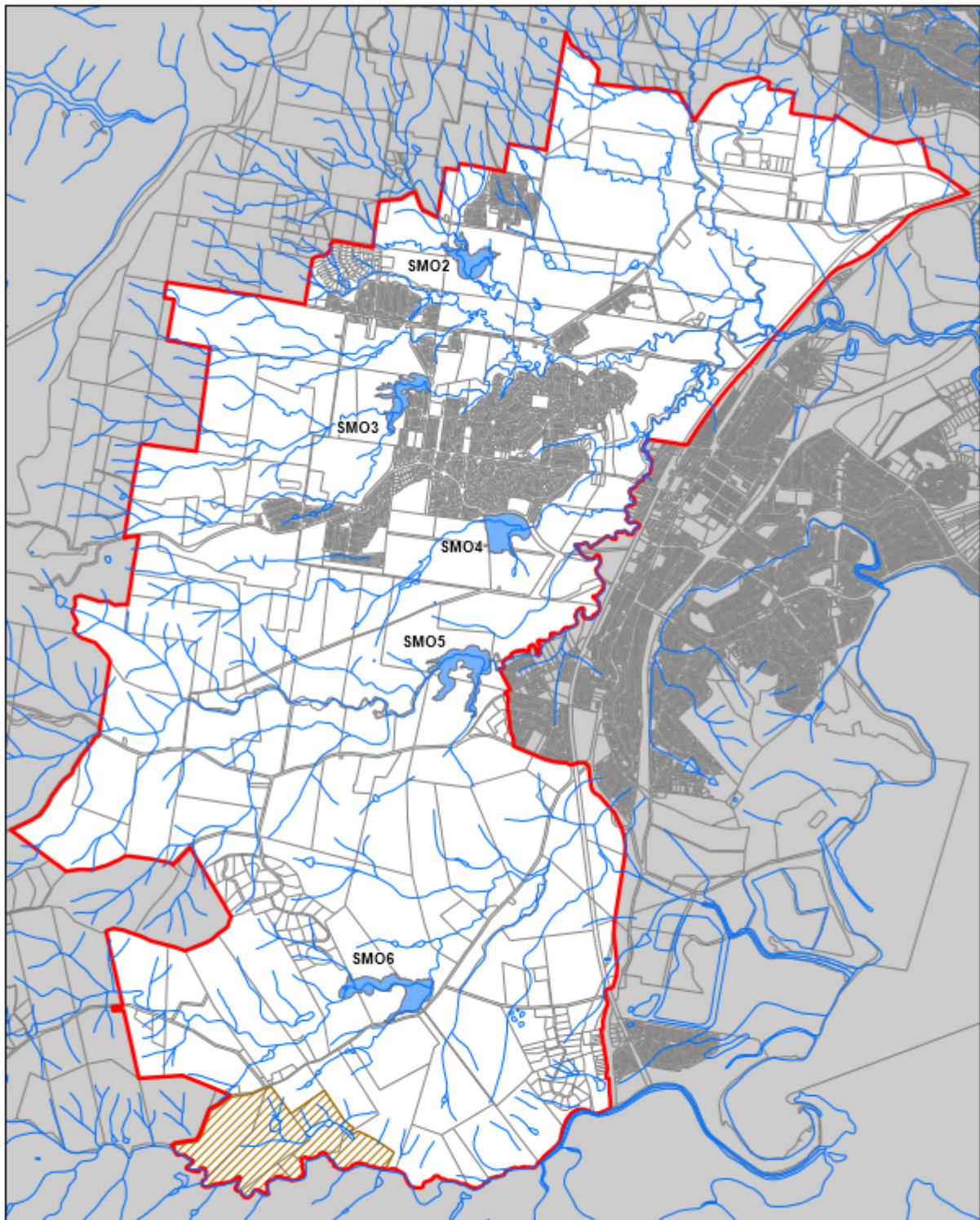


Figure 14 Map – Stormwater management enhanced storage areas



4.5 Administration

4.5.1 Administration

The cost of preparing and implementing the Plan, as well as the ongoing administration and management of the Plan requires specifically designated staff resources. The duties for these roles include plan preparation, calculating contributions on developments, indexing contributions, assessing requests for exemptions and monitoring rates of development, contributions received and expenditure. In addition, there may be direct costs incurred for studies that are required to inform a review of the plan. In accordance with IPART's recommendations this contributions plan will be reviewed every 3 years. As these costs are directly associated with the Plan it is reasonable that they be funded through the Plan.

Administration costs have been calculated at a rate of 1.5% of the total cost of works in this Plan.

4.5.2 Nexus, apportionment and schedule

There is a direct nexus between the staff resources required for the preparation and administration of the plan, with only the direct staff costs (or the relevant proportion of a staff cost) funded by the Plan. In addition, there is a direct nexus with any planning studies required to inform the plan preparation.

As these costs are generated by both the residential and non-residential development it is therefore appropriate that the costs be apportioned between the land uses as shown at **Table 8**.

The cost of Plan Administration is shown at **Schedule 5**.

4.5.3 Contribution rate formula – Residential

The formula used to calculate the residential per person contribution rate for administration is:

$$\text{Contribution per person} = \frac{\text{Cost of Item} \times \text{Apportionment}}{\text{Demand}}$$

Where:

Cost of Item Total actual or estimated cost attributed to this Plan (from **Schedule 5**)

Apportionment Portion of total cost attributed to residential development (from **Table 8**)

Demand Number of persons (from **Table 4**)

$$\begin{aligned} \text{Contribution per person} &= \frac{\$12,556,357 \times 97.58\%}{57,433} \\ &= \$213.34 \end{aligned}$$

4.5.4 Contribution rate formula – Non-residential

The formula used to calculate the non-residential contribution rate for administration is:

$$\text{Contribution per hectare} = \frac{\text{Cost of Item} \times \text{Apportionment}}{\text{Demand}}$$

Where:

Cost of Item Total actual or estimated cost attributed to this Plan (from **Schedule 5**)

Apportionment Portion of total cost attributed to non-residential development (from **Table 8**)

Demand Total land area (zoned) in hectares (from **Table 6**)

Commercial development:

$$\begin{aligned} \text{Contribution per hectare} &= \frac{\$12,556,357 \times 0.93\%}{22.69} \\ &= \$5,146.50 \end{aligned}$$

Industrial and other development:

$$\begin{aligned} \text{Contribution per hectare} &= \frac{\$12,556,357 \times 1.49\%}{180.44} \\ &= \$1,036.85 \end{aligned}$$

4.6 Contribution Rates

The contribution rates calculated on a per person or per hectare basis in clauses 4.1 to 4.5 are summarised at **Table 18**. The non-residential contribution rates are levied on a per hectare basis as shown at **Table 18**. The residential per person rates are converted to per lot/dwelling rates at **Table 19**. All contribution rates are subject to indexation from June 2020 until the date of payment.

Table 18 Summary of contribution rates calculated in clauses 4.1 to 4.5

Infrastructure Category	Residential	Commercial	Industrial and other
	Contribution rate per person	Contribution rate per hectare	Contribution rate per hectare
Open Space and Recreation	\$1,320.33	\$0.00	\$0.00
Community Facilities	\$30.60	\$0.00	\$0.00
Transport	\$12,504.34	\$301,654.61	\$60,773.60
Stormwater Management	\$2,002.67	\$64,388.24	\$64,702.60
Administration	\$213.34	\$5,146.50	\$1,036.85
Total	\$16,071.28	\$371,189.35	\$126,513.05

As shown at **Table 18**, the per person contribution rate is \$16,071.28, however contributions on residential development are levied on a per lot/dwelling (not per person) basis. The per person contribution rate is therefore multiplied by the assumed occupancy rate to give a per lot/dwelling contribution rate. The assumed occupancy rates and per lot/dwelling contribution rates are shown at **Table 19**. The residential contribution rates by infrastructure category are shown at **Table 20**.

Table 19 Residential contribution rates by dwelling type

Type of Development	Contribution per person	Occupancy Rate	Contribution Rate per lot/dwelling
Residential			
<i>Standard rate:</i>			
Subdivision	\$16,071.28	3.2	\$51,428.10
Dwelling house, dual occupancy*	\$16,071.28	3.2	\$51,428.10
<i>Multi Unit Housing rate*:</i>			
4+ bedrooms	\$16,071.28	2.9	\$46,606.72
3 bedrooms	\$16,071.28	2.5	\$40,178.21
2 bedrooms	\$16,071.28	2.2	\$35,356.82
0-1 bedrooms	\$16,071.28	1.7	\$27,321.18

* Refer to **clause 2.8** for further clarification on which rate applies to a specific type of dwelling.

Table 20 Residential contribution rates by dwelling type and infrastructure category

Infrastructure category	Standard Rate	Multi Unit Housing Rate			
		4+ bedrooms	3 bedrooms	2 bedrooms	0-1 bedrooms
Open Space and Recreation	\$4,225.06	\$3,828.96	\$3,300.83	\$2,904.73	\$2,244.56
Community Facilities	\$97.92	\$88.74	\$76.50	\$67.32	\$52.02
Transport	\$40,013.89	\$36,262.59	\$31,260.85	\$27,509.55	\$21,257.38
Stormwater Management	\$6,408.54	\$5,807.74	\$5,006.68	\$4,405.87	\$3,404.54
Administration	\$682.69	\$618.69	\$533.35	\$469.35	\$362.68
Total	\$51,428.10	\$46,606.72	\$40,178.21	\$35,356.82	\$27,321.18

Part 5 Schedules and Maps

Schedule 1 Open Space and Recreation

Reference	Infrastructure Item	Cost of Land	Cost of Works	Total Cost	Apportionment to Plan	Cost to Plan
Stage 1/2 Darkes Town Centre						
OS01	City wide sports park	\$ 1,748,400	\$ 5,384,348	\$ 7,132,748	50%	\$ 3,566,374
OS02	Local park	\$ 4,422,623	\$ 1,271,304	\$ 5,693,928	100%	\$ 5,693,928
Stage 1/2 Sheaffes - Wongawilli						
OS03	Stane Dyke Park	\$ 634,512	\$ 833,355	\$ 1,467,867	100%	\$ 1,467,867
OS04	McPhail Reserve	\$ 1,420,098	\$ 910,557	\$ 2,330,655	100%	\$ 2,330,655
OS05	Mogomorra Park	\$ 916,517	\$ 783,224	\$ 1,699,741	100%	\$ 1,699,741
OS06	Neighbourhood park	\$ 2,200,000	\$ 1,794,783	\$ 3,994,783	100%	\$ 3,994,783
OS07	Local park	\$ 1,900,000	\$ 1,121,739	\$ 3,021,739	100%	\$ 3,021,739
OS08	Local park	\$ 1,900,000	\$ 1,121,739	\$ 3,021,739	100%	\$ 3,021,739
OS09	Bankbook Park	\$ 124,296	\$ 862,500	\$ 986,796	100%	\$ 986,796
Stage 1/2 West Horsley						
OS10	Neighbourhood park	\$ 3,800,000	\$ 1,794,783	\$ 5,594,783	100%	\$ 5,594,783
OS11	Neighbourhood park	\$ 1,650,000	\$ 4,412,174	\$ 6,062,174	100%	\$ 6,062,174
OS12	Local park	\$ 1,900,000	\$ 1,121,739	\$ 3,021,739	100%	\$ 3,021,739
Stage 3 Cleveland						
OS13	Community leisure and recreation centre (part only)	\$ -	\$ 2,683,008	\$ 2,683,008	100%	\$ 2,683,008
OS14	Local Park	\$ 825,000	\$ 841,304	\$ 1,666,304	100%	\$ 1,666,304
OS15	Local Park	\$ 550,000	\$ 560,870	\$ 1,110,870	100%	\$ 1,110,869
OS16	Neighbourhood park	\$ 2,200,000	\$ 1,944,348	\$ 4,144,348	100%	\$ 4,144,348
OS17	Local Park	\$ 1,100,000	\$ 1,121,739	\$ 2,221,739	100%	\$ 2,221,739
OS18	Local Park	\$ 1,100,000	\$ 1,121,739	\$ 2,221,739	100%	\$ 2,221,739

Reference	Infrastructure Item	Cost of Land	Cost of Works	Total Cost	Apportionment to Plan	Cost to Plan
Stage 4 Avondale						
OS19	Neighbourhood park	\$ 2,200,000	\$ 1,944,348	\$ 4,144,348	100%	\$ 4,144,348
OS20	Neighbourhood park	\$ 2,200,000	\$ 1,944,348	\$ 4,144,348	100%	\$ 4,144,348
OS21	Local park	\$ 1,100,000	\$ 1,121,739	\$ 2,221,739	100%	\$ 2,221,739
OS22	Local park	\$ 1,100,000	\$ 1,121,739	\$ 2,221,739	100%	\$ 2,221,739
Stage 5 Yallah - Marshall Mount						
OS23	Neighbourhood park	\$ 2,200,000	\$ 1,944,348	\$ 4,144,348	100%	\$ 4,144,348
OS24	Local park	\$ 1,100,000	\$ 1,121,739	\$ 2,221,739	100%	\$ 2,221,739
OS25	Local park	\$ 1,100,000	\$ 1,121,739	\$ 2,221,739	100%	\$ 2,221,739
Total Open Space & Recreation		\$ 39,391,447	\$ 40,005,252	\$ 79,396,700		\$ 75,830,325

Note: Cost of works includes provision for design, project management and contingency.

Schedule 2 Community Facilities

Reference	Infrastructure Item	Cost of Land	Cost of Works	Apportionment to Plan	Cost to Plan
Darkes Town Centre					
CF01	Neighbourhood Multi-Purpose Community Centre	\$ 332,500	N/A	100%	\$ 332,500
Wongawilli					
CF02	Neighbourhood Community Centre	\$ -	N/A	100%	\$ -
Bong Bong					
CF03	Sub-District Multi-Purpose Community Centre & Library	\$ 950,000	N/A	100%	\$ 950,000
Cleveland precinct					
CF04	Neighbourhood Multi-Purpose Community Centre	\$ 142,500	N/A	100%	\$ 142,500
Yallah - Marshall Mount					
CF05	Neighbourhood Multi-Purpose Community Centre	\$ 332,500	N/A	100%	\$ 332,500
Total Community Facilities		\$ 1,757,500			\$ 1,757,500

Note: As the cost of works for community facilities is not included in the Essential Works List they are not included in this Plan.

Schedule 3 Transport

Reference	Infrastructure Item	Cost of Land	Cost of Works				Less: Grants Received	Total Cost	Apportionment to Plan	Cost to Plan
			Pavement	Intersections	Bridges & Rail Crossings	On Costs				
Existing Roads										
TR01	West Dapto Road	\$ 712,129	\$ 27,624,402	\$ 4,535,905	\$ 11,853,218	\$ 8,802,705	\$ -	\$ 53,528,359	100%	\$ 53,528,359
TR02	West Dapto Road Rail Crossing	\$ 6,175	\$ 517,734	\$ 1,790,415	\$ -	\$ 103,547	\$ -	\$ 2,417,871	100%	\$ 2,417,870
TR03	Sheaffes Road	\$ 207,694	\$ 8,658,661	\$ 1,309,467	\$ -	\$ 1,993,626	\$ -	\$ 12,169,448	100%	\$ 12,169,448
TR04	Paynes Road	\$ 898,750	\$ 4,558,443	\$ 958,486	\$ 258,095	\$ 1,155,005	\$ -	\$ 7,828,779	100%	\$ 7,828,779
TR05	Smiths Lane	\$ -	\$ -	\$ -	\$ 3,542,826	\$ -	\$ -	\$ 3,542,826	100%	\$ 3,542,826
TR06	Wongawilli Road	\$ 127,723	\$ 3,048,922	\$ -	\$ 145,178	\$ 638,820	(\$3,000,000)	\$ 960,643	100%	\$ 960,643
TR07	Darkes Road	\$ 384,927	\$ 8,670,563	\$ 1,133,976	\$ 7,614,507	\$ 3,483,809	\$ -	\$ 21,287,782	100%	\$ 21,287,782
TR08	Shone Avenue	\$ 991,050	\$ 10,924,083	\$ 2,584,078	\$ 6,545,368	\$ 2,490,759	(\$13,300,000)	\$ 10,235,338	100%	\$ 10,235,338
TR09	Bong Bong Road rail crossing	\$ -	\$ -	\$ -	\$ 35,872,193	\$ 7,174,439	\$ -	\$ 43,046,632	100%	\$ 43,046,632
TR10	Bong Bong Road	\$ 55,860	\$ 4,453,688	\$ 2,190,305	\$ 4,328,761	\$ 1,921,935	\$ -	\$ 12,950,549	100%	\$ 12,950,549
TR11	Reddalls Road	\$ 221,235	\$ 2,915,975	\$ -	\$ -	\$ 583,195	\$ -	\$ 3,720,405	100%	\$ 3,720,405
TR12	Wyllie Road	\$ 16,800	\$ 2,856,466	\$ -	\$ -	\$ 571,293	\$ -	\$ 3,444,559	100%	\$ 3,444,559
TR13	Cleveland Road	\$ 2,334,692	\$ 26,927,816	\$ 4,009,434	\$ 9,845,006	\$ 6,908,534	\$ -	\$ 50,025,482	100%	\$ 50,025,482
TR14	Avondale Road	\$ 1,496,540	\$ 19,489,426	\$ 2,926,864	\$ 3,218,335	\$ 5,126,925	\$ -	\$ 32,258,090	100%	\$ 32,258,090
TR15	Huntley Road	\$ 566,115	\$ 6,629,380	\$ 2,276,309	\$ 9,144,079	\$ 3,609,954	\$ -	\$ 22,225,837	100%	\$ 22,225,837
TR16	Yallah Road	\$ 1,782,773	\$ 15,727,418	\$ 958,486	\$ 5,051,539	\$ 5,434,360	\$ -	\$ 28,954,576	75.76%	\$ 21,934,987
TR17	Marshall Mount Road	\$ 6,077,473	\$ 38,424,965	\$ 1,943,344	\$ 15,423,091	\$ 13,947,850	\$ -	\$ 75,816,723	44.28%	\$ 33,571,557
New Roads										
TR18	Northcliffe Drive extension - Princes Hwy to Paynes Road	\$ 662,476	\$ 25,980,352	\$ 3,610,339	\$ 28,271,621	\$ 11,572,462	\$ -	\$ 70,097,250	100%	\$ 70,097,250
TR19	Northcliffe Drive extension - Sheaffes Road to West Dapto Road	\$ 1,635,655	\$ 6,630,140	\$ 350,981	\$ 2,419,639	\$ 1,880,152	\$ -	\$ 12,916,567	100%	\$ 12,916,567
TR20	Iredell Road	\$ 860,207	\$ 3,083,913	\$ -	\$ 4,963,362	\$ 1,569,790	\$ -	\$ 10,477,272	100%	\$ 10,477,272
TR21	Brooks Reach to Cleveland (East)	\$ 6,120	\$ -	\$ -	\$ 7,090,517	\$ 1,418,103	\$ -	\$ 8,514,740	100%	\$ 8,514,741
TR22	Fairwater Drive	\$ 347,177	\$ 10,613,227	\$ 815,490	\$ -	\$ 162,601	\$ -	\$ 11,938,495	100%	\$ 11,938,495
TR23	Fowlers Road Extension	\$ 690,345	\$ 26,557,166	\$ 1,693,367	\$ 60,374,390	\$ 2,297,623	(\$32,600,000)	\$ 59,012,891	100%	\$ 59,012,891
TR24	Eastern Link Road (Bong Bong to Fowlers Rd)	\$ 521,220	\$ 3,791,527	\$ -	\$ 3,545,259	\$ 1,467,357	\$ -	\$ 9,325,363	100%	\$ 9,325,363

Reference	Infrastructure Item	Cost of Land	Cost of Works				Less: Grants Received	Total Cost	Apportionment to Plan	Cost to Plan
			Pavement	Intersections	Bridges & Rail Crossings	On Costs				
TR25	Western Ring Road - Shone Avenue to Yallah Road	\$ 15,531,183	\$ 46,321,058	\$ 5,295,603	\$ 38,009,196	\$ 17,925,171	\$ -	\$ 123,082,211	100%	\$ 123,082,211
TR26	Brooks Reach to Huntley Link	\$ 3,522,661	\$ 12,734,063	\$ 175,490	\$ 11,477,775	\$ 4,877,466	\$ -	\$ 32,787,455	100%	\$ 32,787,455
TR27	Eastern Link Road (Fairwater Dr to Avondale Rd)	\$ 1,989,998	\$ 9,126,509	\$ -	\$ 2,260,102	\$ 2,277,322	\$ -	\$ 15,653,931	100%	\$ 15,653,931
TR28	Eastern spine road - Western Ring Road to Huntley Road	\$ 2,853,899	\$ 9,193,615	\$ -	\$ 3,899,784	\$ 2,618,680	\$ -	\$ 18,565,978	100%	\$ 18,565,978
TR29	Marshall Mount Town Centre Bypass (Marshall Mt Rd to Yallah Rd)	\$ 4,809,185	\$ 13,565,416	\$ 818,284	\$ 2,967,818	\$ 4,337,880	\$ -	\$ 26,498,583	24.66%	\$ 6,534,502
Public Transport										
TR30	Bus Shelters	\$ -	\$ 4,154,136	\$ -	\$ -	\$ 1,246,241	\$ -	\$ 5,400,377	100%	\$ 5,400,377
TR31	Bus Transport Kiosk	\$ -	\$ 1,519,397	\$ -	\$ -	\$ -	\$ -	\$ 1,519,397	100%	\$ 1,519,397
Active Transport										
TR32	Stage 1/2 Shared Use Pathway	\$ 137,438	\$ 4,987,275	\$ -	\$ -	\$ 699,940	\$ -	\$ 5,824,653	100%	\$ 5,824,653
TR33	Stage 3 Shared Use Pathway	\$ 71,303	\$ 2,570,978	\$ -	\$ -	\$ 385,647	\$ -	\$ 3,027,928	100%	\$ 3,027,928
TR34	Stage 4 Shared Use Pathway	\$ 71,303	\$ 2,570,978	\$ -	\$ -	\$ 385,647	\$ -	\$ 3,027,928	100%	\$ 3,027,928
TR35	Stage 5 Shared Use Pathway	\$ 34,845	\$ 1,256,418	\$ -	\$ -	\$ 188,463	\$ -	\$ 1,479,726	100%	\$ 1,479,726
TR36	Shared Use Pathway Bridges	\$ -	\$ -	\$ -	\$ 1,636,569	\$ -	\$ -	\$ 1,636,569	100%	\$ 1,636,569
Total Transport		\$ 49,624,951	\$ 366,084,110	\$ 39,376,623	\$ 279,758,228	\$ 119,257,300	(\$48,900,000)	\$ 805,201,212		\$ 735,972,377

Note: On costs includes design, project management and contingency.

Note: The 'Apportionment to Plan' for TR16, TR17 and TR29 shows the overall percentage of the total cost that is apportioned to the Plan. The apportionment at a road segment, bridge and intersection level is shown at clause 4.3.4.

Note: Although the Public Transport construction costs are shown within the 'pavement' column, additional construction work components apply.

Schedule 4 Stormwater Management

Reference	Infrastructure Item	Cost of Land	Cost of Works	Total Cost	Apportionment to Plan	Cost to Plan
Detention Basins						
SM01	Detention Basins (including Gross Pollutant Trap)	\$ 21,828,348	\$ 52,850,643	\$ 74,678,990	100%	\$ 74,678,990
Enhanced Storage Areas						
SM02	Forest Creek	\$ 360,000	\$ 5,697,737	\$ 6,057,737	100%	\$ 6,057,737
SM03	Robins Creek	\$ 270,000	\$ 3,798,491	\$ 4,068,491	100%	\$ 4,068,492
SM04	Reed Creek	\$ 315,000	\$ 3,165,409	\$ 3,480,409	100%	\$ 3,480,410
SM05	Mullet Creek	\$ 420,000	\$ 4,431,573	\$ 4,851,573	100%	\$ 4,851,573
SM06	Duck Creek	\$ 570,000	\$ 7,596,983	\$ 8,166,983	100%	\$ 8,166,983
Trunk Drainage						
SM07	Trunk Drainage	\$ -	\$ 26,851,005	\$ 26,851,005	100%	\$ 26,851,005
Total Stormwater Management		\$ 23,763,348	\$ 104,391,842	\$ 128,155,190		\$ 128,155,190

Schedule 5 Administration

Reference	Item	Total Cost of Works in Plan	Percentage	Total Cost	Apportionment to Plan	Cost to Plan
AD01	Administration of Contributions Plan	\$ 837,090,494	1.50%	\$ 12,556,357	100%	\$ 12,556,357
Total Administration						\$ 12,556,357

Figure 15 Comprehensive Maps (Sheet 1)

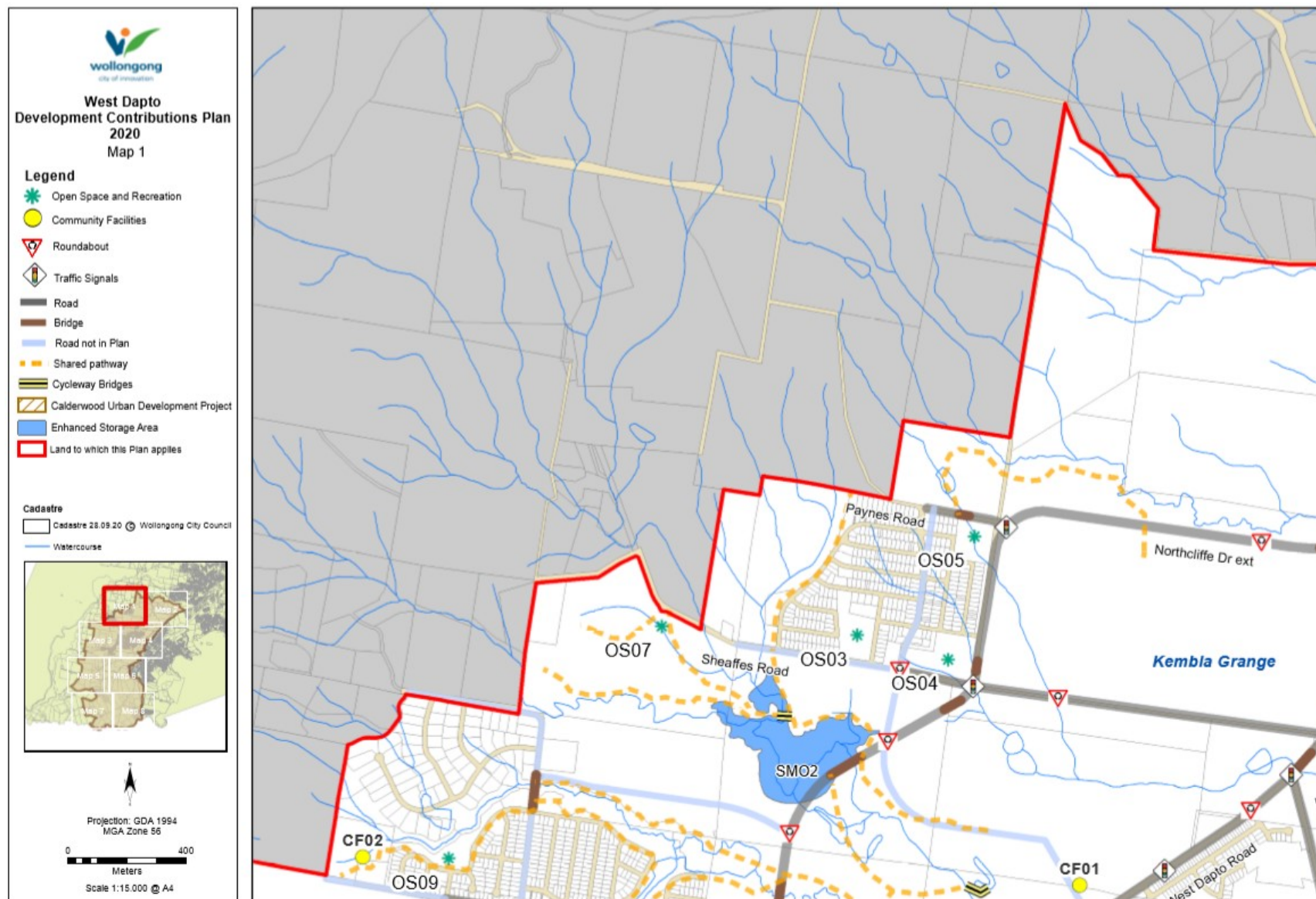


Figure 16 Comprehensive Maps (Sheet 2)

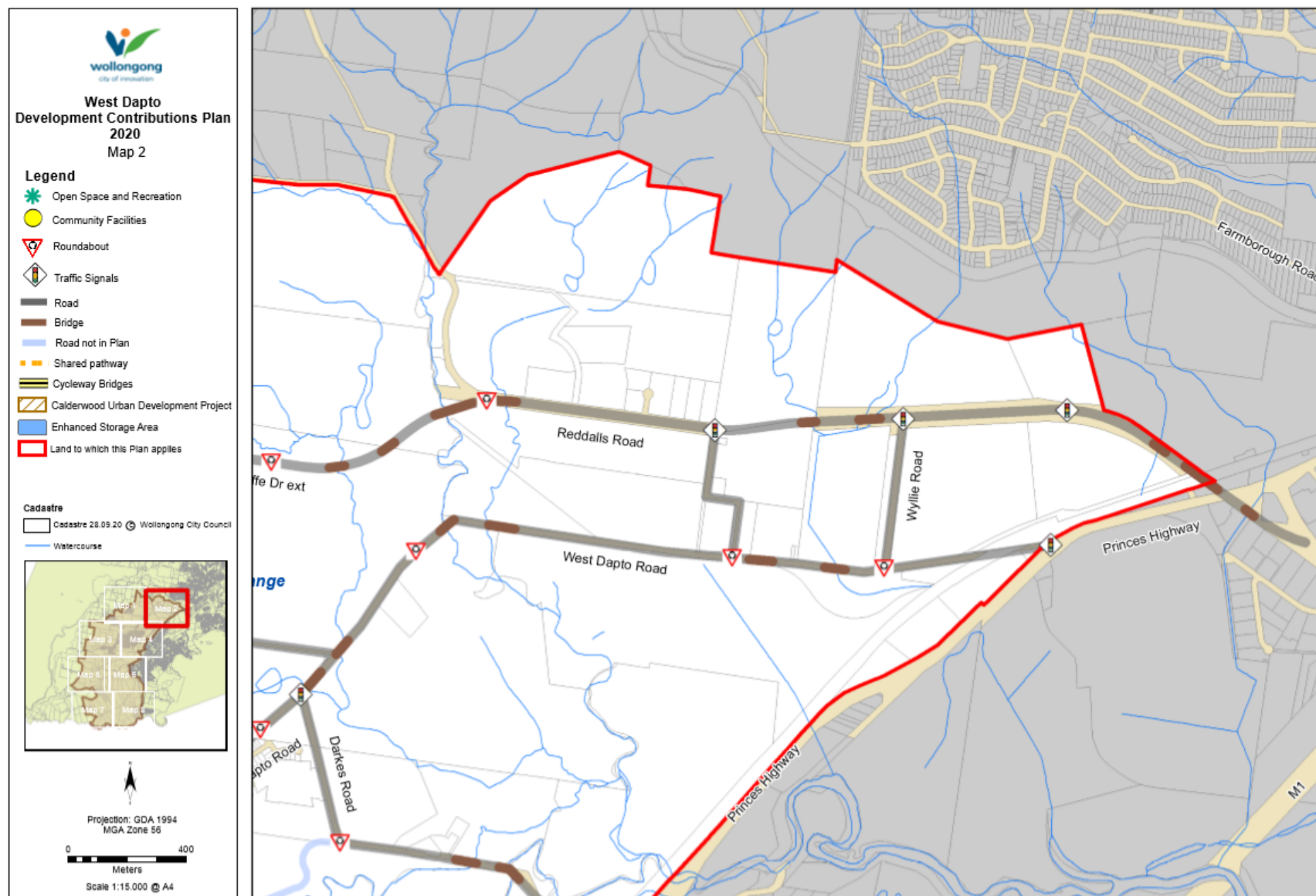


Figure 17 Comprehensive Maps (Sheet 3)

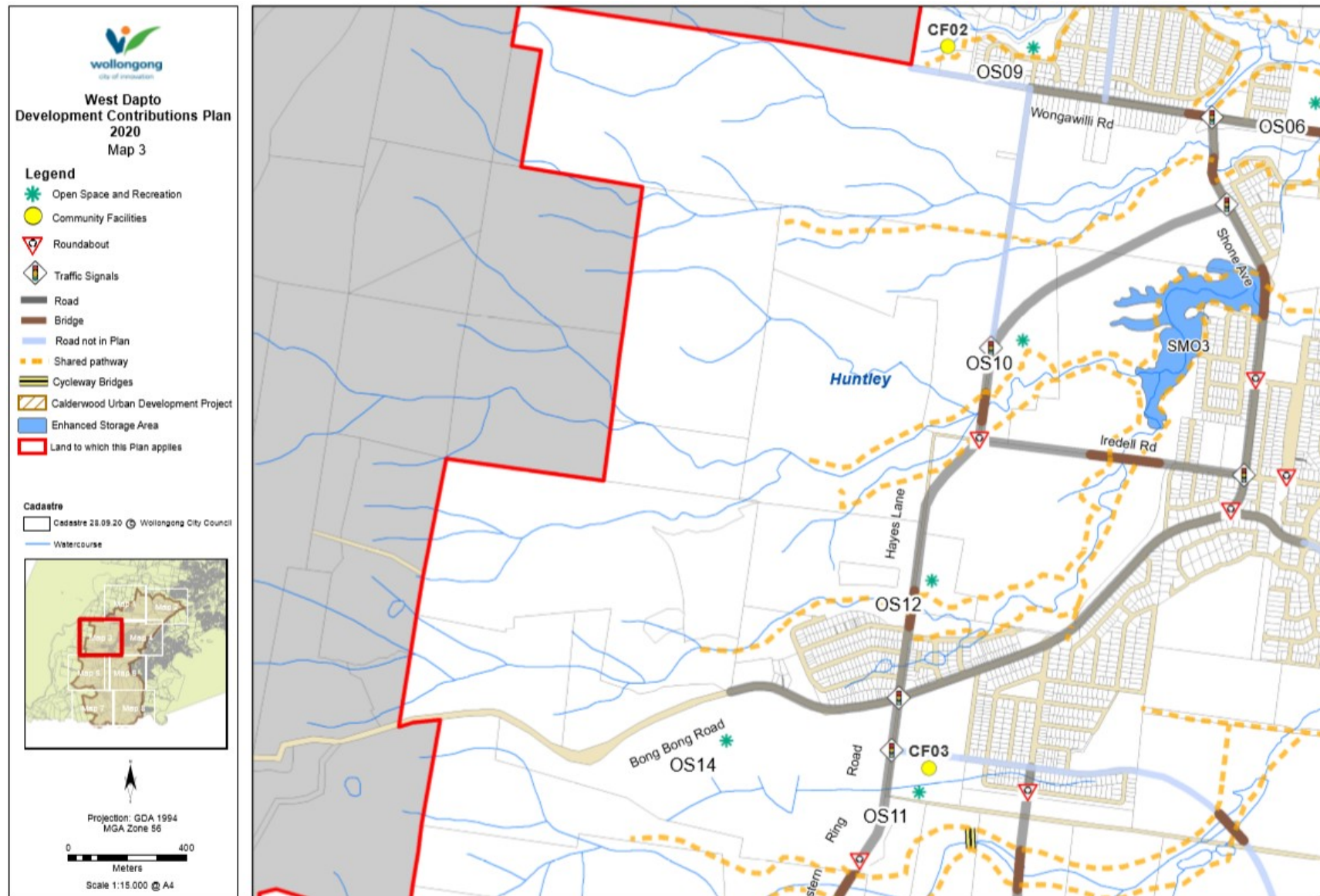


Figure 18 Comprehensive Maps (Sheet 4)

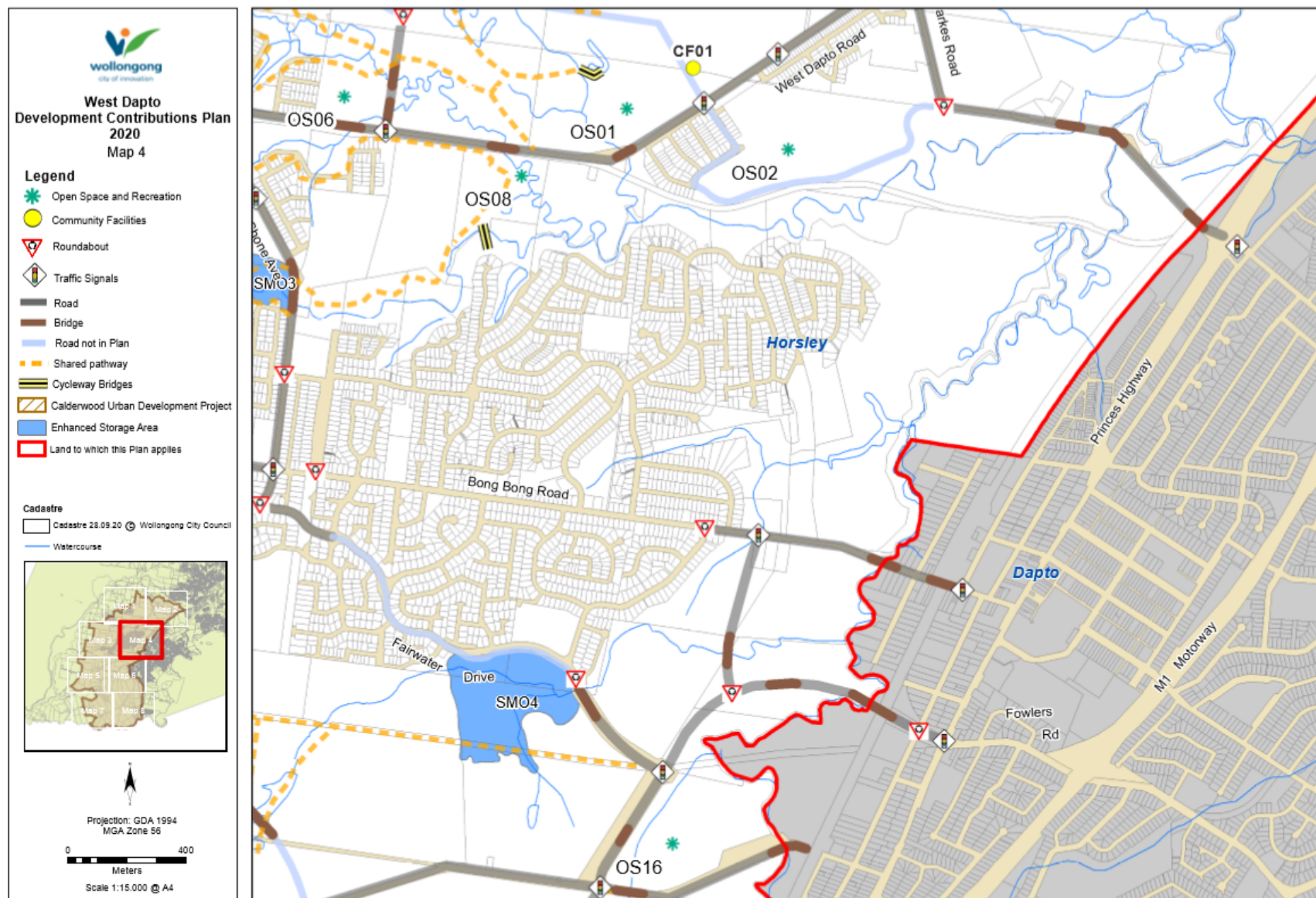


Figure 19 Comprehensive Maps (Sheet 5)

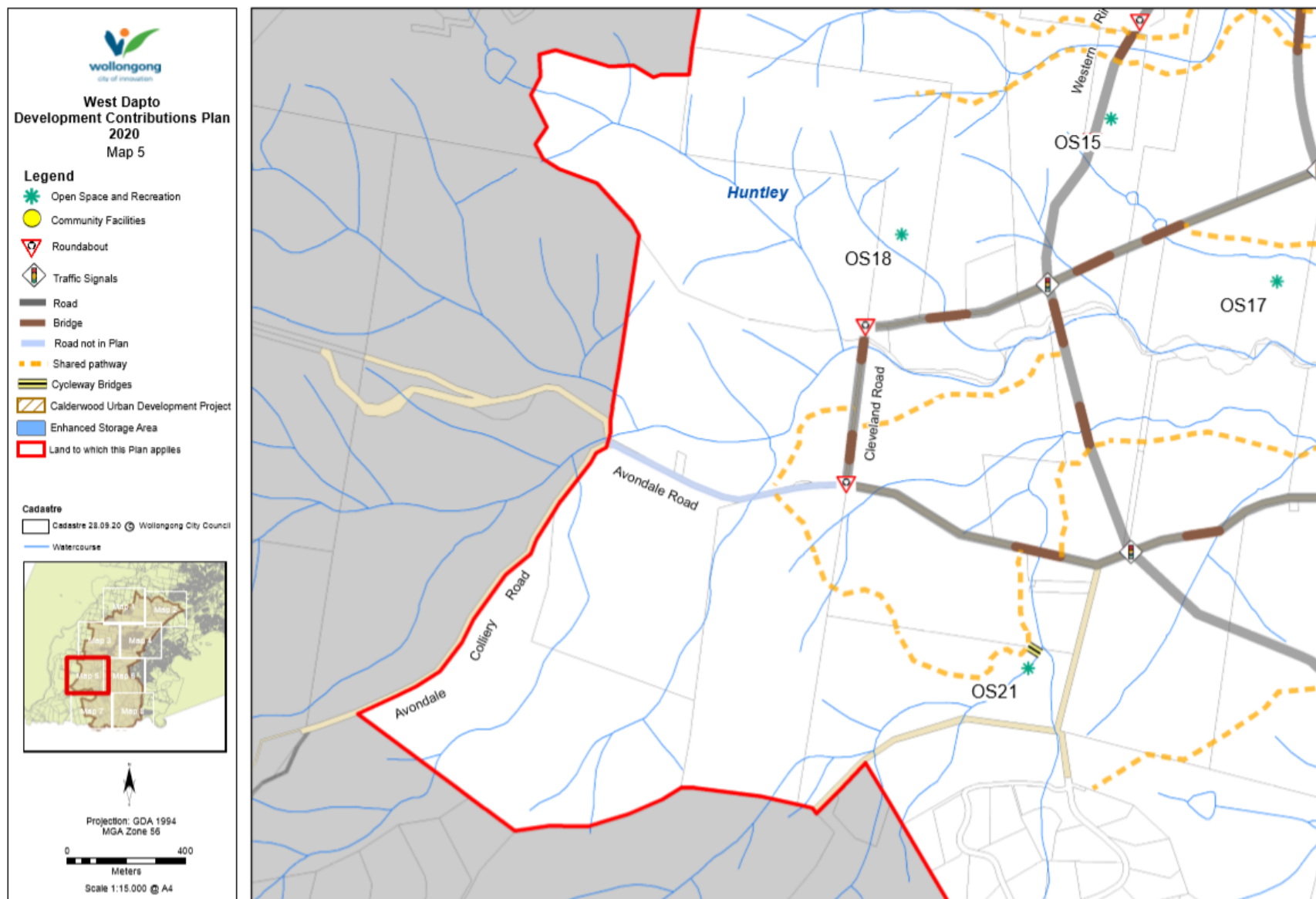


Figure 20 Comprehensive Maps (Sheet 6)

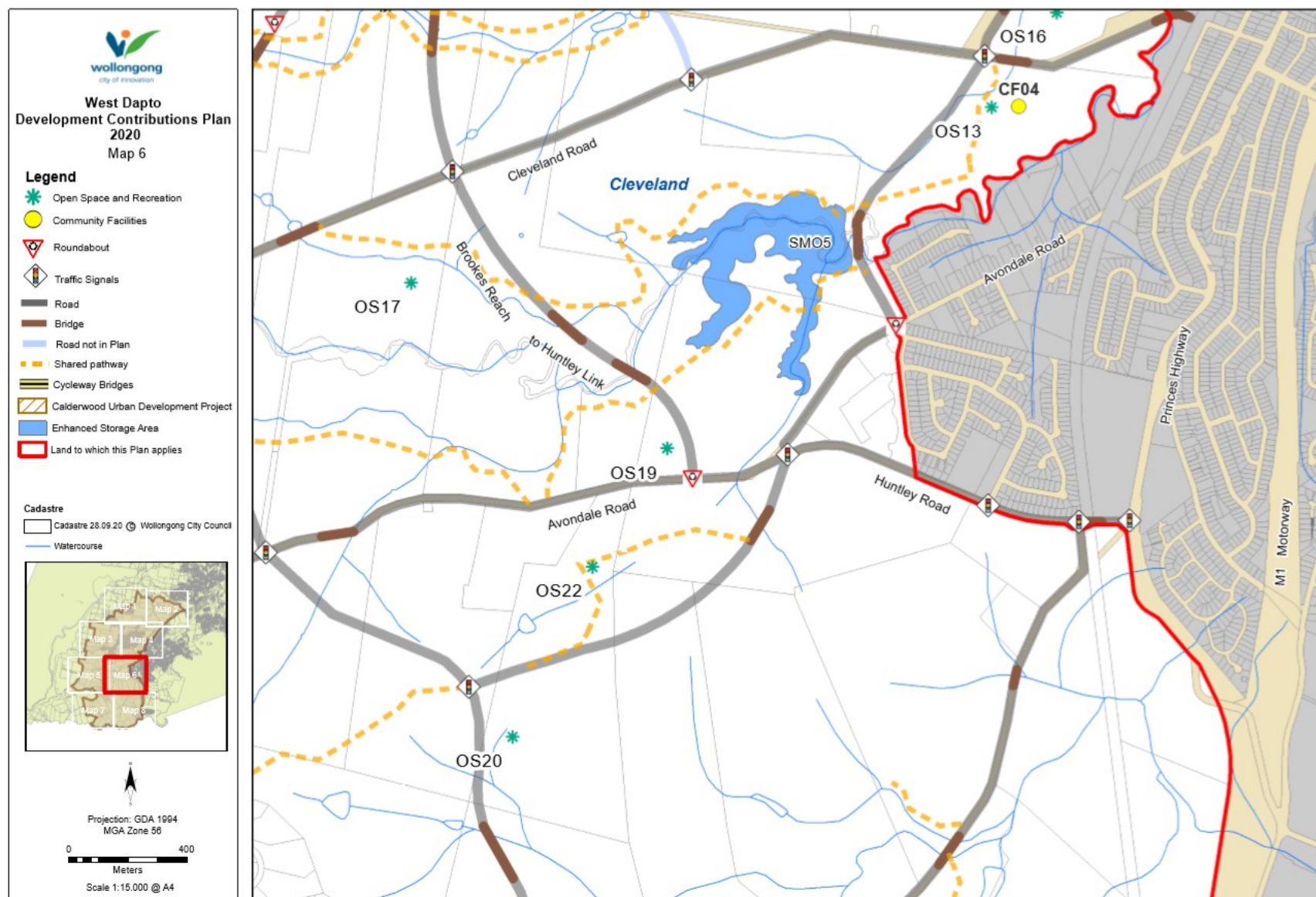


Figure 21 Comprehensive Maps (Sheet 7)

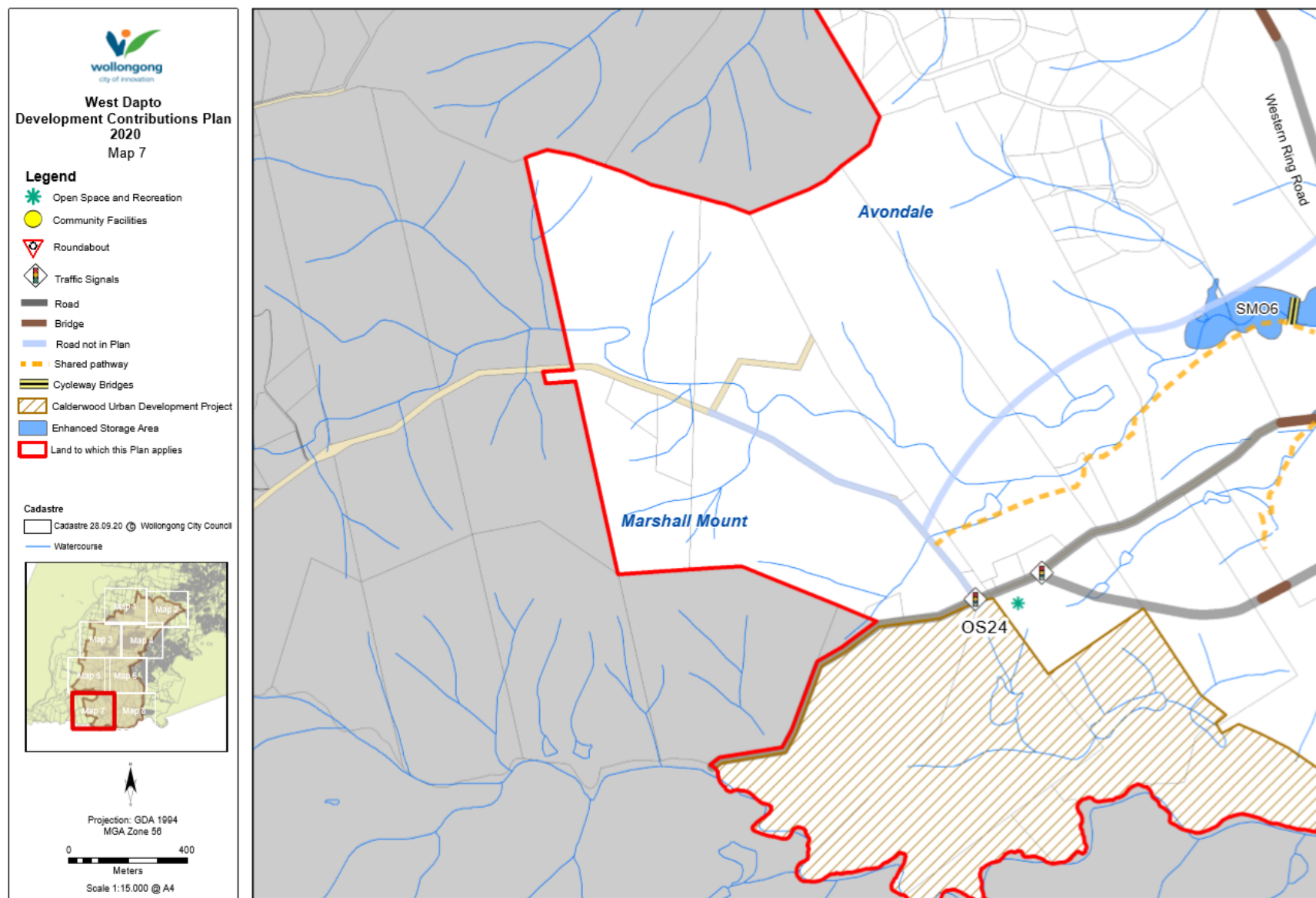


Figure 22 Comprehensive Maps (Sheet 8)

