LIVERPOOL CITY COUNCIL

# LIVERPOOL CONTRIBUTIONS PLAN 2014
## Austral and Leppington North Precincts


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LIVERPOOL THE GREAT SOUTH WEST

# Liverpool Contributions Plan 2014

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# 1. Summary of Plan

## 1.1 Preamble

The Austral and Leppington North Precincts are urban release areas in Sydney's South West Growth Centre. Although the Austral Precinct is solely within the Liverpool LGA, the Leppington North Precinct straddles the Liverpool and Camden LGAs.

A range of new and augmented infrastructure needs to be planned, programmed, funded and delivered in order to support this planned development.

The infrastructure will be delivered or coordinated by a number of parties including State Government public authorities, State-owned corporations, councils, developers and private providers.

Councils typically fund the provision of local infrastructure through a combination of general revenue (from rates and other charges), development contributions under the Environmental Planning and Assessment Act 1979, and grants from the State or Commonwealth government. Much of the capital cost of local infrastructure in new urban areas is funded by development ('section 94') contributions as there is often a clear relationship between the need for new or upgraded infrastructure and population growth attributable to the new development.

This Plan addresses the provision in the Precinct of those public amenities and public services - or local infrastructure - to be delivered by or on behalf of Liverpool City Council. This infrastructure includes:

- open space and recreation facilities, such as sports fields, sports courts, playgrounds, walking trails and bike paths;
- community and cultural facilities, such as an aquatic and recreation centre and multi-purpose community centres;
- water cycle management facilities, such as detention basins and stormwater channels; and
- traffic and transport management facilities, such as upgrades to existing roads, new roads and intersections.

## 1.2 Summary of contribution rates and Works Schedule costs

The tables on the following pages show the contribution rates applicable to development the subject of this Plan, and the total value of works to be funded by contributions anticipated under this Plan.

MONETARY CONTRIBUTION RATES

| ESSENTIAL INFRASTRUCTURE | | RESIDENTIAL DEVELOPMENT* | | | | ALL DEVELOPMENT |
|---|---|---|---|---|---|---|
| Item | Item Cost apportioned to Austral and Leppington North Development | $ per additional person | $ per residential lot for a dwelling house | $ per attached dwelling, semi-attached dwellings and multi-dwelling housing | $ per dwelling in all other residential accommodation | $ per hectare of equivalent NDA |
| Open Space | | | | | | |
| Land | $159,978,793 | $3,219.78 | $10,947.27 | $8,371.44 | $8,371.44 | |
| Works | $113,797,544 | $2,290.33 | $7,787.11 | $5,954.85 | $5,954.85 | |
| Subtotal | $273,776,337 | $5,510.11 | $18,734.38 | $14,326.29 | $14,326.29 | |
| Community Facilities | | | | | | |
| Land | $2,698,416 | $54.31 | $184.65 | $141.20 | $141.20 | |
| Subtotal | $2,698,416 | $54.31 | $184.65 | $141.20 | $141.20 | |
| Roads | | | | | | |
| Land | $10,659,016 | | | | | $9,304 |
| Works | $83,872,763 | | | | | $73,214 |
| Subtotal | $94,531,779 | | | | | $82,518 |
| Drainage | | | | | | |
| Land | $61,008,788 | | | | | $53,255 |
| Works | $159,738,847 | | | | | $139,438 |
| Subtotal | $220,747,635 | | | | | $192,693 |
| Plan Administration | | | | | | |
| Allowance | $5,361,137 | | | | | $4,680 |
| Subtotal | $5,361,137 | | | | | $4,680 |
| TOTAL | $597,115,305 | $5,564.42 | $18,919.03 | $14,467.49 | $14,467.49 | $279,891.03 |

*Residential development also pays roads and drainage.

| NON ESSENTIAL INFRASTRUCTURE | | RESIDENTIAL DEVELOPMENT | | | | ALL DEVELOPMENT |
|---|---|---|---|---|---|---|
| Item | Item Cost apportioned to Austral and Leppington North Development | $ per additional person | $ per residential lot for a dwelling house | $ per attached dwelling, semi-attached dwellings and multi-dwelling housing | $ per dwelling in all other residential accommodation | $ per hectare of equivalent NDA |
| Community Facilities | | | | | | |
| Local Facilities Works | $17,010,968 | $342 | $1,164 | $890 | $890 | |
| Regional Facility Works | $30,408,872 | $612.02 | $2,080.86 | $1,591.25 | $1,591.25 | |
| Subtotal | $47,419,839 | $954.39 | $3,244.92 | $2,481.41 | $2,481.41 | |
| Roads | | | | | | |
| Street Tree Planting | $248,878 | | | | | $217 |
| Subtotal | $248,878 | | | | | $217.25 |
| TOTAL | $47,668,718 | $954.39 | $3,244.92 | $2,481.41 | $2,481.41 | $217.25 |

| ESSENTIAL INFRASTRUCTURE | | RESIDENTIAL DEVELOPMENT* | | | | ALL DEVELOPMENT |
|---|---|---|---|---|---|---|
| Item | Item Total Area apportioned to Austral and Leppington North Development (m2) | m2 per additional person | m2 per dwelling house | m2 per attached dwelling, semi-attached dwellings and multi-dwelling housing | m2 per dwelling in all other residential accommodation | m2 per hectare of equivalent NDA |
| Open Space | | | | | | |
| Land | 1,048,351 | 21.10 | 71.74 | 54.86 | 54.86 | |
| Community Facilities | | | | | | |
| Land | 14,341 | 0.29 | 0.98 | 0.75 | 0.75 | |
| Roads | | | | | | |
| Land | 61,382 | | | | | 53.58 |
| Drainage | | | | | | |
| Land | 668,203 | | | | | 583.28 |
| TOTAL | 1,792,277 | 21.39 | 72.72 | 55.61 | 55.61 | 636.86 |

## 1.3 Overview and structure of Plan

Section 94 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) allows a consent authority responsible for determining a development application to grant consent to the proposed development subject to a condition requiring the payment of a monetary contribution, or the dedication of land free of cost, or a combination of them, towards the provision of public amenities and public services to meet the development.

Where the consent authority is a council or an accredited certifier, such a contribution may be imposed on a development only if it is of a kind allowed by and determined in accordance with a contributions plan, such as this Plan.

This Plan has been prepared to authorise the imposition of development contributions on development expected to occur in the Austral Precinct and that part of the Leppington North Precinct that is situated in the Liverpool LGA.

This Plan has been prepared:

- in accordance with the EP&A Act and *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation); and
- having regard to the latest Practice Notes issued by the NSW Department of Planning and Environment.

There are minimum requirements for development contributions plans set out in the EP&A Regulation. Each requirement, and reference to the clause or Part of this document that deals with that requirement, are listed below:

| | |
|---|---|
| The purpose of the plan | Clause 2.4 |
| The land to which the plan applies | Clause 2.3 |
| The relationship or nexus between the expected development in the area and the community infrastructure that is required to meet the demands of that development | Part 3 |
| The formulas to be used for determining the reasonable contributions required from expected development for different types of community infrastructure; | Clauses 4.2.2, 4.3.2, 4.4.2, 4.5.2, 4.6.2 |
| The contribution rates for the anticipated types of development in the area; | Clause 1.2 |
| The council's policy concerning the timing of the payment of monetary development contributions, and the imposition of development conditions that allow deferred or periodic payment, | Clause 2.9 |
| Maps showing the specific public amenities and services proposed to be provided by the council, supported by a works schedule that contains an estimate of their cost and staging (whether by reference to dates or thresholds) | Part 5 |
| If the plan authorises monetary development contributions or section 94A levies paid for different purposes to be pooled and applied progressively for those purposes, the priorities for the expenditure of the contributions or levies, particularised by reference to the works schedule. | Part 5 |

# 2. Administration and operation of the Plan

## 2.1 Definitions used in this Plan

Except where indicated in this clause, the definitions of terms used in this Plan are the definitions included in the EP&A Act, EP&A Regulation and the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*,, are adopted by this Plan.

In this clause, 'existing' means at the date on which this Plan came into effect.

In this Plan, the following words and phrases have the following meanings:

**Bank Guarantee** means an irrevocable and unconditional undertaking without any expiry or end date in favour of the Council to pay an amount or amounts of money to the Council on demand issued by an Australian bank, non-bank financial institution, or insurance company subject to prudential supervision by the Australian Prudential Regulatory Authority and has a credit rating of 'A' or above (as assessed by Standard and Poors) or 'A2' or above (as assessed by Moody's Investors Service) or 'A' or above (as assessed by FitchRatings)

**Council** means Liverpool City Council.

**CPI** means the *Consumer Price Index (All Groups - Sydney)* published by the Australia Statistician.

**EP&A Act** means the Environmental Planning and Assessment Act 1979.

**EP&A Regulation** means the Environmental Planning and Assessment Regulation 2000.

**ILP** means the Austral and Leppington North Precincts Indicative Layout Plan.

**LGA** means local government area.

**Liverpool Precincts** means the area of land shown in Figure 2.1 of this Plan.

**Net Developable Area** means the area of land to which a development application relates and includes the area of any land that the development consent authorises, or requires, to be used as a road, or reserved or dedicated as a public road but excludes:

- existing roads to be used as part of the proposed road network;
- existing educational establishments (as defined in the Standard Instrument);
- any part of the land that is below the level of a 1:100 ARI flood event, if that part of the land is unsuitable for development by virtue of it being at or below that level;
- any land that the development consent authorises, or requires, to be reserved, dedicated or otherwise set aside as, or for the purpose of, any of the following:

    (a) a government school (within the meaning of the *Education Act 1990*);

    (b) a tertiary institution, including a university or TAFE establishment, that provides formal education and is constituted by or under an Act.

    (c) an emergency services facility;

    (d) a health services facility owned and operated by a public authority;

    (e) a golf course;

    (f) a passenger transport facility;

    (g) a public reserve or a drainage reserve (within the meaning of the *Local Government Act 1993*);

    (h) a public transport corridor (other than a road corridor);

    (i) a public utility undertaking;

    (j) roads or other public amenities or public services, in connection with which development contributions have been imposed under section 94 or section 94A of the Act or may be imposed in accordance with a contributions plan approved under section 94EA of the EP&A Act;

    (k) roads or other infrastructure in connection with which Special Infrastructure Contributions have been, or may be, imposed in accordance with section 94EF of the EP&A Act.

**Planning Agreement** means a voluntary Planning Agreement referred to in section 93F of the EP&A Act.

**Residential Accommodation** has the same meaning as in the State Environmental Planning Policy (Sydney Region Growth Centres) 2006.

**Social Infrastructure Assessment** means the report Austral and Leppington North Precincts - Demographic and Social Infrastructure Assessment, prepared by Elton Consulting, July 2011.

**Special Infrastructure Contribution** means a contribution referred to in section 94EF of the EP&A Act.

**State Environmental Planning Policy (Sydney Region Growth Centres) 2006** means the State Environmental Planning Policy amended from time to time.

**Transport Assessment** means the Austral and Leppington North (ALN) Precincts Transport Assessment prepared by AECOM, July 2011.

**Works In Kind** means the undertaking of a work or provision of a facility by an applicant which is already nominated in the works schedule of a contributions plan as a means of either fully or partly satisfying a condition of consent requiring development contributions to be made.

**Works Schedule** means the schedule of the specific public amenities and public services for which contributions may be required as set out in Part 5 of this Plan.

**WSUD Strategy** means Austral & Leppington North Precincts Water Cycle Management WSUD Report, Cardno (NSW/ACT) Pty Ltd, April 2011.

## 2.2 Name of Plan

This Plan is called Liverpool Contributions Plan 2014 Austral and Leppington North Precincts (the Plan).

This Plan has been prepared in accordance with the provisions of Section 94 of the EP&A Act and the EP&A Regulation.

## 2.3 Land to which Plan applies

This Plan applies to the Austral and Leppington North Precincts within the Liverpool LGA (i.e., the Liverpool Precincts), as illustrated in Figure 2.1 over page.

## 2.4 Purposes of Plan

The purposes of the Plan are to:

- Provide an administrative framework under which specific public amenities and services strategies to serve the Liverpool Precincts may be implemented and coordinated.
- Ensure that adequate public amenities and services are provided for as part of any new development in the Liverpool Precincts.
- To authorise the Council or accredited certifiers to impose conditions under section 94 of the EP&A Act when granting consent to development on land to which this Plan applies.
- Provide a comprehensive strategy for the assessment, collection, expenditure accounting and review of development contributions relating to the Liverpool Precincts on an equitable basis.
- Ensure that the existing community is not burdened by the provision of public amenities and services required as a result of future development in the Liverpool Precincts.
- Enable the Council to be both publicly and financially accountable in its assessment and administration of the Plan.


Figure 2.1 Land to which this Plan applies

## 2.5 Adoption of Plan

The Plan was adopted by Council on 26 May 2015 and came into effect on 3 June 2015. Note that the Plan was previously adopted by Council on26 November 2014 and that there was no change in the Plan to 26 May 2015.

The Plan applies to development applications determined after the date on which the Plan came into effect.

**Amendments to Contributions Plan**

*Liverpool Contributions Plan 2014- Austral and Leppington North Precincts* has been amended as follows:

| No | Adoption date | Amendment date | Description of Amendment |
|---|---|---|---|
| 1 | 10 June 2020 | 10 June 2020 | Enacted Council resolution of 29 April 2020 to implement Covid-19 response. |

## 2.6 Relationship to other plans

Immediately prior to this Plan coming into effect, the land to which this Plan applies was subject to section 2.9 of the *Liverpool Contributions Plan 2009*. This Plan repeals section 2.9 of the Liverpool Contributions Plan 2009 insofar as it applies to the land to which this Plan applies (refer Figure 2.1).

The land to which this Plan applies is not otherwise subject to any contributions plans made under Subdivision 3 of Division 6 of Part 4 of the EP&A Act.

This Plan does not limit or otherwise affect any requirements for the payment of Special Infrastructure Contributions pursuant to Subdivision 4 of Division 6 of Part 4 of the EP&A Act.

This Plan has been prepared in conjunction with the *Leppington North Precinct (Camden) Section 94 Contributions Plan* prepared for Camden Council. The Precincts, which comprise land situated in both the Camden and Liverpool LGAs, have been released concurrently and their combined infrastructure needs have been established under an Infrastructure Delivery Plan for the Austral and Leppington North Precincts. This Plan addresses development contributions in respect to development expected to take place in the Liverpool LGA component of the Precincts.

## 2.7 Types of development to be levied

Except as provided for by this clause, this Plan applies to:

- Residential Accommodation development, insofar as the Plan authorises the imposition of a requirement for a development contribution for the types of public amenities and public services described in clauses 4.2 to 4.6 of this Plan; and
- All other development, insofar as the Plan authorises the imposition of a requirement for a development contribution for the types of public amenities and public services described in clauses 4.4 to 4.6 of this Plan.

This Plan does not apply to development:

- for the sole purpose of affordable housing;
- for the sole purpose of the adaptive reuse of an item of environmental heritage;
- for the purposes of public infrastructure provided by or on behalf of State Government or the Council;
- for the purposes of public amenities or public services under this Plan or another contributions plan prepared under section 94B of the EP&A Act;

- for works to be carried out by Sydney Water, Endeavour Energy or equivalent water, sewer or energy provider; or
- that in the opinion of Council does not increase the demand for the categories of public amenities or public services addressed by this Plan.

## 2.8 Authority to require contributions

### Monetary contributions

This Plan authorises the Council, when granting consent to an application to carry out development to which this Plan applies, to impose a condition under section 94 of the EP&A Act requiring the payment of a monetary contribution to the Council towards:

- the provision of public amenities and public services as specified in the Works Schedule to meet the demands of the development; and / or
- the recoupment of the cost of public amenities and public services previously provided in advance of development within the area.

This Plan requires the Council or an accredited certifier, when determining an application for a complying development certificate relating to development to which this Plan applies, to impose a condition under section 94 of the EP&A Act requiring the payment of a monetary contribution towards:

- the provision of public amenities and public services as specified in the Works Schedule to meet the demands of the development; and / or
- the recoupment of the cost of public amenities and public services previously provided in advance of development within the area.

### Land contributions

This Plan authorises the Council, by imposition of a condition of development consent, to require in connection with any development on land to which this Plan applies (and in addition to any monetary contribution that may be sought) the dedication free of cost to the Council of any part of the development site that is land that is to be acquired under this Plan.

The extent of land that may be required in the consent shall not exceed the amount of land the value of which does not exceed the monetary contribution otherwise authorised by this Plan.

The monetary development contribution otherwise authorised by this Plan shall be reduced by an amount corresponding to the value of the land required to be dedicated.

Where the value of the land exceeds the monetary development contribution otherwise authorised, the developer may offer to enter into a voluntary planning agreement dealing with an appropriate settle-up in exchange for the dedication of the remainder.

Further information on land contributions is included in clauses 2.9.5 and 2.11 of this Plan.

## Cap on monetary development contributions

As part of the State Government's strategy to stimulate housing construction, increase housing supply and improve housing affordability in NSW, the Government now imposes limits on the total monetary contributions that a consent authority may impose on certain developments.

The Minister for Planning issued a direction to the Council under section 94E of the EP&A Act effective from 4 March 2011 that restricts consent authorities from imposing conditions of consent requiring monetary development contributions on development for residential lots or dwellings in excess of the monetary cap specified by or under the Direction.

The monetary cap applying to residential development on the land to which this Plan applies is $20,000 per lot or dwelling. However, the Government's policy is to allow a cap of $30,000 per lot or dwelling to apply to development in 'greenfield areas' in recognition of the greater infrastructure costs of those developments.

Consistent with that policy, this Plan assumes that the Liverpool Precincts will be declared a greenfield area and will be subject to a future Direction permitting monetary development contributions up to $30,000 per lot or dwelling.

Notwithstanding the Government's policy, this Plan determines the maximum reasonable development contribution due to expected development in the Liverpool Precincts. The contributions for various types of residential development exceed $30,000 per lot or dwelling.

This is appropriate in order:

- to allow IPART to review the extent to which the (capped) development contributions are likely to fund to the total cost of public amenities and services required by the development of the Liverpool Precincts; and
- to provide information for the State Government, Council and the local community to determine a funding strategy to meet the cost of public amenities and services that will not be met (due to the cap) by development contributions.

## Obligations of accredited certifiers

In relation to an application made to an accredited certifier for a complying development certificate:

- the accredited certifier must, if a complying development certificate is issued, impose a condition requiring a development contribution, if such a contribution is authorised by this Plan; and
- any such contribution may only be a monetary contribution required under this Plan; and
- the amount of the monetary contribution that the accredited certifier must so impose is the amount determined in accordance with this Plan in respect of the development.

It is the responsibility of the principal certifying authority to accurately calculate and apply the local infrastructure contribution conditions to complying development certificates. Deferred payments of contributions required by a condition of a complying development certificate will not be accepted.

## Variation to contributions authorised by this Plan and contributions for unanticipated development

Council retains the right to reduce the development contribution otherwise calculated in accordance with the provisions of this Plan.

A developer's request for variation to a contribution calculated in accordance with this Plan must be supported by written justification included with the development application. Such request will be considered as part of the assessment of the application.

There may be circumstances when development is proposed that was not anticipated when this Plan was made and that is not specifically identified to be levied under this Plan, but which would if carried out result in the provision of, or increase the demand for, the public amenities and services included in this Plan. In these circumstances, Council will calculate a reasonable contribution proportionate to the demand for amenities and services generated by the unanticipated development, and impose that contribution on the consent for that development.

Notwithstanding the above, an Accredited Certifier other than the Council must not:

- vary, waive or modify a development contribution calculated in accordance with this Plan, or
- impose any contribution other than a monetary contribution specifically authorised by this Plan.

## 2.9 Payment of contributions

### Timing of payment

Council requires contributions to be satisfied in full, as follows:

#### Development applications involving subdivision only

Monetary contributions are required to be paid prior to the release of the subdivision certificate whether by Council or an accredited certifier (in the case of strata subdivision). Any dedication of land to Council, in lieu of a monetary contribution, shall be shown on the plan of subdivision.

#### Development applications involving building work only

Monetary contributions are required to be paid to Council prior to the issuing of the construction certificate, whether by Council or an accredited certifier. Dedication of land to Council, in lieu of monetary contribution, shall be shown on a plan of subdivision, to be registered prior to the issue of an occupation certificate.

#### Development applications involving subdivision and building work (for example, dual occupancy and integrated housing)

Monetary contributions are required to be paid to Council prior to the release of the construction certificate or subdivision certificate, whichever occurs first, whether by Council or an accredited certifier. Any dedication of land to Council, in lieu of monetary contribution, shall be shown on a plan of subdivision, to be registered prior to issue of an occupation certificate.

#### Development applications where no building works are proposed

Monetary contributions are required to be paid to Council prior to occupation / commencement of the development. Any dedication of land to Council, in lieu of monetary contribution, shall be shown on a plan of subdivision to be registered prior to issue of an occupation certificate.

#### Covid-19 Response

For Development Applications lodged or approved between 16 April 2020 and 31 December 2020 and for Section 4.55 modifications lodged in the same period which seek to modify the relevant contributions condition of a development consent for which any contributions have not yet been paid, 50% of the contribution can be paid prior to the issue of a construction certificate with the remaining 50% payable prior to the issue of the first occupation certificate. Any applications during this period that include subdivision must have all contributions paid prior to the issue of the Subdivision Certificate.

For such applications, Council will waive the requirement to have an unconditional bank guarantee in place for the duration of the deferral.

## Obligations of accredited certifiers

It is the responsibility of an accredited certifier issuing a construction certificate to certify that the contributions have been paid to Council prior to the issue of the certificate. The accredited certifier must ensure that the applicant provides a receipt (or receipts) confirming that contributions have been fully paid and copies of such receipts must be included with copies of the certified plans provided to the Council in accordance with clause 142(2) of the EP&A Regulation. Failure to follow this procedure may render such a certificate invalid and expose the certifier to legal action.

The only exceptions to the requirement are where Works In Kind, material public benefit, dedication of land and/or deferred payment arrangement has been agreed by the Council. In such cases the Council will issue a letter confirming that an alternative payment method has been agreed with the applicant.

## Deferred payments

Council will allow payment of contributions to be deferred in the following cases only:

- where the applicant has the intention and ability to dedicate land or provide a material public benefit in part or to full satisfaction of a condition imposed by development consent, and that offer of land or material public benefit is acceptable to the Council; or
- in other circumstances, to be outlined in writing by the applicant and determined formally by Council on the merits of the case.

In the circumstances where deferred payments are accepted, the debtor must lodge with Council an unconditional bank guarantee for the amount to be deferred. Bank guarantees will be accepted on the following conditions:

- The guarantee must carry specific wording outlining the purpose for which those contributions were due, for example, "drainage contributions for Stage 3".
- The guarantee will be for the contribution amount plus the estimated amount of compound interest foregone by Council for the anticipated period of deferral (Refer to formula in clause 2.9.4 below).
- Council may call up the guarantee at any time without reference to the applicant, however, the guarantee will generally be called up only when cash payment has not been received, and land is not dedicated or material public benefit not provided by the end of the period of deferral.
- The period of deferral must be for a limited time only as agreed where land is to be dedicated or a material public benefit is to be provided. The period of deferral may be extended subject to providing a further bank guarantee for the extended period in accordance with the above terms.

Council will discharge the bank guarantee when payment is made in full by cash payment, land transfer or by completion of Works In Kind.

For Development Applications lodged or approved between 16 April 2020 and 31 December 2020 and for Section 4.55 modifications lodged in the same period which seek to modify the relevant contributions condition of a development consent for which any contributions have not yet been paid, a bank guarantee for the deferred amount is not required.

## Formula for bank guarantee amounts

The following formula to be applied to all bank guarantees for contributions is:

Guarantee Amount = P + P (CI x Y)

Where

P = Contribution due;

CI = Compound interest rate comprised of Council's estimate over the period plus 3 percent (allowance for fluctuations); and

Y = Period of deferral (years).

## Methods of settling contribution requirements

Contributions may be made by one or a combination of the methods described below.

### Monetary contribution

A monetary contribution is the most common method of settling contribution requirements. However, Council may consider the transfer of land to Council or providing Works In Kind, but only where the offered land and or works are included in this Plan's Works Schedule (Part 6 of this Plan).

### Transfer of land

An applicant may transfer land to Council in part or in full satisfaction of a contribution requirement. The land may be for open space, community facilities, drainage or roads and must be land, which is included in this Plan's Works Schedule (Part 5 of this Plan). The value of the land will be determined by an independent valuer appointed by Council.

Where land which is the subject of a development application contains land identified for acquisition under this Plan, Council may as a condition of consent require that land to be dedicated free of charge to Council. Monetary contributions will be adjusted accordingly to reflect the value of the land to be dedicated in lieu of payment of cash.

### Works In Kind

Applicants are encouraged to provide Works In Kind in part or full satisfaction of a contribution. The works must be included in this Plan's Works Schedule (Part 5 of this Plan). The value of contingency for individual works will be paid where it can be proven to Council's satisfaction that unforeseen circumstances have given rise to additional costs.

Prior to proceeding with the works, applicants will be required to provide details of the works to be undertaken (including a development application), financial guarantees, bank guarantees and administration.

Applicants may provide land or works included in Part 5 of this Plan in excess of that required for the development. The value of the works will be determined in accordance with Council's Works in Kind Procedure, available from Council's administration office.

## Goods and Services Tax

No Goods and Services Tax (GST) is applicable to the payment of contributions made under section 94 of the EP&A Act. This exemption applies to both cash contributions and land or works in lieu of contributions.

## 2.10 Contributions demand credits for existing development

Monetary contributions determined under this Plan will be calculated according to the estimated net increase in demand for the particular public amenities and public services that are included in this Plan and that a particular development is projected to generate.

The Plan addresses the provision of:

- roads, transport, and drainage facilities (being 'economic infrastructure'); and
- open space, recreation, community and cultural facilities (being 'social infrastructure'),

that have been designed to meet the needs of the urban development of the Liverpool Precincts.

The planned economic infrastructure is to facilitate the conversion of the area from semi-rural development context to an urban development context. It is the wholesale re-development of the land for urban purposes (particularly through land subdivisions) that necessitates the provision of the economic infrastructure. The economic infrastructure currently available does not meet the needs of the planned urban development and whole new road and drainage networks have to be designed and built to meet those needs. No credit will therefore be given in the calculation of contributions for the demand for economic infrastructure attributable to development that existed at the time this Plan was prepared.

The planned social infrastructure is also to facilitate that same conversion, however there are people already living in the area that demand and use social infrastructure. It is also likely that current populations will, to some extent, demand the recreation and community facilities that will be provided under this Plan.

Consistent with the above, in calculating contributions under this Plan a credit will be given in the calculation of contributions only for the demand for social infrastructure attributable to development that existed at the time this Plan was prepared. That is, a contribution for social infrastructure will only be due to any net increase in population relating to the proposed development.

To determine the net increase in demand for social infrastructure requires that an assessment be made of the existing residential population. Such an assessment was undertaken for the preparation of this Plan, and is included in Appendix A to this Plan.

The information included in Appendix A will be used to calculate the estimated net increase in population for any proposed Residential Accommodation development, and therefore calculate the contribution toward social infrastructure due to that development.

A precise population attributable to each existing residential development is not available. Instead, this Plan assesses existing population on the basis of average dwelling occupancy figures for the Austral and Leppington North Precincts at the time of the most recently available Census data (2006).

The assumed household occupancy rate for the purpose of determining net increase in demand for social infrastructure and the calculation of open space and recreation, and community and cultural facilities contributions under this Plan is 3.1 persons per dwelling.[i][1]

[1] *Austral and Leppington North Precincts – Demographic and Social Infrastructure Assessment*, prepared by Elton Consulting, page 14 identifies rates of 3.2 and 3.0 persons per dwelling in Austral and Leppington suburbs in 2006. A rate of 3.1 is assumed to be an average occupancy rate across both suburbs.

## 2.11 Adjustment to contribution rates and contribution amounts

### Overview

The purpose of this clause is to ensure that the monetary contribution rates imposed at the time of development consent reflect the current costs of provision of the facilities included in this Plan.

To convert the cost of facilities included in the Plan to a current cost, the monetary contribution rates shown in Part 1 of this Plan are to be adjusted in accordance with the provisions set out below:

- at the time of imposing a condition on a development consent requiring payment of the monetary contribution; and again
- at the time that the monetary contribution is to be paid pursuant to the condition imposed on that same development consent.

The adjusted contribution rates will also be published quarterly on the Council's website *www.liverpool.nsw.gov.au*.

This process is distinct and separate from clause 2.12, which deals with future reviews of this Plan. Future reviews will not affect any consent granted in accordance with this Plan and such reviews are required to be publicly exhibited.

### Adjustment methods

The Consumer Price Index (CPI) is the most commonly used index for adjusting contribution rates. However, it is not a suitable index for adjusting contributions relating to land that is yet to be acquired as land prices do not correlate with movements in the prices of goods and services, especially in urban release areas. As a result, Council will prepare and regularly publish a customised Land Value Index (LVI), generally consistent with in the contributions management arrangements it applies to other land release areas within the Liverpool LGA.

In accordance with the provisions of clause 32(3) of the EP&A Regulation, Council, without the necessity of preparing a new or amending contributions plan, will adjust the monetary development contribution rates set out in this Plan to reflect quarterly changes to both:

- the CPI (for all Works Schedule items identified in this Plan apart from the items comprising land yet to be acquired); and
- the customised LVI (for Works Schedule items identified in this Plan involving land yet to be acquired).

### Works Schedule items other than land

The monetary contributions rates for Works Schedule items as set out in Part 5 of this Plan will be adjusted to reflect quarterly variations in the Consumer Price Index (All Groups - Sydney) from the date that the Plan came into effect.

The adjustments shall be made at the time of granting development consent so as to determine the appropriate contribution to be included on any relevant consent. A further adjustment will be made at the time of payment to reflect any further changes between the date of consent and payment of contribution.

#### Contribution at time of development consent

$$C_2 = \frac{C_1 \times CPI_2}{CPI_1}$$

### Contribution at time of payment

$$C_3 = \frac{C_2 \times CPI_3}{CPI_2}$$

Where:

$C_1$ = Contribution of rate for works as shown in this Plan

$C_2$ = Contribution rate for works as included or to be included in the conditions imposed on the development consent

$C_3$ = Contribution rate for works at the time that the contribution is to be paid

$CPI_1$ = *Consumer Price Index (All Groups - Sydney)* result at the time that the Plan was prepared - i.e. June 2014

$CPI_2$ = *Consumer Price Index (All Groups - Sydney)* result for the quarter immediately prior to the date of granting the relevant development consent

$CPI_3$ = *Consumer Price Index (All Groups - Sydney)* result for the quarter immediately prior to the date that the contribution is to be paid

## Land

The monetary contributions rates for Works Schedule items that relate to land as set out in Part 5 of this Plan will be adjusted in accordance to reflect quarterly variations in the Land Value Index (published on the Liverpool City Council website) from the date that the Plan came into effect.

The adjustments shall be made at the time of granting development consent so as to determine the appropriate contribution to be included on any relevant consent. A further adjustment will be made at the time of payment to reflect any further changes between the date of consent and payment of contribution.

### Contribution at time of development consent

$$C_2 = \frac{C_1 \times LVI_2}{LVI_1}$$

### Contribution at time of payment

$$C_3 = \frac{C_2 \times LVI_3}{LVI_2}$$

Where:

$C_1$ = Land component of contributions as shown in this Plan

$C_2$ = Land component of contributions subject of the conditions imposed on the development consent

$C_3$ = Land component of contributions at the time that the contribution is to be paid

$LVI_1$ = Land Value Index at the time that the Plan was prepared - i.e. 1.00

$LVI_2$ = Land Value Index at the time of granting the relevant development consent

$LVI_3$ = The latest Land Value Index at time that the contribution is to be paid

## Calculation of Land Value Index

The Land Value Index is a measure to reflect the changes in land values during the life of the Plan from the date of the adoption of the Plan.

The land costs included in the Works Schedule in Part 5 of this Plan are based on estimates provided in the report prepared by MJ Davis Valuations Pty Ltd and titled *Section 94 Contributions and Infrastructure Delivery Plan - Austral and Leppington North Precincts.*

The values are shown in Table 2.1.

**Table 2.1 Assumed land values for various classifications**

| Land classification | Base assumed land cost (per sqm) | Land cost (per sqm) including average acquisition contingencies[2] of 12% |
|---|---|---|
| Riparian corridors (constrained land and land below the 20 year Annual Recurrence Interval (ARI) event) | $40 | $44.80 |
| Residential and Commercial/ Retail land between the 20 year and 100 year ARI events | $145 | $162.40 |
| Residential and Commercial/ Retail (other than in the town centre) prime land above the 100 year ARI event | $160 | $179.20 |
| Commercial/ Retail prime land within the town centre and above the 100 year ARI event | $170 | $190.40 |
| Employment lands/ Industrial | $165 | $184.80 |
| Rural lands (below the 100 year ARI event) | $50 | $56 |

## 2.12 Review of Plan and contribution rates

Council will review this Plan on a regular basis.

The review process will canvass, as a minimum, the following issues (where data is available):

- development activity in terms of latest information on net additional dwellings and populations;
- likely total development activity to be experienced during the remainder of the Liverpool Precincts development;
- progress in the delivery of public amenities and services identified in Part 6 of this Plan;
- modification of facility concepts, changes in anticipated facility costs, facility timing and land values;
- annual contributions received and expenditure information; and
- any other factors likely to affect the delivery of works identified in this Plan.

Pursuant to clause 32(3) of the EP&A Regulation, Council may make only minor adjustments or amendments to the Plan without prior public exhibition and adoption by Council. Minor adjustments could include minor typographical corrections and amendments to rates resulting from changes in the indexes adopted by this Plan.

Amendments beyond those authorised under clause 32 of the EP&A Regulation require the preparation of a new draft plan which in turn must meet the requirements of the EP&A Act and EP&A Regulation (including public exhibition of the draft plan for a period of at least 28 days). The nature of the proposed amendments and reasons for same would be clearly outlined as part of the exhibition.

Amendments requiring public exhibition would include adjustments to contribution rates taking account of more recent information and, where relevant, the following:

- actual costs of completed works;
- reviewed costs of yet to be completed works and land acquisition;
- adjustment in projected project management and contingency costs associated with works; and
- plan management and administration costs.

[2] Refer to section 5.0 of the MJ Davis Valuations report for further detail but may include Special Land Value at date of acquisition, Severance, Solatium and Disturbance as required to be paid pursuant to the *Land Acquisition (Just Terms Compensation) Act 1991*.

Plan reviews of the type described above will not affect any development contributions obligation required under any consent that is granted under this Plan.

## 2.13 Pooling of funds

Council's ability to forward fund services and amenities identified in this Plan is very limited. Consequently their provision is largely contingent upon the availability of contributions funds.

To provide a strategy for the orderly delivery of the public services and amenities, this Plan authorises monetary contributions paid for different purposes in accordance with the conditions of various development consents authorised by this Plan and any other contributions plan approved by the Council to be pooled and applied progressively for those purposes.

The priorities for the expenditure of pooled monetary contributions under this Plan are the priorities for works as set out in the Works Schedule in Part 5.

In any case of the Council deciding whether to pool and progressively apply contributions funds, the Council will have to first be satisfied that such action will not unreasonably prejudice the carrying into effect, within a reasonable time, of the purposes for which the money was originally paid.

# 3. Demand for public amenities and public services

## 3.1 Summary of this Part

The NSW State Government is planning for the development of land in the South West Growth Centre, of which the Austral and Leppington North Precincts form part.

The Austral Precinct and a portion of the Leppington North Precinct are in the Liverpool LGA and so Liverpool City Council will serve as a consent authority for much of the development. Council will also be the manager of most of the new public infrastructure that will be required to be delivered in its jurisdiction.

Planning for housing and other development requires the parallel planning for public infrastructure to support the development and the incoming population.

The incoming population is directly related to the expected number and type of residential dwellings and extent of non-residential development floor space in an area.

The extent of public amenities and services required for the future development of an area is usually based on standards or benchmarks rates (e.g. per capita provision).

The application of the provision standards to the estimate of expected development enables a list of infrastructure requirements to meet that development to be compiled.

This connection between expected development, infrastructure standards, and the resultant infrastructure list directly informs the contribution requirements in this Plan.

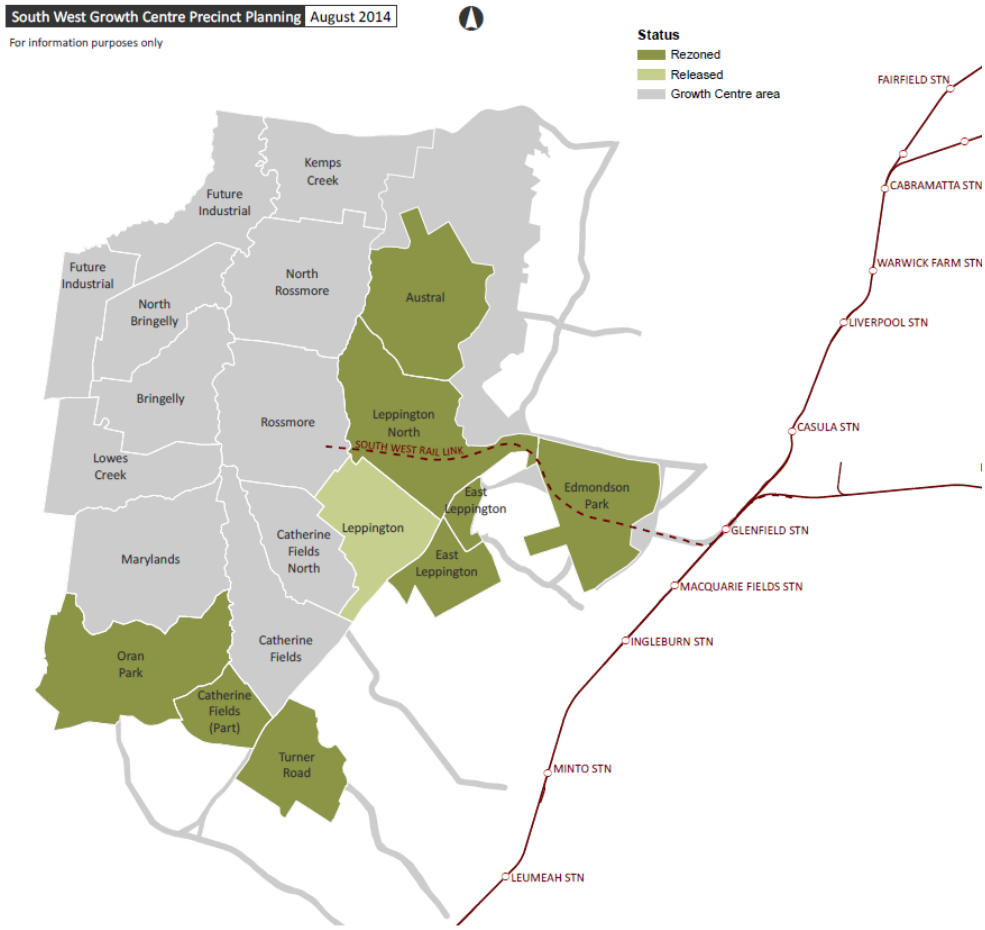
A range of infrastructure studies have been prepared to inform the infrastructure list (or Works Schedule). Part 4 of this Plan provides more detail on the servicing requirements expressed in these studies.

## 3.2 Development and infrastructure planning context

### Growth Centres Structure Planning

The land affected by this Plan is within the Austral and Leppington North Precincts in Sydney's South West Growth Centre.

To facilitate planning and orderly development of the South West Growth Centre, this area has been divided into seventeen precincts. The locations of the early release precincts, including Austral and Leppington North Precincts, are shown in Figure 3.1.



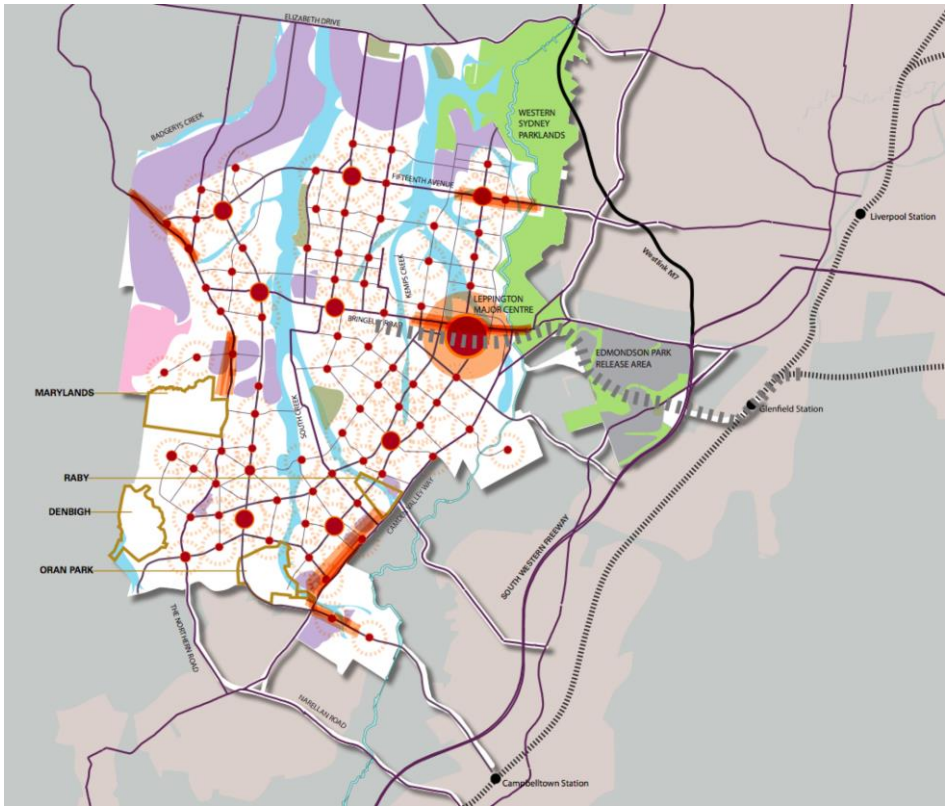

Source: Department of Planning and Environment

Figure 3.1 South West Growth Centre early release precincts

The Austral and Leppington North Precincts were released for precinct planning purposes by the Minister for Planning in October 2009. The Austral Precinct is wholly located in the Liverpool LGA, while the Leppington North Precinct is located partly in the Liverpool LGA and partly in the Camden LGA. This contributions plan relates to the Austral Precinct and that part of the Leppington North Precincts that is within the Liverpool LGA – and discussed in this Plan as the 'Liverpool Precincts'.

A structure plan has been prepared for the Growth Centre, a copy of which is included as Figure 3.2. Apart from local neighbourhood centres, the structure plan proposes ten (10) new town or village centres. The largest of these is the planned Major Town Centre at Leppington that will be located in the Leppington North Precinct in the adjoining Camden LGA, immediately adjacent to the southern boundary of the land affected by this Plan. The Western Sydney Parkland forms the northern and eastern boundaries of the Liverpool Precincts.

The Leppington Major Centre will be a major service provider for properties in the Liverpool Precincts and some of the regional facilities of the centre will be located within the land affected by this Plan. Other infrastructure investment is underway to support the future Leppington Major Centre, including a new rail line from Glenfield via Edmondson Park.




Source: South West Growth Centres Structure Plan Edition 3, prepared by Department of Planning and Environment

Figure 3.2 South West Growth Centres Structure Plan

Table 3.1 provides a context for the area the subject of this Plan in terms of the planned dwellings and population illustrating that the majority of housing and population in the Austral and Leppington North Precincts will be located in the Liverpool LGA.

**Table 3.1 Estimated dwelling and populations**

| District | Area (ha) | Projected dwellings | Projected population |
|---|---|---|---|
| South West Growth Centre (17 Precincts) | 17,000 | 110,000 | 300,000 |
| Liverpool Precincts | | 16,133* | 49,686* |

Sources: Growth Centres Commission (Structure Plan Explanatory Note); Department of Planning and Infrastructure (now Department of Planning and Environment)

*Gross estimated dwellings and population included in this Plan

## Precinct Planning

A package of information on anticipated development and required infrastructure has been prepared for the Austral and Leppington North Precincts, including:

- Indicative Layout Plan (ILP) to guide planning and assessment of the precincts.
- An amendment to *State Environmental Planning Policy (Sydney Growth Centres) 2006* to facilitate the formal rezoning of the land to enable urban development.
- Development Control Plan.
- Contributions plans prepared by Camden Council and Liverpool City Council (this Plan).
- Infrastructure Delivery Plan (IDP).

Key information sources that have underpinned infrastructure planning and costing and this Plan in particular, are listed included in Table 3.2.

**Table 3.2 Studies supporting infrastructure planning and costing**

| Public amenity or service | Studies informing infrastructure need and cost |
|---|---|
| Land acquisition for public amenities or services | MJ Davis Valuations Pty Ltd (2014, - Austral and Leppington North Precincts) |
| Storm water drainage works | Cardno (NSW/ACT) Pty Ltd (2011), *Austral & Leppington North Precincts Water Cycle Management WSUD Report*, prepared for NSW Department of Planning and Infrastructure, plus Responses to Exhibition Submissions Sep 2012 |
| Roads and transport works | AECOM Australia Pty Ltd (2011), *Austral and Leppington North (ALN) Precincts Transport Assessment*, prepared for NSW Department of Planning and Infrastructure, July 2012 |
| Open space and recreation, community and cultural facilities works | Elton Consulting (2011), Austral and Leppington North Precincts - Demographic and Social Infrastructure Assessment, plus *Addendum* July 2012 |

More detail on the Liverpool Precincts' infrastructure requirements is included in the Parts 4 and 5 of this Plan.

## Infrastructure Delivery Plan

The Infrastructure Delivery Plan (IDP) provides an overview of the urban infrastructure requirements for the Austral and Leppington North Precincts, and how those requirements will be met.

The IDP provides, amongst other things, a basis for ongoing discussion between planning and infrastructure agencies to guide, inform and improve the delivery of infrastructure. It also serves the purpose of acquainting owners and developers of land in the Precincts with how and when infrastructure is likely to be provided.

Coordination in infrastructure delivery will be critical to the timely roll-out of urban development of the Liverpool Precincts. Coordination is even more critical in an environment where the land is comprised of relatively small parcels held by a large number of land owners. This is the case in in the Liverpool Precincts.

The IDP provides the following directions for the delivery of local infrastructure to the land to which this Plan applies:

- Identifies the need to prepare contributions plans for local infrastructure. This Plan addresses this requirement.
- Requires staging plans for local infrastructure to accord with the indicative priority development areas identified in the IDP. The staging outcomes in this Plan reflect the IDP.
- Identifies that total local infrastructure costs are likely to be higher than the likely contribution receipts, given the contributions caps that are in place. The funding of higher order recreation and community facilities is particularly uncertain. Council, in partnership with the State Government, will therefore need to explore other sources of funding or other delivery options.
- Provides that councils have prepared, or are required to prepare, Community Strategic Plans as the key documents guiding councils' activities in the coming decades. This is now the mandated way for councils in NSW to undertake and report their resource planning and the delivery of services and facilities to their communities. Supporting the implementation of the strategic plans will be the resourcing strategies (including long-term financial plans, workforce management plans and asset management plans), delivery plans and operational plans. Councils' Community Strategic Plans must be prepared with due consideration of the various strategies and policies that impact on the local area from both the State (including the Metropolitan Strategy and the State Plan) and Federal Government levels.
- Provides that the effective management of development growth will require a significant ongoing commitment from State Government, particularly in the delivery of infrastructure and services. State Government's role will span a range of agencies and joint commitment and action through the Metropolitan

and Sub-regional Strategy will be required to ensure consistent, timely and quality delivery of infrastructure and services to this part of the South West Growth Centre.

- Provides that funding constraints mean that there should be an even greater emphasis placed on partnering with developers to provide the necessary local infrastructure (through, for example, Planning Agreements and Works In Kind agreements).

## 3.3 Expected development outcomes

### Existing development

Existing development in the area is characterised by mainly rural and rural residential land uses.

The majority of land in the Precincts is currently used for either small scale agricultural purposes such as market gardens or rural residences. Rural residencies are often used as a place of business. This may include ownership of trucks, horses or running construction businesses.3

There is also an array of uses that also might be characterised as urban uses – for example, private schools and retirement living establishments.

### Net Developable Area

The capacity for development of land is restricted by a number of factors, including:

- natural constraints such as riparian and flood prone lands;
- man-made constraints such as existing infrastructure, easements and other legal restrictions, and existing infrastructure such as gas and transmission lines.

In addition to the constraints, there are future constraints. For example, certain land is needed to be set aside or reserved for public purposes such as roads, government buildings, education and health facilities, and so on.

Taking these matters into consideration allows a calculation of the amount of 'economic' land that is available for development. The planned development of this 'Net Developable Area' (or NDA) is the development that will generate the demand for the urban infrastructure such as parks, roads and drains that are required to sustain it. Net Developable Area is therefore one of the bases used to determine contributions under this Plan.

The Liverpool Precincts together have an estimated total Net Developable Area of approximately 1,030 hectares.[4]

### Overview of expected development

The Precinct Plan for both Austral and Leppington North Precincts has been prepared with reference to the Structure Plan and the indicative dwelling and town centre targets, and achieves the following outcomes:

- Leppington Major Centre and nearby employment land, with capacity for up to 13,000 jobs in retailing, light industrial, business park, human services and entertainment sectors.
- Approximately 17,350 dwellings and a population of approximately 54,300.
- A Town Centre in Austral with retail floor space in the order of 30,000 square metres.

[3] Austral and Leppington North Precincts – Demographic and Social Infrastructure Assessment, prepared by Elton Consulting, page 28
[4] Total NDA is 1,131 hectares. 'Equivalent NDA' (that is, total NDA adjusted to reflect the lower residential development potential of Environment zoned lands and higher potential of some areas) is used to calculate contributions under this Plan. Equivalent NDA for the Liverpool Precincts is approximately 1,146 hectares.

- Three neighbourhood centres each with retail floor space in the order of 10,000 square metres.
- 4 primary schools and 2 high schools.
- 85 hectares of light industrial land for local jobs and local services.
- A new TAFE college and Regional Integrated Primary Health Care centre located in Leppington Major Centre.
- Regional level community and cultural facilities in Leppington Major Centre.

Expected development in the Liverpool Precincts will be characterised by the following:

- A part of the Leppington Major Centre civic precinct and bulky goods retailing located immediately to the north of Bringelly Road.
- Four (4) neighbourhood retail shopping centres and up to eight (6) schools.
- A range of lower density residential areas, including medium density around the various retail centres, infill low density urban residential and lower density Environmental Living zones just beyond the creek corridors and rural transition along the western boundary.
- A light Industrial area to the north of Fifteenth Avenue.
- Open space and drainage facilities along the Bonds Kemps and Scalabrini Creek corridors as well as adjacent to the Western Sydney Parklands and along other minor, unnamed creeks that pass through the Austral Precinct.
- Areas reserved for environmental conservation and environmental protection, principally along the Kemps Creek corridor and in the north of the Austral Precinct, as well as a corridor for the South West Rail Line.

The extent of development is reflected in the final Indicative Layout Plan adopted by the Department of Planning and Infrastructure (now Department of Planning and Environment).

Table 3.3 outlines the expected extent of development in the Liverpool LGA portion of the Austral and Leppington North Precinct based on the final Indicative Layout Plan. The Equivalent NDA makes allowance for higher and lesser densities.

The proposed arrangement of these component land uses is shown in Figure 3.3.

**Table 3.3 Expected Net Developable Area – Liverpool Precincts**

| Land Use | NDA (ha) | Equivalent NDA assuming 15dw/ha |
|---|---|---|
| Environmental Living (4 dwellings/ha) | 107.79 | 28.74 |
| Environmental Living (10 dwellings/ha) | 45.69 | 30.46 |
| Very Low Density Residential (10 dw/ha) | 9.23 | 6.15 |
| Lower Density Residential (15 dw/ha) | 703.00 | 703.00 |
| Low Density Residential (20 dw/ha) | 56.35 | 75.13 |
| Medium Density Residential (25 dw/ha) | 13.85 | 23.08 |
| R3 Medium Density Residential (25 dw/ha) | 125.38 | 208.97 |
| Sub Total Residential | 1,061 | 1,076 |
| Neighbourhood Centre | 9.90 | 9.90 |
| Bulky Goods | 24.14 | 24.14 |
| Light Industrial | 36.01 | 36.01 |
| Sub Total Employment | 70.05 | 70.05 |
| TOTAL | 1,131 | 1,146 |

Source: Department of Planning and Infrastructure (now Department of Planning and Environment)

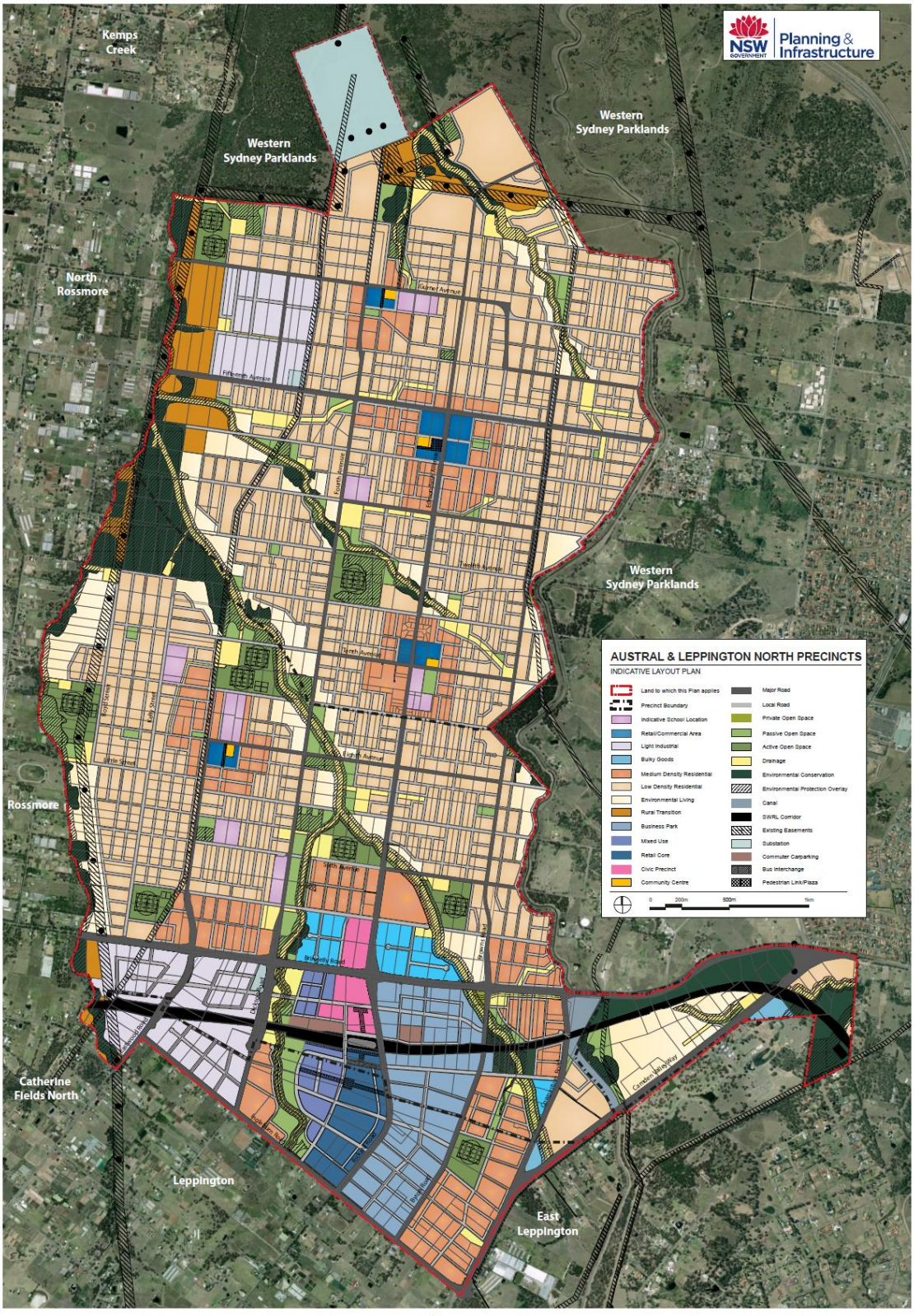



Figure 3.3 Expected land use in Liverpool Precincts

## Demographic characteristics

The likely demographic characteristics of a development area are important for understanding and planning for the future social infrastructure needs of that area.

- The demographic characteristics of the existing rural population do not provide a robust indicator of the future demography of the Liverpool Precincts.

The report *Austral and Leppington North Precincts - Demographic and Social Infrastructure Assessment* prepared by Elton Consulting analyses the demographics and housing market conditions in the Camden, Liverpool and Campbelltown LGAs.

The Social Infrastructure Assessment makes the following conclusions about the anticipated demography of the future release area:

- There will initially be a comparable proportion of young couples and families with children to other release areas in the region, but a greater range of family types, reflecting the wider range of housing types and price markets to be provided.
- Proportions of empty nesters and older people will be initially similar to that usually experienced in new release areas, but, given the differing housing stock, will rapidly increase to approximate those in the wider district once services and public transport become well established.
- Over time, the population will become more diverse. Increasing proportions of young adults and older people will be attracted to the area once Leppington Major Centre is established. The proportion of the population who are young children and young adults will decline as the population ages and the proportion of older children with older parents grows. The proportion of the population aged 55+ years will also increase considerably as the area matures.
- Owner occupiers are likely to provide a stable group that will age in place through the life cycle stages, while tenant households will experience greater turnover, thereby maintaining a similar age profile as in the initial stages.
- Over time the population profile is likely to come to more closely approximate that of an established area with a variety of age and household characteristics, rather than a traditional new release area with particular age concentrations.
- Changing demographic, cultural and lifestyle patterns that will occur through the life of the development; and the relative uncertainty about the future composition of the population and its precise needs, gives rise to a need to plan for flexibility in social infrastructure facilities to enable them to respond and adapt as the particular requirements and lifestyle preferences of the population are ascertained.[5]

## Dwelling occupancy rates

The amount and mix of the types of expected residential development will inform estimate of the future population of an area. The need for social infrastructure is usually based on per capita benchmarks. As development contributions are levied on a development-by-development basis, in order for the contribution to be reasonable there needs to be an assumption of how many people are likely to live in the proposed development.

This Plan therefore assumes standard dwelling occupancy rates for the purpose of determining the estimated occupancy of development that is approved during the life of the Plan.

The occupancy rates used to calculate contributions under this Plan are those determined by Elton Consulting in the report *Austral and Leppington North Precincts - Demographic and Social Infrastructure Assessment*. They are shown in Table 3.4.

**Table 3.4 Dwelling occupancy rates assumed in this Plan**

| Development type | Occupancy rate |
|---|---|
| Subdivided lots | 3.4 persons per lot |

[5] Social Infrastructure Assessment, pp45-46

| Development type | Occupancy rate |
|---|---|
| Detached dwelling, detached dual occupancy (each dwelling) | 3.4 persons per dwelling |
| Semi-detached, town house, terrace, attached dual occupancy (each dwelling) | 2.6 persons per dwelling |
| Flat, unit, apartment, secondary dwellings | 1.8 persons per dwelling |
| Seniors living dwellings | 1.5 persons per dwelling |

## Anticipated resident population

The anticipated population in the Austral and Leppington North Precincts has been determined on the basis of the Net Developable Area for various types of residential development, the minimum density of dwellings in those areas (specified in the draft SEPP amendment), and the assumed average occupancy rates for those dwellings.

The anticipated population is shown in Table 3.5.

**Table 3.5 Calculation of anticipated resident population – Liverpool Precincts**

| Dwelling type | Projected dwellings | Assumed dwelling occupancy rate | Population |
|---|---|---|---|
| Low density and environmental living (detached dwellings) | 12.652 | 3.4 | 39.186 |
| Medium density residential (semi-detached etc.) | 3,481 | 2.6 | 13,159 |
| Less assumed existing population (see Appendix A) | | | -2,659 |
| Expected net additional population | | | 49.686 |

## Anticipated non-residential floor space

The predominant economic land use in the Precincts will be residential development. There will also be some non-residential development including neighbourhood retail centres, a light industrial area; and a bulky goods retailing area adjoining the neighbouring Leppington Major Centre in Camden LGA.

The anticipated extent of these non-residential developments is shown in Table 3.6.

**Table 3.6 Anticipated non residential development potential - Liverpool Precincts**

| Land use category | Net Developable Area (ha) | Projected gross floor area ($m^2$)* |
|---|---|---|
| Neighbourhood Retail Centre | 9.90 | 44,550 |
| Bulky goods | 24.14 | 108,630 |
| Light Industrial | 36.01 | 162,045 |
| Total | 70.05 | 315,225 |

* based on an assumed average floor space ratio of 0.45:1
Source: Department of Planning and Infrastructure (now Department of Planning and Environment)

## 3.4 Infrastructure demand arising from the expected development

Future development in the South West Growth Centre will result in an additional population of up to 300,000 people.

Existing public amenities and services in the Liverpool Precincts have been essentially designed to accommodate the existing predominantly rural living environment. A change in the development profile from rural to urban development is now planned. More particularly, the Liverpool Precincts are planned to have a low density suburban character. The projected influx of over 49.686 new residents demands a significant investment in new and augmented public amenities and services.

Research on infrastructure needs for the impending urban development has identified the following impacts on public services and public amenities:

- increased demand for active and passive recreation facilities, such as recreation centres, sports fields, sports courts, playgrounds, walking trails and bike paths;
- increased demand for spaces that will foster community life and the development of social capital in the Liverpool Precincts, such as multi-purpose community centres and libraries;
- increased demand for facilities that will support safe and convenient travel between land uses both within the Liverpool Precincts and to and from destinations outside of the area, such as upgrades to existing roads, new roads, intersections and public transport facilities; and
- increased demand for stormwater drainage facilities as a result of the extra stormwater runoff generated by impervious surfaces associated with urban (as distinct from rural) development.

A range of public facilities and public amenities have been identified as being required to address the impacts of the expected development, including:

- open space and recreation facilities;
- community and cultural facilities;
- water cycle management facilities; and
- traffic and transport management facilities.

More detail on the demand for public services and amenities, the relationship with the expected development, and the strategies for the delivery of required infrastructure is included in Part 4 of this Plan.

The costs, indicative timing, and proposed location of individual items for the public amenities and public services included in this Plan are shown in Part 5 of this Plan.

# 4. Strategy plans

## 4.1 Infrastructure costs and delivery generally

### Apportionment of the infrastructure costs to expected development

The costs for public services and amenities were informed by the studies that support the infrastructure planning of the area (refer Table 3.2).

The development monetary contribution for each of the facilities identified in this Plan is determined by dividing the total cost of the facility by the contribution catchment (which is expressed in persons or NDA). This process ensures that fair apportionment of facility costs is calculated for development expected to occur under this Plan.

The contribution catchments for each infrastructure type are:

- in the case of open space and recreation facilities land and works, the expected additional resident population of the Liverpool Precincts;
- in the case of community and cultural facilities land and works, the number of people (or future residents) the respective facility has been designed for; and
- in the case of stormwater drainage, roads and transport land and works, the estimated equivalent Net Developable Area of the Liverpool Precincts.

The infrastructure included in this Plan has generally been sized to reflect the demand generated by the expected development under this Plan. Some facilities, such as the proposed aquatic and indoor recreation centre, have been designed to serve a wider catchment and the contribution rate reflects that wider contribution catchment. Council will need to make arrangements to ensure that the cost attributable to the demand sources external to the Liverpool Precincts is met (for example, by subsequent contributions plans, joint contributions plans, special rates, grants).

More details on this apportionment are discussed in the remainder of Part 4 of this Plan.

### Delivery of the infrastructure

Council will require contributions from developers under this Plan toward provision of the public amenities and public services identified in this Plan. These contributions may be in the form of monetary contributions, dedications of land free of cost, or a combination of these.

Developers may choose to provide, subject to the agreement of the Council, one or more infrastructure items identified in this Plan as Works In Kind or provide another type of material public benefit as means of satisfying development contributions required under the Plan (refer clause 2.9.5 of this Plan). A Works In Kind Agreement must be in place prior to commencing the works in accordance with the Council's Works In Kind Agreements Policy.

Substantial research has been applied to the derivation of the Plan's Works Schedule and the planning for the location of all facilities has been completed but detailed design will be carried out in the development phase. The facilities will be developed in a manner that allows them to effectively serve the demand attributable to development envisaged under this Plan.

The facilities strategies included in Part 4 of this Plan are based on strategic information. It is likely that, as the planning process for the different development areas proceeds, modified and more cost effective solutions that still meet the strategy objectives will be developed.

Council will prepare design concepts for the facilities so that specification and costing of the facilities can be more accurately defined as implementation of this Plan proceeds. This may result in amendment of this Plan.

Where alternatives to the Works Schedule are proposed in conjunction with the development of areas and the alternatives are approved by the Council, the development contribution applicable to a development the subject of a development application may be reviewed, or the Works Schedule in this Plan updated, or both.

## Infrastructure staging and priority

The over-arching strategy that guides the staging and priority of infrastructure is the Infrastructure Delivery Plan. This will be developed and refined in accordance with the anticipated development program for the Austral and Leppington North Precincts. The provision of facilities included in this Plan will be programmed, as far as practicable, to align with these broader programs.

The initial development areas, as discussed in the Infrastructure Delivery Plan and clause 3.2.3, include:

- Land in and around the Leppington Major Centre.
- Land located north and south of Fifteenth Avenue on the eastern edge of the Austral Precinct.

The second of these areas is within the Liverpool LGA, while the Leppington Major Centre is just south of the border with Camden Council and so the land around this centre may include land in the Liverpool LGA.

Ideally, development will proceed outward from the railway station and retail core. The existing land ownership pattern and other influences (such as the demand for different land use types) however means that this order of development is unlikely to occur. The Infrastructure Delivery Plan strategies reflect this:

There should not be any assumption that services are 'reserved' for particular areas in the early stages. If owners and developers of land located outside the initial development areas consult and work cooperatively with infrastructure providers and owners of adjacent land, there is no reason why those lands could not also be developed. 6

With these uncertainties, the facility staging and priorities details that are shown in Part 5 of this Plan are general in their scope, and will be subject to regular review.

[6] *Austral and Leppington North Precincts Infrastructure Delivery Plan*, Draft Report for Exhibition, prepared by Newplan, August 2011, Section 4.2

## 4.2 Open space and recreation facilities

### Relationship between the expected types of development and the demand for additional public facilities

The requirements for local, district and regional scale open space and recreation facilities as a result of the expected development of the Precincts are documented in the report Austral and Leppington North Precincts – Demographic and Social Infrastructure Assessment, prepared by Elton Consulting in August 2011. This is supplemented by an Addendum, prepared by Elton Consulting July 2012

The information below comprises a summary of sections of that report that describe the demand for new and upgraded public amenities and services.

#### Existing provision

There are limited open space and recreation facilities accessible to the current residents of the Liverpool Precincts. However the extent of provision is consistent with the area's small population and semi-rural character.[7]

There are three identified local public open space areas located within the Liverpool LGA part of the Austral and Leppington North Precincts. These are:

- Craik Park (includes children's playground, sports field and tennis courts);
- WV Scott Memorial Park (includes children's playground, sports fields, cricket practice nets, netball courts and bushland); and
- Starr Park (bushland).

In addition there is a significant area of district and regional parks and bushlands on the periphery of the Austral Precinct, including:

- Western Sydney Regional Parklands;
- Grimson Park (in West Hoxton); and
- Kemps Creek Nature Reserve (high conservation value bushland – no public access).

The level of open space provision reflects the rural residential lifestyle of the area. That is, the demand for public open space (particular local and passive open space) is significantly reduced in locations where residents live on their own substantial parcel of land.

With the proposed development of the area to an urban environment and its associated influx of new residents, the area will require significantly more land for open space and recreation purposes.

[7] Social Infrastructure Assessment, page 16

## Trends in facility provision

Current and emerging trends and factors that have been considered in the planning and specification of Austral and Leppington North Precincts recreation infrastructure included the following:

- Significant and ongoing popularity of informal recreation activities (e.g. walking), and activities requiring fixed commitments are declining in favour of informal and more flexible activities.
- Facilities that are flexible in their service provision.
- Growing awareness and interest in health and fitness as part of a balanced life-style rather than an emphasis solely on leisure.
- Increasing demand for outdoor recreation.
- Growing awareness of the importance of incidental exercise within employment and residential areas, increasing the demand for walking and cycling paths.
- An increasing emphasis on quality as well as quantity.
- An increasing demands for access for young people and improved accessibility more generally.
- An increased demand for natural areas and adventure based activities.
- The increased duration of playing seasons requiring consideration of alternative playing surfaces.

## Planning principles for open space and recreation

Principles for the provision of sustainable open space and recreation infrastructure that have guided the selection of infrastructure items included in this Plan include the following:

- Open space should be largely publicly provided.
- Meet a diverse range of open space and recreation needs and opportunities.
- Avoid exerting pressure on open space and recreation facilities in surrounding areas.
- Quality of open space is more important than quantity.
- A physically and visually connected network; and represent a non-vehicular system that connects major activities and open spaces by walking and cycling.
- Comprise a local, district and regional hierarchy of spaces.
- Reflect and complement the natural, ecological, waterway and visual features of the area; and incorporate natural areas and riparian corridors into the open space system where possible.
- Integrate a network of open space with stormwater management and water-sensitive urban design.[8]

## Recreation demand assessment based on forecast demographics

The size and characteristics of the population in the Liverpool Precincts is discussed in Part 3 of this Plan.

Implications for recreation demand as a result of the expected mix of residents is discussed in detail in Table 9.1 of the Social Infrastructure Assessment.

In summary:

- Future developments will initially contain a predominance of families with children, adolescents and young people, and only over time will there be a balance of more middle aged and older people.

[8] Social Infrastructure Assessment, Section 3.1

- The major target groups for recreation planning in new release areas are children aged 0-14 years, and adults aged 25-40 years.
- Local open space is important in encouraging informal interaction and creating opportunities for new and existing residents to come together, as well as for encouraging extended family activity, for walking and cycling as well as family gatherings.
- The level of local open space will in part be informed by prevailing council standards of provision.

In relation to the last point, the following plans and strategies provide guidance:

- Liverpool City-Wide Recreation Strategy 2020 (2003); and
- Liverpool City Council Provision Rates Indicative Draft 21 September 2010.

The following is a summary of Liverpool City Council's standards relating to open space[9]:

- The provision of open space in new release areas is based on a standard of 2.83 hectares per 1,000 people;
- Local parks (minimum 2,000 square metres) to be provided within a five minute walk of most dwellings;
- 1 key suburb park (district park) with a minimum size of 3 hectares per 5,000 – 10,000 people;
- 1 double playing field of minimum 4 hectares per 10,000 people (local sporting field);
- 1 district sporting field per 60,000 people approximately;
- District sporting fields to be minimum 6 hectares and, where possible, co-located with other commercial, community and recreation space in larger neighbourhood activity hubs;
- Split between active and passive open space to reflect quality considerations, rather than a firm 50:50 split; and
- High use recreation facilities and quality open public spaces should be provided away from electricity transmission lines, wherever practicable.

The above considerations have informed the open space and recreation requirements for the future development of the Liverpool Precincts.

## Local and district open space requirements

The total area of local and district open space land required was calculated in the Social Infrastructure Assessment on the basis of meeting the combined needs of the Austral and Leppington North Precincts' developments.

The planning of open space areas was undertaken as part of the Precinct planning phase in an iterative manner. Earlier versions of the ILP identified more extensive passive open space areas aligning with the numerous drainage lines traversing the Austral and Leppington North Precincts. The size of the open space areas was reduced in acknowledgment of the very high cost of acquiring the substantial areas required for meeting open space demands.

The benchmark figure in the report proposed a rate of 2.9 hectares per 1,000 population. For a forecast population of 52,345 people in the Liverpool precincts, application of this benchmark would result in a requirement of approximately 151.8 hectares of district and local open space.

This Plan proposes to provide marginally less than the total Austral and Leppington North Precincts benchmark rate for open space (2.9 hectares per 1,000 residents). Table 4.1 shows that some of the land has been obtained free of cost so that the incoming population 49,686 residents) is required to provide only 104.84 hectares, or 2.11 hectares per 1,000 residents. The incoming population benefits from open space areas greater than the

[9] Social Infrastructure Assessment page 76

benchmark rate, while paying for less than the benchmark rate. The proposed inclusion of 104.84 hectares of land in this Plan for open space purposes is considered reasonable on these grounds.

The extent of open space is based on the final Indicative Layout Plan prepared by the Department of Planning and Infrastructure (now Department of Planning and Environment)

For the Liverpool Precincts, Table 4.1 sets out the how the required amount of open space land was achieved.

**Table 4.1 Proposed provision of district and local open space – Liverpool Precincts**

| Open space | Area (ha) |
|---|---|
| Land to be acquired | 104.84 |
| Land dedicated from the NSW Government (Office of Strategic Lands) | 5.67 |
| Land currently owned or managed by Liverpool City Council | 13.50 |
| Total open space to be provided in Liverpool Precincts | 124.01 |
| Total population in Liverpool Precincts (persons) | 49,686 |
| Open space provision rate (ha/1,000 persons) | 2.5 |

Source: Department of Planning and Infrastructure (now Department of Planning and Environment)

Table 4.2 provides a breakdown of this open space according to type.

**Table 4.2 Proposed provision of district and local open space – Liverpool Precincts**

| Open space type | Acquisition land area (ha) | Dedication land area (ha) | Total open space (ha) |
|---|---|---|---|
| Local passive open space | 36.16 | | 36.16 |
| Local sporting fields (active recreation) | 26.52 | 9.70 (Craik Park)<br>5.67 (NSW Govt. dedication) | 36.22 |
| District passive open space | 33.09 | 3.80 (Council land) | 42.56 |
| District sporting fields (active recreation) | 9.07 | | 9.07 |
| Total open space | 104.84 | 19.17 | 124.01 |

Source: Department of Planning and Infrastructure (now Department of Planning and Environment)

The data in Table 4.1 show a weighting toward the provision of passive rather than active open space. The high percentage of passive open space arises in part because of the extensive creek networks that traverse the Liverpool Precincts.

The above land also does not include:

- Regional active open space available in Western Sydney Parklands;
- Riparian and other conservation land such as bushland;
- Open space under transmission lines; and
- Playing fields within school sites.

The costs associated with open space land and works will be apportioned solely to new residential development. No contributions for Liverpool Precincts open space facilities will be required of non-residential development as the need for the facilities has been based on the anticipated residential development only.

## Recreation facilities requirements

The facilities described in Table 4.3 (on the following pages) have been determined in the Social Infrastructure Assessment as being required to meet the needs of expected development in the Austral and Leppington North Precincts, and in some cases the wider Growth Centre catchment.

Some of the facilities are located in the Camden LGA portion of the Leppington North Precinct and are therefore not included in the Works Schedules that comprise Part 5 of this Plan. The full list of Austral and Leppington North Precincts' requirements is shown for completeness.

**Table 4.3 Recreation facilities requirements**

| Facility | Size | Description | Provision | Provision in Liverpool Precincts |
|---|---|---|---|---|
| Local passive parks | Min. 0.2ha up to 0.5ha | Local parks should have a range of play spaces and opportunities and cater to older children and young people as well as the traditional playground for young children. Grassed area for ball games, seats, shelter. May contain practice wall, fitness equipment, other elements. | Within 400-500m walking distance of 90% of dwellings | Many dispersed throughout the Precinct mainly focused along the riparian corridors but generally well distributed around the area |
| District (key suburb) parks | Min. 3ha | 'Something for everyone', family parks. Includes a combination of outdoor courts (basketball, netball), skate park, BMX track, shared pathways, children's play equipment, outdoor fitness equipment, performance space, specialised recreation facilities, water feature, picnic / barbecue facilities, unleashed dog exercise area. | 6-7 parks | 7 concentrations of district passive recreation facilities sized between 3 and 16 hectares |
| Children's playgrounds (0-4years) | Min. 0.3ha for standalone playgrounds | Co-located with parks, sportsgrounds, courts, schools, community facilities, conservation areas. Regional, district, local hierarchy in terms of play equipment and range of experiences.<br>Each play area should offer a different experience. Include road safety bike track at regional playground. Include children's bike paths in district and regional playgrounds.<br>Can be co-located with playspaces for 5 to 12 year olds – within sight distance for carers but physically separated. Fencing if adjacent to water, road, steep slope. Seating, shade, water provided. | 11 playgrounds | 18 playgrounds or playspaces to be provided on local and district passive parks |
| Play spaces (5 to 12 year olds) | Min. 0.3ha for standalone playgrounds. Where co-located the space may be reduced. | Allows for more independent play, skill development and cognitive development. However they still require adult supervision. More challenging equipment These may include bouldering features, climbing areas, 'learn to' cycleways through to cycle obstacle course, skate facility, BMX/mountain bike jumps and tracks. These areas could be co-located with children's playgrounds, school or community facilities for supervision and convenience of use by carers. | 13 play spaces | See above |

| Facility | Size | Description | Provision | Provision in Liverpool Precincts |
|---|---|---|---|---|
| Local sportsground | Min. 4ha (ideally 5ha) | 1 double field per 5,000 people. To accommodate demand for local sport and recreation training and competition. Rather than a series of single fields facilities are grouped to provide economies of scale for infrastructure. To be located close to schools. Inclusions : – 2 multi-purpose rectangular fields or 1-2 full-sized cricket/AFL ovals (plus practice nets) – 2 tennis / netball courts – 2 half-court basketball courts, or 2 multi-purpose courts – Lights for training – Amenities with change rooms, canteen, meeting room – Parking co-located with a playground, school, community facility, play space. | 8 double playing fields or 20 single fields. | 6 additional local sportsgrounds to complement an existing sportsground at Craik Park |
| District sportsground | Min. 6ha up to 10ha | The local sports park identified above may be expanded to incorporate one of the proposed district grounds dependent on location and access. Requirements – To be located near public transport routes, no further than 2 km from all dwellings – To be co-located, where possible, with other commercial, community and recreation space in neighbourhood activity hub – Provide for district standard adult competitions and training or junior regional or state school championships. – Amenity buildings, parking, storage core inclusions – Located on land without flooding or transmission line constraints. Given the timeframe before the population threshold warrants a district standard facility. The final mix of courts and fields will require community consultation and council input based on most recent open space planning principles and research. Inclusions: – 4 multi-purpose rectangular fields, parking and landscaped buffer – No flooding or transmission line restrictions – Higher quality fields than local – Maybe combined with playground, netball training courts or multi-purpose tennis/basketball/netball courts. Add practice nets if cricket wickets – May include lawn bowling club or similar. | 1 complex of four playing fields | 1 complex of four playing fields on a new 9.1ha park located between Ninth and Tenth Avenues |

Source: Social Infrastructure Assessment, pages 79-84

### Regional open space and recreation facilities requirements

The Leppington railway station will be located just outside the southern boundary of the Liverpool Precincts in the surrounding Major Centre. Leppington Major Centre is the only major centre to be developed in the entire South West Growth Centre, and will include some of the land at the southern edge of the Liverpool Precincts. This centre is being designed to serve a user catchment of around 300,000 residents.

Associated with this centre and located within the Liverpool LGA, the Regional Indoor Sports and Aquatic Centre is proposed to service the population of the Liverpool Precincts and beyond. Details of this facility are included in clause 4.3 Community and Cultural Facilities.

Other regional open space demands are expected to be met by the Western Sydney Parklands, which adjoin the Austral and Leppington North Precincts to the east. It is expected that the embellishment of the Parklands will be carried out in the manner of other regional parks in the Sydney region (e.g. Centennial Park in the Sydney City LGA).

The Growth Centre catchment, equivalent in scale to Canberra, will require substantial recreation facilities to meet the regional demand. Apart from the Aquatic Centre, the planning for regional facilities also includes a regional stadium. The Western Sydney Parklands Trust has prepared an options paper in relation to the stadium and envisages that it will be located in the Western Sydney Parklands.10

This Plan does not require contributions toward a stadium or any embellishments in the Western Sydney Parklands.

## How are the contributions calculated?

Contributions will be collected only from residential development toward open space and recreation facilities identified under this Plan.

Monetary contributions are calculated on a per person or per resident basis, then factored up to a per lot or per dwelling amount.

The monetary contribution per person in a development containing residential dwellings or lots (whether or not that development also comprises non-residential floor space) is calculated as follows:

$$\text{Contribution per resident (\$)} = \sum \frac{(\$INF)}{P}$$

Where:

$INF = the estimated $ cost - or if the facility is existing, the indexed, completed cost - of providing each of the open space and recreation facilities (refer Part 5 – Works Schedule).

P = the estimated resident population (in persons) that will demand each facility - that is, the expected net additional population of the Liverpool Precincts (refer Table 3.5)

The monetary contribution for different residential development types is determined by multiplying the contribution per person by the estimated increase in population as a result of the development and using the assumed occupancy rates included in clause 3.3.5 of this Plan.

For convenience, these rates are reproduced in Table 4.4.

[10] The *Western Sydney Parklands Trust Plan of Management* identifies a proposal for a regional sporting hub in the southern end of the Western Sydney Parklands, in the vicinity of the Austral and Leppington North Precincts, subject to funding.

**Table 4.4 Assumed residential development occupancy rates**

| Development type | Occupancy rate |
|---|---|
| Subdivided lots | 3.4 persons per lot |
| Detached dwelling, detached dual occupancy (each dwelling) | 3.4 persons per dwelling |
| Semi-detached, town house, terrace, attached dual occupancy (each dwelling) | 2.6 persons per dwelling |
| Flat, unit, apartment, secondary dwellings | 1.8 persons per dwelling |
| Seniors living dwellings | 1.5 persons per dwelling |

## 4.3 Community and cultural facilities

### What is the relationship between the expected types of development and the demand for additional public facilities?

The requirements for community and cultural facilities as a result of the expected development of the Precinct are documented in the Social Infrastructure Assessment.

The following is summary of the information and approach used to arrive at the community and cultural facilities requirements of the Precinct.

#### Existing provision

There are very limited community and cultural facilities accessible to the current residents of the Liverpool Precincts. They include two (2) schools and three (3) child care centres, three (3) places of worship and two (2) seniors living developments11.

Other facilities are located further afield, including in the Camden LGA and surrounding suburbs of Liverpool LGA. District level facilities are located in the newer suburbs further east around Horningsea Park and further south in Camden LGA, and have been designed to meet the needs of incremental urban growth in those locations, rather than any growth envisaged in the Austral and Leppington North Precincts.

The limited extent of provision is consistent with the area's small population and semi-rural character.[12]

#### Principles for sustainable community infrastructure

Principles for the provision of sustainable community facilities infrastructure described in the Social Infrastructure Assessment and that have guided the selection of infrastructure items included in this Plan include the following:

- Facilities should be provided in an efficient, timely and co-ordinated way to support the pattern of development; ensuring that services are available to residents as early as possible and they are not disadvantaged through delays in delivery.
- Efficient use of limited resources by designing facilities to be multipurpose, co-located with other facilities and able to accommodate shared and multiple use arrangements.
- Cluster related facilities and services to promote civic identity, safety and focal points for the community.
- Ensure that facilities, services and open space are accessible by public transport and located to maximise access for pedestrians and cyclists.
- Ensure flexibility in the design and use of facilities, so they can respond and adapt as needs change. Avoid arrangements for single uses or specific target groups that may quickly become outdated.
- Promote equitable access for all sections of the population, through the distribution, design and management (including cost) of facilities.
- Provide environmentally and economically sustainable buildings.
- Ensure viable levels of resourcing of facilities and services, both capital and recurrent funding.
- Promote innovation and creativity between agencies in services delivery and integration
- Develop sustainable ownership, governance, management and maintenance arrangements for facilities.13

[11] Social Infrastructure Assessment, map page 18
[12] Social Infrastructure Assessment, page 16
[13] Social Infrastructure Assessment, Section 3.2

## Community facilities demand assessment based on forecast demographics

The anticipated size and characteristics of the resident population in the Liverpool Precincts is discussed in Part 3 of this Plan.

Various standards of provision for local and district community facilities have been adopted by the Department of Planning and Infrastructure, Camden Council and Liverpool City Council. The standards have been used as a basis for determining facility needs in the Austral and Leppington North Precincts as a whole.

A summary of these standards is included in Table 4.5.

**Table 4.5 Comparison of community facility provision standards**

| Facility type | Department of Planning & Infrastructure / Growth Centres Commission standard | Camden Council standard | Liverpool City Council standard |
|---|---|---|---|
| Libraries<br>- Branch<br>- District | 1 branch facility for each 33,000 persons<br>1 district facility for each 40,000 persons | 39 square metres per 1,000 persons + 20% circulation space | 42 square metres per 1,000 persons |
| Multi-purpose community centre in smaller activity centre | 1 centre for each 6,000 persons<br>Each centre with a size of 2,000-2,500 square metres | 42 square metres per 1,000 persons<br>2.5 x floor area for land component | Indicative 1 centre for each 10,000 people, with an average size of 600 square metres for each centre<br>To be located in activity centres with shops, schools etc.<br>Facilities are to provide flexible multipurpose spaces and spaces for outreach services.<br>Smaller 600m$^2$ facilities contribute to the overall level of provision of 60- 85m$^2$ per 1,000 people |
| Multipurpose community centres in larger activity centre | 1 centre for each 20,000 persons<br>1 community service centre for each 60,000 persons | 22 square metres per 1,000 persons<br>2.5 x floor area for land component | Indicative 1 centre for each 60,000 persons, with a built area of about 1,500 square metres<br>To be located in larger activity centres and commercial and transport hubs to provide flexible multipurpose spaces and provide a base for organisations and the delivery of services<br>Larger 1,500m$^2$ facilities contribute to the overall level of provision of 60- 85m$^2$ per 1,000 people |
| Youth Centre | 1 centre for each 20,000 persons | 89 square metres per 1,000 persons + outdoor space | No longer provided by Council as a stand-alone purpose built facility. The size and layout of multipurpose community facilities now provide appropriate and designated spaces for delivering youth services, programs and activities.<br>Outdoor spaces, like half-court basketball courts and skate parks, are now provided as standard for informal activities and programs for young people. |

Sources: Social Infrastructure Assessment Table 8.1

## Community and cultural facility requirements

This Plan proposes to provide primarily for a residential population in a suburban setting. Regional level facilities are proposed to be provided in the Leppington Major Centre in Camden LGA. The community and cultural facilities proposed in the Liverpool Precincts have either a local or district service catchment. This Plan nevertheless proposes that development contribute towards regional facilities that are located in Liverpool LGA, by providing its reasonable share towards the Regional Aquatic Centre including associated public art.

One of the four (4) proposed multi-purpose community centres has been scaled-up to service a district scale population of approximately 40,000 residents, which approximates the catchment of the Liverpool Precincts. The other three (3) centres will provide for a neighbourhood catchment of approximately 10,000 residents each. The cost of these four facilities are shared equally across the entire Liverpool Precincts incoming residential population.

## Proposed community and cultural facility provision

Regional infrastructure required on the northern fringe of the Leppington Major Centre and provided in the Liverpool Precincts, and serving a surrounding population of around 120,000, includes the Regional Indoor Sports and Aquatic Centre. This centre is to be located on a 5 hectare site, including a 3 hectare facility and outdoor elements and 2 hectares for parking and landscaping. Building components include the following:

- Aquatic facilities include an indoor 50 metre x 10 lane Olympic pool, training pool, 25 metre leisure pool, heated teaching pool; children's play pool / wave pool / whirl pool/ water slides, diving pool.
- Indoor Sports to include 4 indoor sports courts each large enough for netball
- Fitness centre incorporating weights, aerobics/Dance/Yoga/Pilates activity room with wooden floor, spin cycle room,
- Wellness / health services – physiotherapy, nutrition etc.
- Spa, sauna, steam room
- Retractable seating for 1,500 this would increase to 3,500 in stage 2.
- General amenity, kiosk and café, equipment sales, change, lockers, toilets, crèche facilities for users
- Outdoor elements - may include water play park, BMX, skate, sports oval and netball, tennis, basketball courts. May be integrated with a youth recreation facility.

Local and district level infrastructure includes the following:

- A multi-purpose community centre in Austral of 1,500 square metres floor area, including a variety of flexible multi-purpose spaces suited to a range of community activities and programs. Also, the building is proposed to include office and service delivery areas for human services and spaces suitable for young people and older people.
- Three (3) multi-purpose community centres in other neighborhood centres in the Liverpool Precincts, each with an approximate building area of 750 square metres.

This Plan includes provision for the land and works associated with these facilities, but acknowledges that with respect to the Regional Sports and Aquatic Centre, the demand is spread over a large catchment (120,000 residents). This Plan therefore authorises contributions that are commensurate with the Liverpool Precincts' level of demand for the regional facilities, i.e.:

49,686 persons / 120,000 persons = 41.4%,

Or an apportionment factor of 0.42.

Council will seek funding from other sources to meet the balance of the cost of the facility, including development contributions from future developments in other Growth Centre Precincts situated within the Liverpool LGA.

### Location and staging matters

Facilities should generally be co-located with or adjacent to open space in activity centres. There are multiple ways to arrange the spaces and further planning should concentrate on combination and co-location options.

A number of sites have been identified in the ILP for these purposes but there is a significant amount of planning and acquisition of land required even before preliminary designs can be prepared.

The design of facilities will depend upon a variety of factors, including the availability of funds, the aspirations of the responsible council, and evolving best practice. Detailed needs and feasibility assessments need to be undertaken as the population of the area grows.

Existing higher order facilities in the surrounding region (including those in both the Liverpool and Camden LGAs) offer some opportunity to meet interim needs either in their current form or through expansion (for example, the Casula Powerhouse).

The general principle will be that the local and district community facilities will not be built until the surrounding population that each services has reached a threshold of 5,000 residents for the local centres and 30,000 for the larger district centre. Should the demand for two facilities require the facility to be constructed within a similar time-frame, Council must necessarily prioritise these so to manage the delivery as efficiently as possible within the constraints of funding and resources.

## How are the contributions calculated?

Contributions will be collected from residential development toward community and cultural facilities identified under this Plan.

Monetary contributions are calculated on a per person or per resident basis, then factored up to a per lot or per dwelling amount.

The monetary contribution per person in a development containing residential dwellings or lots (whether or not that development also comprises non-residential floor space) is calculated as follows:

$$\text{Contribution per resident (\$)} = \sum \frac{(\$INF)}{P}$$

Where:

$INF = the estimated $ cost - or if the facility is existing, the indexed, completed cost - of providing each of the community and cultural facilities (refer Part 5 – Works Schedule)14

P = the estimated resident population (in persons) that will demand each facility - that is, the expected net additional population of the Liverpool Precincts (refer Table 3.5)

The monetary contribution for different residential development types is determined by multiplying the contribution per person by the estimated increase in population as a result of the development and using the assumed occupancy rates included in clause 3.3.5 of this Plan.

For convenience, these rates are reproduced in Table 4.6.

**Table 4.6 Assumed residential development occupancy rates**

| Development type | Occupancy rate |
|---|---|
| Subdivided lots | 3.4 persons per lot |
| Detached dwelling, detached dual occupancy (each dwelling) | 3.4 persons per dwelling |
| Semi-detached, town house, terrace, attached dual occupancy (each dwelling) | 2.6 persons per dwelling |
| Flat, unit, apartment, secondary dwellings | 1.8 persons per dwelling |
| Seniors living dwellings | 1.5 persons per dwelling |

[14] In the case of the regional facility, the cost is the cost fairly apportioned to the Liverpool Precincts' expected population - that is, 41% of the total cost (see section on 'Community and cultural facility requirements' above)

## 4.4 Water cycle management facilities

### What is the relationship between the expected types of development and the demand for additional public facilities?

Stormwater runoff in the Austral and Leppington North Precincts is proposed to be managed through a comprehensive Water Sensitive Urban Design (WSUD) approach.

Informed by a range of studies[15], the report *Austral and Leppington North Precincts Water Cycle Management WSUD Report* (the WSUD Strategy) prepared by Cardno Pty. Ltd. establishes the framework for the management of stormwater quantity and quality related to the expected urban development of the Liverpool Precincts.

The WSUD Strategy acknowledges that development of an area:

- generates demand for water supply;
- requires management of wastewater as well as stormwater; and
- increases the area of impermeable surfaces and so exacerbates potential flooding issues, impacts on the quality of stormwater and potentially affects riparian corridors.

These water related issues are locality based and caused directly and solely by the development activity and so should be ameliorated by that same development activity.

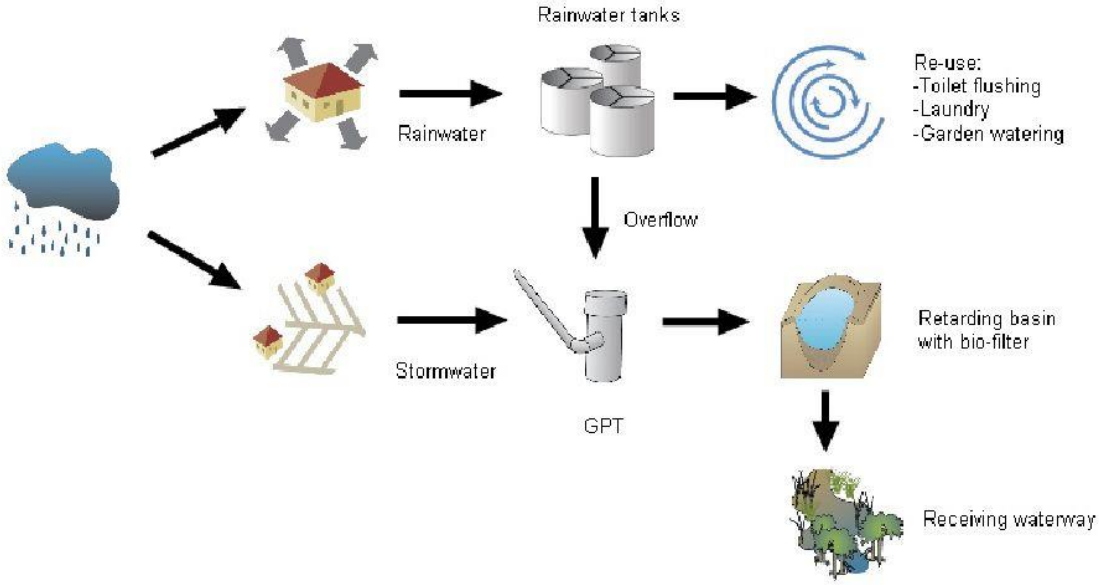
To minimise the potential cost of the stormwater management scheme, the WSUD Strategy investigated the following:

- harvesting of rainwater for toilet, laundry and garden use in residential lots; and
- treatment measures to improve stormwater quality, promote infiltration and attenuate run-off to emulate a more natural rainfall/ runoff regime.

Figure 4.1 (over page) is a schematic describing the approach taken with the WSUD strategy.

The schematic illustrates that 'rainwater' works will be required in conjunction with development consents for individual dwellings, while other ('stormwater') works relate to the broader catchment and so will be funded through development contributions obtained under this Plan.

[15] Cardno (2011), *Biodiversity Conservation Assessment*, Draft Final Report, prepared for the Department of Planning, January.
Cardno (2011), *Riparian Corridor and Flooding Assessment*, Draft Final Report, prepared for the Department of Planning, February.
GeoEnviro Consulting (2010), *Geotechnical, Salinity and Acid Sulfate Soil Investigation*, prepared for the Department of Planning, December.
JBS Environmental (2010), *Preliminary Environmental Site Assessment*, Final report, prepared for the Department of Planning, December.
Growth Centres Commission (2006), *Growth Centres Development Code*, November.




Source: Austral and Leppington North Precincts Water Cycle Management WSUD Report, page 17

Figure 4.1 Concept Stormwater Treatment Train

The objectives of the WSUD Strategy include:

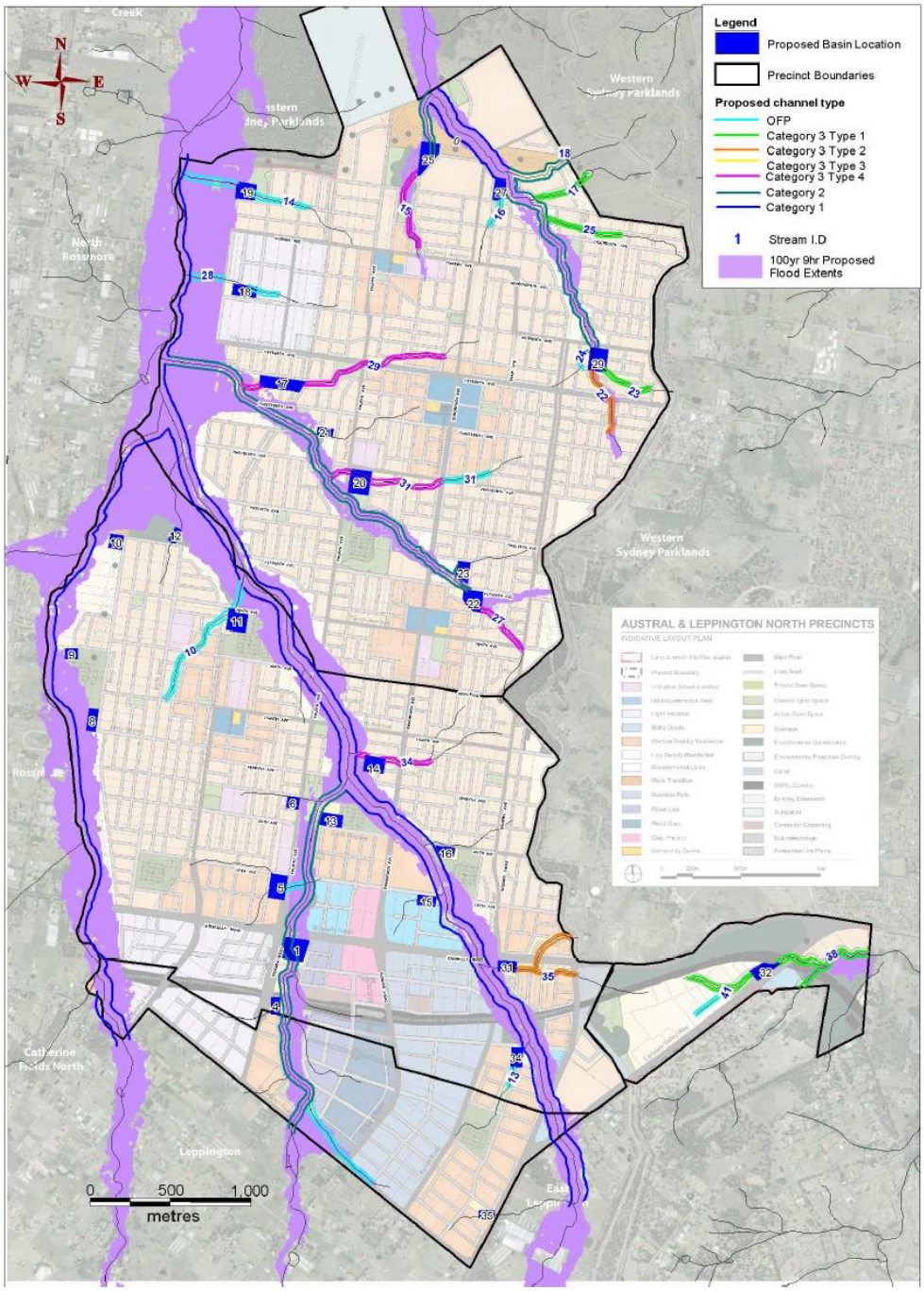
- Collection of rainwater from roofs to reduce runoff volumes particularly for small rainfall events;
- To reduce as far as possible the 2 year Annual Recurrence Interval (ARI) and 100 year ARI peak flows downstream of the proposed development areas to no greater than peak flows under existing conditions; and
- Reduction of stormwater pollutants according to best management practices.[16]

Features of the WSUD Strategy to achieve the above objectives include the following:

- Rainwater tanks to capture initial / small volume run-off.
- Reservation and dedication of land in drainage corridors to enable construction of drainage facilities and effective ongoing management of those facilities.
- Implementation of a series of retarding basins to manage stormwater flows. The basins are generally positioned adjacent to, but off-line from, the Category 1 and 2 streams that traverse the Austral and Leppington North Precincts. In most cases the basins are also outside the areas affected by the 100 year ARI flood so as to avoid impacting on these flood extents and ensure that the basins effectively detain additional flows.
- Implementation of a combination of measures in conjunction with the retarding basins to manage the quality stormwater runoff, including gross pollutant traps, bio-filters, wetlands, and/or open water ponds.
- Integration of water management facilities with open space and recreation areas where appropriate.

The WSUD Strategy identified a series of stormwater basins and channels that, with other measures, would be required to be implemented on land across both Precincts to achieve the above objectives. The drainage infrastructure described in the WSUD Strategy includes trunk infrastructure to support the development. Councils are responsible for ensuring trunk infrastructure that meets the needs of the entire development is in place, while land developers are required through conditions of consent to provide reticulation works within the development.

[16] WSUD Strategy, page 2

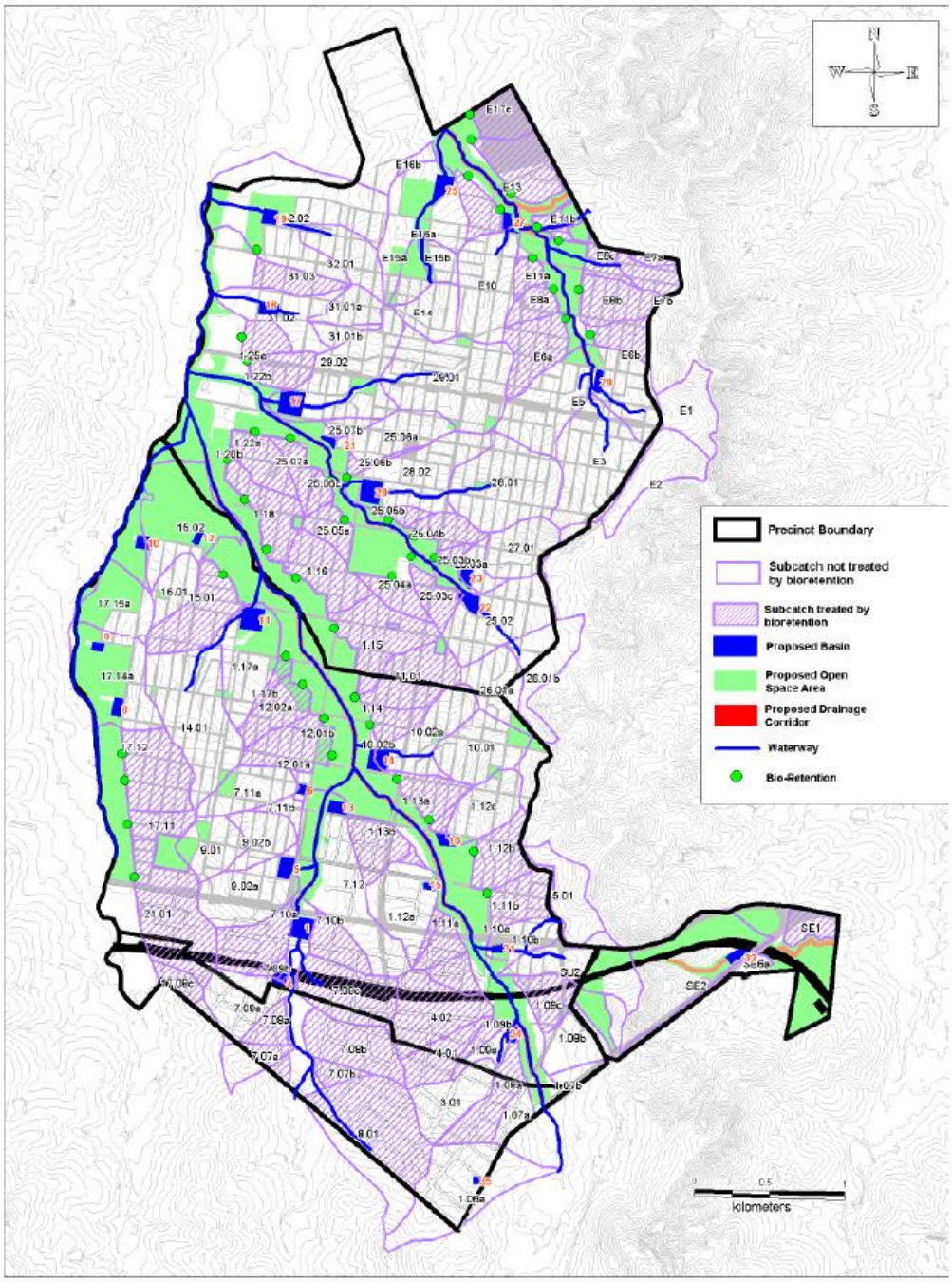



Source: Austral and Leppington North Precincts Water Cycle Management WSUD Report

Figure 4.2 Proposed channels and basins - Austral and Leppington North Precincts

The locations of proposed trunk infrastructure that comprises stormwater channels and basins for both Precincts are shown in Figure 4.2.

Following exhibition of the ILP, the need to provide water quality management for sub-catchments that do not drain through detention basins was identified.




*Note – Where bioretention locations are not shown, the strategy allows for biofiltration within the road reserve in the form of raingardens and street trees.*

Figure 4.3 Bio-retention Locations for sub-catchments not draining to basins

The locations of proposed bio-retention locations are shown in Figure 4.3.

More detail on the basins and channels, the cost of which is to be met by contributions collected under this Plan, are included in the maps and schedules included in Part 5. Council will however encourage the provision of water cycle management works identified in this Plan as Works In Kind in conjunction with the civil works undertaken as part of land subdivision.

A range of 'non-trunk' reticulation works not addressed by this Plan will also be required to be undertaken directly by the developer as conditions of consent under section 80A(1)(f) of the EP&A Act. The facilities may include lot-

scale on-site detention (OSD) basins, rainwater tanks, construction of kerb, gutter and piping in local roads, installation of drainage pits and grates, and pipe connections to the trunk drainage network.

## How are the contributions calculated?

Contributions are determined on a Net Developable Area basis.

The monetary contribution per hectare is calculated as follows:

$$\text{Contribution per hectare of net developable land (\$)} = \sum \frac{(\$INF)}{NDA}$$

Where:

$INF = the estimated cost, or if the facility has been completed, the indexed actual cost, of providing each of the water cycle management infrastructure items in the area to which this Plan applies (refer Part 5 – Works Schedule)

NDA = the total area of equivalent net developable land (in hectares) that will generate demand for facilities – refer to Table 3.3 of this Plan

To determine the total contribution that would apply to a proposed development, multiply the contribution rate by the amount of net developable land (in hectares) on the site the subject of the proposed development.

## 4.5 Transport management facilities

### What is the relationship between the expected types of development and the demand for additional public facilities?

Occupants of expected development in the Liverpool Precincts will utilise a transport network comprising:

- facilities for private vehicles, including roads and intersections;
- facilities for public transport, including rail and bus facilities focused on the planned Leppington railway station; and
- facilities for walking and cycling.

The existing transport network, including the network for pedestrians and cyclists, has been planned to serve existing and approved developments (that is, predominantly rural residential developments) in the area, and not the future development envisaged for the area.

The ILP for the Austral and Leppington North Precincts and the *Austral and Leppington North (ALN) Precincts Transport Assessment* prepared by AECOM (the Transport Assessment) together identify a range of transport infrastructure works that will be required to mitigate the impacts and otherwise accommodate the expected development.

Details of:

- the assumptions of expected land use and development;
- the methodology used to determine the need for transport facilities attributable to the expected development in the Austral and Leppington North Precincts; and
- the scope and specification of those facilities,

are contained in the Transport Assessment.

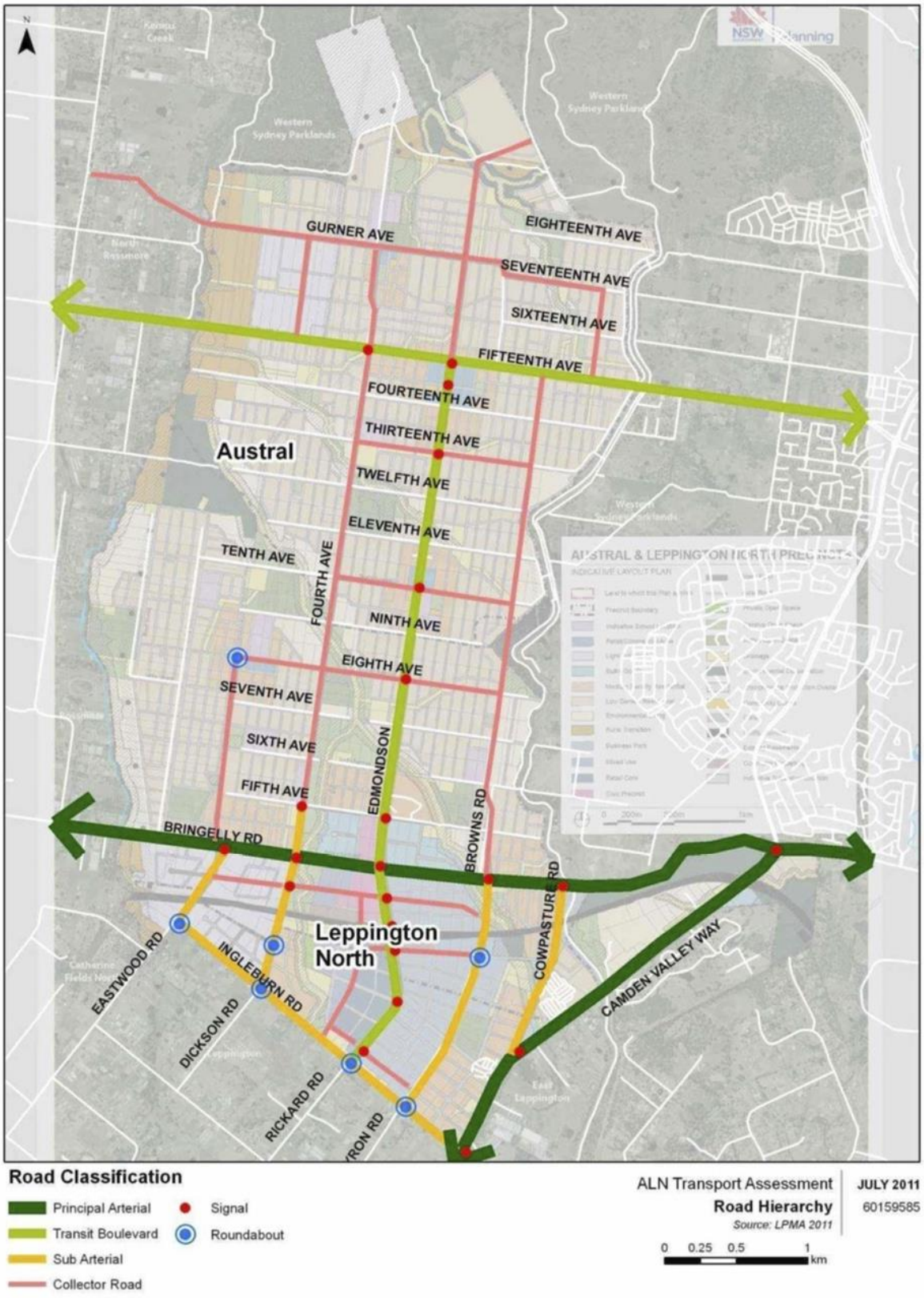
The following is a summary of the approach utilised in the Transport Assessment for planning for the transport needs in the Liverpool Precincts.

#### Proposed road and intersection hierarchy

The proposed road network complements a broader hierarchy envisaged for the South West Growth Centre.

The proposed hierarchy comprises 'principal arterial', 'transit boulevard', 'sub arterial' and 'collector' roads. These will connect to a network of existing and new roads in adjoining Growth Centre Precincts. Following finalisation of the ILP a road safety assessment of the proposed street network was undertaken by Council. As a result additional roundabouts were found necessary and are included in the contributions plan.

The proposed road hierarchy and intersection treatments for the future development of the Austral and Leppington North Precincts are shown in Figure 4.4.




Source: Transport Assessment, Figure 13

Figure 4.4 Proposed road hierarchy and intersection treatments – Austral and Leppington North Precincts

## Proposed walking and cycling facilities

Providing viable alternatives to the private car for journeys with destinations both within and outside the development area is viewed as essential to encouraging sustainable development. A comprehensive bicycle network is proposed for both the Austral and Leppington North Precincts, which will link the centres, schools, transport nodes and various residential neighbourhoods with key strategic routes and onward destinations.

The proposed network will include a mixture of dedicated bicycle facilities that will take the form of:

- Off-Road (Shared Path);
- On-Road (Cycle Lane); and
- On-Road (Signed Route).

All proposed roads throughout the Austral and Leppington North Precincts will have dedicated pedestrian footpaths. Footpaths will be provided in conjunction with the adjacent road project.

Increased width of footway allowed for to allowed for – i.e. 1.2 to 2.5.

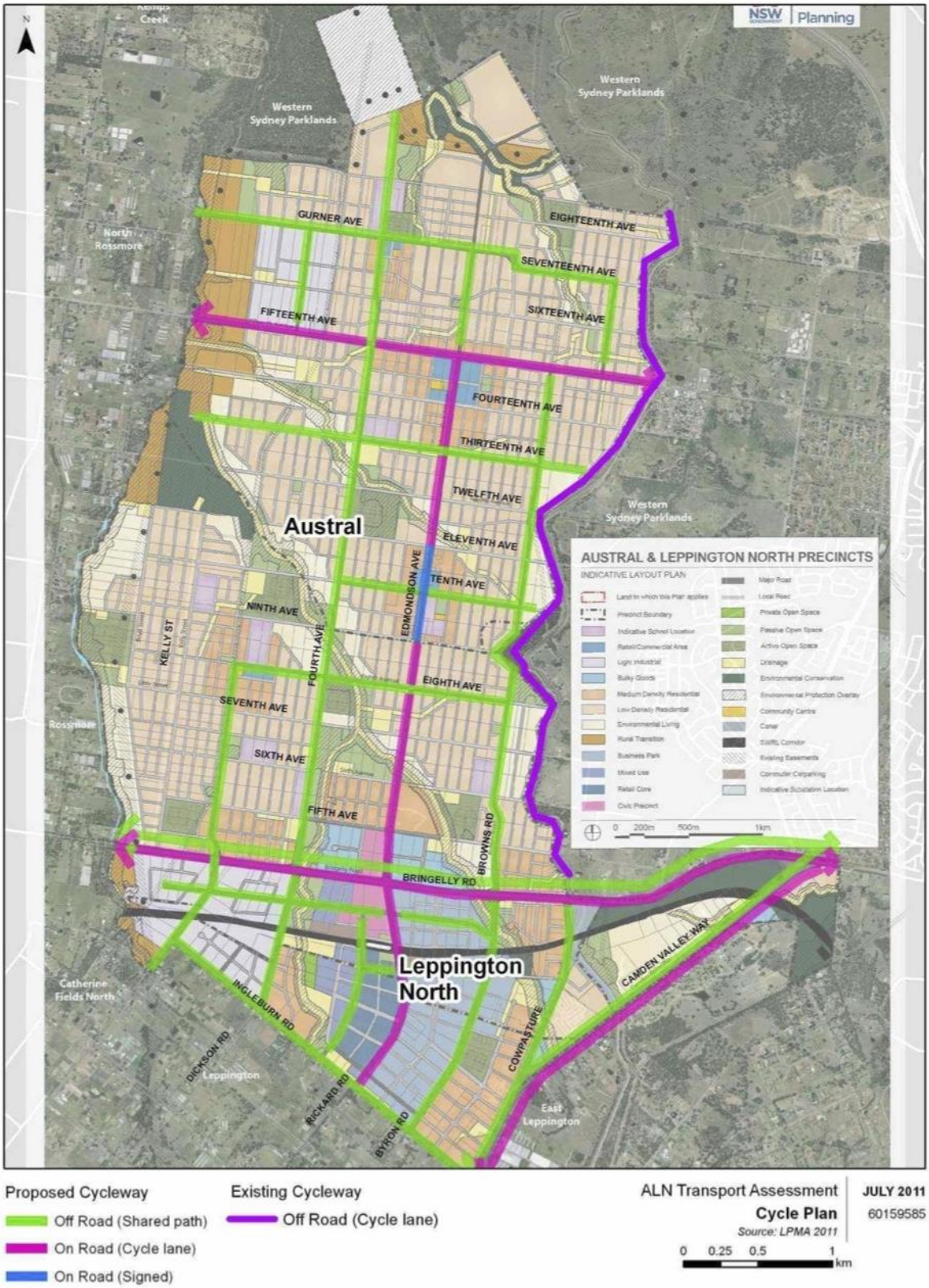
Leppington North Precinct will be a focus for walking and cycling trips because of the location of the Leppington Major Centre but there is proposed to be a similar level of provision in the Austral Precinct. In addition, an off-road cycleway is proposed to be provided along the edge of the Western Sydney Parklands. This facility to be funded from sources apart from development contributions.

Figure 4.5 shows the proposed walking and cycle network for Leppington North Precinct.

## Public transport facilities

The Austral and Leppington North Precincts are proposed to benefit from good public transport accessibility through the South West Rail Line and a comprehensive proposed bus network and bus servicing strategy linking key centres, transport nodes, schools, employment opportunities and residential areas.

The only public transport work addressed by this Plan is the proposed provision of bus shelters to serve bus routes throughout the Liverpool Precincts. All other public transport works, apart from the roads and intersections that will cater for buses and other general traffic and bus shelters, are not addressed by this Plan and will be delivered using funding and delivery mechanisms apart from development contributions.




Source: Transport Assessment, Figure 25

Figure 4.5 Proposed walkways and cycleways

## Funding and delivery dependent on road hierarchy

Some of the required transport works are to meet a regional demand that extends beyond the Liverpool Precincts boundary to the remainder of the South West Growth Centre.

The State Government has identified a number of works in the Liverpool Precincts that are intended to be provided through the State budget or through Special Infrastructure Contributions under the EP&A Act.17 The works include arterial road and public transport links as well as rail and bus passenger transport facilities (such as interchanges and bus shelters on roads to be funded via Special Infrastructure Contributions).

Figure 4.6 shows the major road infrastructure planned to be provided across both the Austral and Leppington North Precincts, including delineation of those roads that are intended to be funded via Special Infrastructure Contributions.

Special Infrastructure Contributions will be imposed via conditions of consent on developments in the Precinct. More details on the applicability of Special Infrastructure Contributions can be found by accessing the Department of Planning and Environment's website.

Planned higher order roads for the Precinct not covered by State Government funding are to be provided by councils. They are usually funded through land or monetary development contributions but are often constructed as Works In Kind by the developer (that is, works carried out instead of, or as payment towards, a development contribution). Such roads can be constructed by the developer through a Works In Kind agreement at the time of subdivision and dedicated to the local council as public roads once constructed.

Collector roads may be delivered by a combination of development contributions and direct provision by developers as a condition of development consent. Usually, where private development lots front onto a collector road then that road is usually provided by the developer as part of the subdivision works. On existing streets, half frontages to open space and drainage will be funded by contributions.

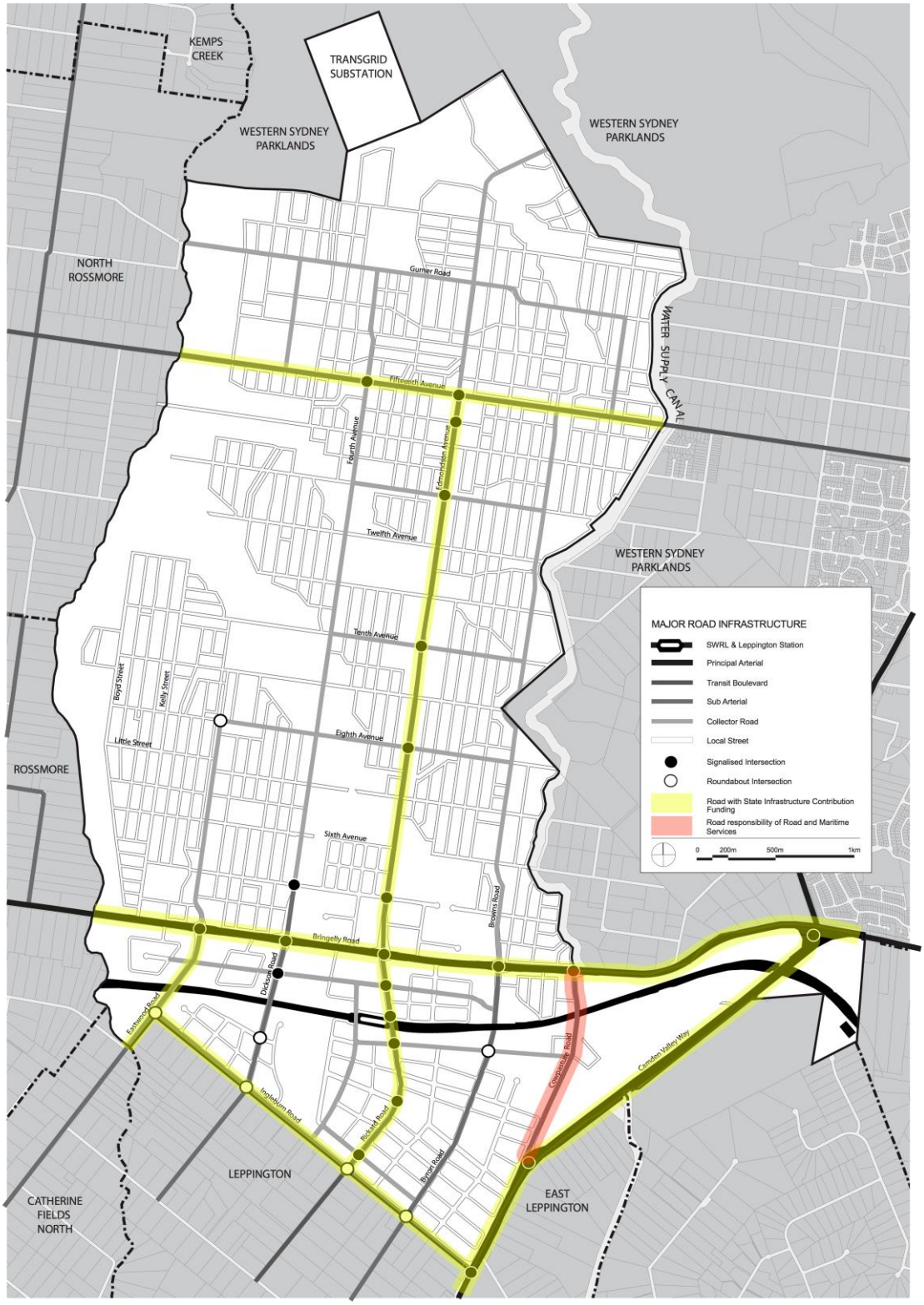
New local roads are also usually provided by developers as, in most cases, they have private lots fronting onto them and are needed for the development to function safely. In this Plan there are a number of works defined as 'new road half-width' and 'upgrade road half-width'. These works relate to circumstances where the 'half-road' does not adjoin private land and is therefore not able to be provided by that development. Roads in front of public parks fall into this category.

Roads that do not or will not have development fronting them - such as bridges and crossings of open space - are often funded through development contributions. In some cases development will front a road that is half on the adjoining property and in turn fronts open space. In this situation it would be difficult to construct the road without contributions.

For public schools only two frontages are expected to be funded by the school. In some cases frontages to a school site on an existing street will be funded by contributions.

The selection of some facilities for inclusion in this Plan has also been based on the land ownership arrangement given that there may be difficulty in developers providing key transport links through parts of the Liverpool Precincts where the ownership is fragmented. The integrated use of the different implementation mechanisms cited above will result in the transport infrastructure that is required as a consequence of the expected development in the Liverpool Precincts being provided.

[17] Environmental Planning and Assessment (Special Infrastructure Contribution - Western Sydney Growth Areas) Determination 2011




Source: Department of Planning and Infrastructure

Figure 4.6 Planned major road infrastructure - Austral and Leppington North Precincts

### Infrastructure works identified in this Plan

Works the subject of a development contribution condition that are addressed under this Plan include the following and a detailed list is included in the Works Schedules in Part 5 of this Plan:

- Approximately (15) kilometres of new roads or road upgrades for full or half road widths as required;
- Thirty nine (39) road or pedestrian crossings over creeks and seven (9) pedestrian crossings;
- Fifty (50) pedestrian crossings or thresholds;
- Four major intersection upgrades; and
- Forty-two (42) bus shelters.

## How are the contributions calculated?

Per trip versus per hectare of net developable land basis

The determination of reasonable contribution rates for transport facilities in development contributions plans is often based on the number of vehicle trips generated by development. Apportionment to the different classes of development (that is, residential, commercial, employment, etc.) of the costs of facilities that are determined on a per trip basis is then derived by calculating the degree to which the traffic generated by each land use class will use the different road links and intersections included in the contributions plan.

This Plan instead determines contributions for traffic and transport facilities on a net developable land basis.

This results in all types of developments making the same contribution (based on land area) toward facilities included in this Plan, regardless of the projected level of use of the facilities by each development class.

The net developable land area approach for determining contributions is considered reasonable for the Liverpool Precincts' transport management works on the basis of the limited knowledge of likely trip origins and destinations that was available at the time of the preparation of this Plan.

That is, a vehicle trip based contribution methodology relies on there being reasonably precise data on the different land use mix likely in the development area.

At the time this Plan was prepared, the land use mix and employment numbers attributable to the different non-residential land uses expected in the Precinct were assessed only at a strategic network level. In the absence of robust trip estimates segmented by land use, the levying of residential and employment development areas on a land area basis is considered reasonable.

### Formula

Contributions are determined on a Net Developable Area basis.

The monetary contribution per hectare is calculated as follows:

$$\text{Contribution per hectare of net developable land (\$)} = \frac{(\$INF)}{NDA}$$

Where:

$INF = the estimated cost, or if the facility has been completed, the indexed actual cost, of providing each of the transport management infrastructure items in the area to which this Plan applies (refer Part 5 – Works Schedule).

NDA = the total area of equivalent net developable land (in hectares) that will generate demand for each facility – refer to Table 3.3 of this Plan.

To determine the total contribution that would apply to a proposed development, multiply the contribution rate by the amount of equivalent net developable land (in hectares) on the site the subject of the proposed development.

## 4.6 Plan management and administration

### What is the relationship between the expected types of development and the demand for additional public facilities?

Councils incur significant costs in the preparation and administration of contributions plans.

Council staff are deployed to:

- prepare and review contributions plans;
- account for contributions receipts and expenditure; and
- co-ordinate the implementation of contributions plans and works, including involvement in negotiating Works In Kind and material public benefit agreements.

Consultant studies are also commissioned by Council from time to time in order to determine the value of land to be acquired, the design and cost of works, as well as to review the development and demand assumptions of the contributions plan. Council is also required to engage the services of legal professionals from time to time to assist it in the administration of this Plan.

As these costs arise directly as a result of the development in the Plan area, it is reasonable that the costs associated with preparing and administering this Plan be recouped through contributions from development.

Costs associated with the ongoing administration and management of the Plan will be levied on all applications that are required to pay a development contribution.

Costs included in this Plan for these purposes are determined are based on the recommended rate by IPART, being 1.5% of the cost of works.

### Calculation of contributions

Contributions will be collected from development toward Plan preparation and administration activities.

The monetary contribution per hectare of net developable land is calculated as follows:

$$\text{Contribution per hectare of net developable land (\$)} = \sum \frac{(\$INF)}{NDA}$$

Where:

$Admin = the estimated cost - or if study work has been completed, the indexed, completed cost - of providing Plan preparation and administration activities (refer Part 5 – Works Schedule)

NDA = the total area of equivalent net developable land (in hectares) of the area to which this Plan applies as shown in Table 3.3 of this Plan.

To determine the total contribution that would apply to a proposed development, multiply the contribution rate by the amount of equivalent net developable land (in hectares) on the site the subject of the proposed development.

# 5. Works Schedules and Map

## Works Schedules

The schedules contained in this section are extracted from the following MS Excel spread sheet:

Liverpool S94 Schedules June 2014.xls.XLSX

The spread sheet also contains details on the components of each facility, as well as the assumptions informing the calculation of costs included in this Part. Refer to the source spread sheet file for more information on works and land items included in this Plan.

## Infrastructure Map

The infrastructure referred to in the contributions plan is shown on the Austral Leppington North Infrastructure Map, which is a separate document. This map can be viewed at a large scale and shows all the infrastructure items on the one map in relation to property boundaries and the proposed local streets under the Growth Centres Development Control Plan (Liverpool Precincts).

Open space and recreation facilities

Land

| Item | Facility | Area (ha) | Cost |
|---|---|---|---|
| | Future Land Acquisition | | |
| LALP | Local passive open space facilities | 36.1578 | $48,637,281 |
| LALS | Local sporting field facilities | 26.5185 | $38,002,457 |
| LADP | District passive open space facilities | 33.0897 | $43,390,620 |
| LADS | District sporting field facilities | 9.0691 | $12,807,850 |
| | Subtotal | 104.8351 | $142,838,208 |
| | Land Acquisition Contingency | | $17,140,585 |
| | TOTAL ESSENTIAL OPEN SPACE INFRASTRUCTURE LAND ACQUISITION COSTS | 104.8351 | $159,978,793 |

Staging / Priority of infrastructure - when surrounding development proceeds.

LALP - Local Passive Open Space

| Item | Area (ha) | Acquisition Cost |
|---|---|---|
| LP2 | 1.6146 | $2,583,360 |
| LP4 | 0.0972 | $155,520 |
| LP5 | 1.8031 | $1,987,619 |
| LP6 | 0.5036 | $805,737 |
| LP7 | 0.6757 | $1,081,061 |
| LP8 | 2.3162 | $2,742,823 |
| LP10 | 1.3320 | $1,260,450 |
| LP11 | 1.4399 | $1,480,625 |
| LP12 | 1.2173 | $1,269,065 |
| LP13 | 0.9572 | $983,165 |
| LP16 | 0.6532 | $982,480 |
| LP17 | 0.6713 | $1,074,080 |
| LP22 | 1.2139 | $1,942,240 |
| LP25 | 0.9098 | $1,319,210 |
| LP26 | 0.1708 | $247,660 |
| LP27 | 0.4352 | $696,320 |
| LP28 | 0.6337 | $662,245 |
| LP29 | 1.3538 | $1,699,745 |
| LP30 | 0.4333 | $450,340 |
| LP31 | 0.5520 | $592,890 |
| LP32 | 2.1575 | $2,759,753 |
| LP33 | 0.5072 | $597,268 |
| LP34 | 0.3354 | $446,049 |
| LP35 | 0.8813 | $1,367,297 |
| LP39 | 0.5964 | $954,193 |
| LP40 | 0.5879 | $940,699 |
| LP44 | 0.5196 | $714,257 |
| LP45 | 2.1657 | $3,387,991 |
| LP46 | 0.2426 | $238,172 |
| LP49 | 0.5679 | $587,692 |
| LP50 | 0.4252 | $257,358 |
| LP51 | 0.3487 | $408,160 |
| LP52 | 0.1733 | $191,729 |
| LP53 | 0.3139 | $502,281 |
| LP55 | 0.5859 | $937,476 |

| Item | Area (ha) | Acquisition Cost |
|---|---|---|
| LP56 | 0.3316 | $530,520 |
| LP57 | 0.1351 | $57,961 |
| LP58 | 0.1913 | $306,001 |
| LP59 | 0.2575 | $412,044 |
| LP60 | 0.3275 | $524,012 |
| LP61 | 0.2725 | $435,942 |
| LP62 | 1.2146 | $1,943,344 |
| LP63 | 0.0325 | $52,070 |
| LP64 | 2.3271 | $3,723,351 |
| LP65 | 0.2558 | $409,265 |
| LP66 | 1.4202 | $1,935,761 |

LADP - District Passive Open Space

| Item | Area (ha) | Acquisition Cost |
|---|---|---|
| DP2 | 3.6531 | $3,637,770 |
| DP3 | 3.9971 | $5,649,530 |
| DP4 | 2.2378 | $2,909,860 |
| DP5 | 2.0379 | $2,309,715 |
| DP6 | 6.1467 | $7,956,615 |
| DP7 | 0.3658 | $237,880 |
| DP8 | 0.5594 | $895,040 |
| DP9 | 0.3295 | $527,200 |
| DP10 | 10.3433 | $14,254,430 |
| DP11 | 2.6598 | $4,086,315 |
| DP12 | 0.7593 | $926,265 |

LALS - Local Sporting Fields

| Item | Area (ha) | Acquisition Cost |
|---|---|---|
| LS1 | 5.7036 | $9,125,736 |
| LS4 | 6.1658 | $8,633,513 |
| LS8 | 2.6640 | $3,597,382 |
| LS9 | 11.9850 | $16,645,827 |

LADS - District Sporting Fields

| Item | Area (ha) | Acquisition Cost |
|---|---|---|
| DS1 | 9.0691 | $12,807,850 |

Works

| Item | Area (ha) | Cost | Project On Costs | Demolition Allowance | Total Cost |
|---|---|---|---|---|---|
| Local Passive Open Space embellishment | | | | | |
| LP2 | 1.6146 | $1,131,354 | $308,860 | $50,931 | $1,491,145 |
| LP4 | 0.0972 | $82,731 | $22,586 | $0 | $105,317 |
| LP5 | 1.8031 | $1,257,954 | $343,422 | $25,465 | $1,626,841 |
| LP6 | 0.5036 | $339,899 | $92,792 | $0 | $432,691 |
| LP7 | 0.6757 | $448,792 | $122,520 | In DC15 | $571,313 |
| LP8 | 2.3162 | $1,565,110 | $427,275 | $0 | $1,992,385 |
| LP10 | 1.3320 | $853,014 | $232,873 | $50,931 | $1,136,817 |
| LP11 | 1.4399 | $921,766 | $251,642 | $0 | $1,173,408 |

| Item | Area (ha) | Cost | Project On Costs | Demolition Allowance | Total Cost |
|---|---|---|---|---|---|
| LP12 | 1.2173 | $871,716 | $237,978 | $0 | $1,109,694 |
| LP13 | 0.9572 | $620,245 | $169,327 | $0 | $789,572 |
| LP16 | 0.6532 | $433,669 | $118,392 | $0 | $552,060 |
| LP17 | 0.6713 | $446,031 | $121,767 | $0 | $567,798 |
| LP22 | 1.2139 | $877,785 | $239,635 | $76,396 | $1,193,816 |
| LP25 | 0.9098 | $596,958 | $162,970 | $25,465 | $785,393 |
| LP26 | 0.1708 | $108,085 | $29,507 | $0 | $137,592 |
| LP27 | 0.4352 | $296,623 | $80,978 | $50,931 | $428,532 |
| LP28 | 0.6337 | $417,984 | $114,110 | $50,931 | $583,025 |
| LP29 | 1.3538 | $960,314 | $262,166 | $50,931 | $1,273,411 |
| LP30 | 0.4333 | $292,355 | $79,813 | In DC25 | $372,167 |
| LP31 | 0.5520 | $367,009 | $100,193 | In DC25 | $467,202 |
| LP32 | 2.1575 | $1,468,362 | $400,863 | $25,465 | $1,894,690 |
| LP33 | 0.5072 | $318,378 | $86,917 | | $405,295 |
| LP34 | 0.3354 | $209,664 | $57,238 | $0 | $266,902 |
| LP35 | 0.8813 | $666,132 | $181,854 | $0 | $847,986 |
| LP39 | 0.5964 | $398,615 | $108,822 | $0 | $507,437 |
| LP40 | 0.5879 | $393,278 | $107,365 | $25,465 | $526,108 |
| LP44 | 0.5196 | $350,018 | $95,555 | $0 | $445,573 |
| LP45 | 2.1657 | $1,390,807 | $379,690 | $0 | $1,770,497 |
| LP46 | 0.2426 | $151,659 | $41,403 | $0 | $193,063 |
| LP49 | 0.5679 | $376,064 | $102,665 | $25,465 | $504,195 |
| LP50 | 0.4252 | $263,095 | $71,825 | $0 | $334,920 |
| LP51 | 0.3487 | $239,766 | $65,456 | $25,465 | $330,687 |
| LP52 | 0.1733 | $108,446 | $29,606 | $0 | $138,051 |
| LP53 | 0.3139 | $219,878 | $60,027 | $0 | $279,905 |
| LP55 | 0.5859 | $480,390 | $131,147 | $0 | $611,537 |
| LP56 | 0.3316 | $231,048 | $63,076 | $0 | $294,123 |
| LP57 | 0.1351 | $83,118 | $22,691 | $0 | $105,810 |
| LP58 | 0.1913 | $142,248 | $38,834 | $0 | $181,081 |
| LP59 | 0.2575 | $184,189 | $50,284 | $0 | $234,472 |
| LP60 | 0.3275 | $228,473 | $62,373 | $0 | $290,847 |
| LP61 | 0.2725 | $193,641 | $52,864 | $0 | $246,505 |
| LP62 | 1.2146 | $789,834 | $215,625 | $0 | $1,005,459 |
| LP63 | 0.0325 | $41,816 | $11,416 | $0 | $53,231 |
| LP64 | 2.3271 | $1,493,846 | $407,820 | $0 | $1,901,666 |
| LP65 | 0.2558 | $183,090 | $49,983 | $0 | $233,073 |
| LP66 | 1.4202 | $916,128 | $250,103 | $0 | $1,166,231 |
| Subtotal | 36.1578 | $24,411,376 | $6,664,306 | $483,844 | $31,559,525 |
| | | | | | |
| District Passive Open Space embellishment | | | | | |
| DP2 | 3.6531 | $2,629,688 | $717,905 | $101,862 | $3,449,454 |
| DP3 | 3.9971 | $2,496,118 | $681,440 | $76,396 | $3,253,954 |
| DP4 | 2.2378 | $1,343,551 | $366,789 | $76,396 | $1,786,736 |
| DP5 | 2.0379 | $1,613,381 | $440,453 | $101,862 | $2,155,696 |
| DP6 | 6.1467 | $4,065,784 | $1,109,959 | $101,862 | $5,277,605 |
| DP7 | 0.3658 | $225,119 | $61,457 | $0 | $286,576 |
| DP8 | 3.7543 | $2,623,683 | $716,266 | $0 | $3,339,949 |

| Item | Area (ha) | Cost | Project On Costs | Demolition Allowance | Total Cost |
|---|---|---|---|---|---|
| DP9 | 0.3295 | $812,846 | $221,907 | $50,931 | $1,085,684 |
| DP10 | 10.3433 | $6,413,007 | $1,750,751 | $50,931 | $8,214,689 |
| DP11 | 6.4326 | $4,163,983 | $1,136,767 | $0 | $5,300,750 |
| DP12 | 0.7593 | $451,185 | $123,174 | $50,931 | $625,289 |
| Subtotal | 39.2981 | $26,387,159 | $7,326,868 | $560,240 | $34,151,094 |
| | | | | | |
| Local Sporting Fields embellishment | | | | | |
| LS1 | 5.7036 | $4,474,256 | $1,221,472 | $101,862 | $5,797,589 |
| LS4 | 6.1658 | $4,741,660 | $1,294,473 | $152,793 | $6,188,926 |
| LS5 | 9.6961 | $5,203,295 | $1,420,500 | $0 | $6,623,794 |
| LS8 | 2.6640 | $3,028,445 | $826,765 | $101,862 | $3,957,072 |
| LS9 | 11.9850 | $8,536,240 | $2,330,393 | $101,862 | $10,968,495 |
| Subtotal | 36.2146 | $25,983,895 | $7,093,603 | $458,378 | $33,535,876 |
| | | | | | |
| District Sporting Fields embellishment | | | | | |
| DS1 | 9.0691 | $6,255,733 | $1,707,815 | $229,189 | $8,192,738 |
| Subtotal | 9.0691 | $6,255,733 | $1,707,815 | $229,189 | $8,192,738 |
| | | | | | |
| Preparation of Plan of Management for all reserves | | | | | |
| | | $424,424 | Not applicable | Not applicable | $424,424 |
| Subtotal | 120.7395 | $424,424 | | | $424,424 |
| Total Construction Costs | | $83,462,587 | $22,792,592 | $1,731,652 | $107,863,657 |
| Construction Contingency | | | $5,933,887 | | $5,724,642 |
| TOTAL ESSENTIAL OPEN SPACE CONSTRUCTION COSTS | | | | | $113,797,544 |

Staging / Priority of infrastructure - as and when surrounding development proceeds.

Project On Costs excludes construction and contingency

Community and cultural facilities

Land

| Item | Facility | Area (ha) | Cost |
|---|---|---|---|
| LACF | Future Land Acquisition Land for Local Community Facilities | 1.4341 | $2,409,300 |
| | Subtotal | 1.4341 | $2,409,300 |
| | Land Acquisition Contingency | | $289,116 |
| TOTAL ESSENTIAL COMMUNITY FACILITY INFRASTRUCTURE LAND ACQUISITION COSTS | | 1.4341 | $2,698,416 |

LACF - Local Community Facilities

| Item | Total Area | Acquisition Cost |
|---|---|---|
| CF2 | 0.3412 | $580,040 |
| CF3 | 0.2867 | $458,720 |
| CF4 | 0.5339 | $907,630 |
| CF5 | 0.2723 | $462,910 |

Works

| Item | Facility | Area (ha) | Cost to Plan | Project On Costs | Demolition Allowance | Total Cost to Plan | Priority / Staging |
|---|---|---|---|---|---|---|---|
| | Regional Community Facility | | | | | | |
| LS1 | Aquatic and Indoor Recreation Centre construction | 5.2141 | $21,966,694 | $5,996,907 | $21,088 | $27,984,689 | 1 |
| | Subtotal | 5.2141 | $21,966,694 | $5,996,907 | $21,088 | $27,984,689 | |
| | Local Community Facilities | | | | | | |
| CF2 | Local Community Facility construction | 0.3412 | $2,509,320 | $685,044 | $25,465 | $3,219,830 | 2 |
| CF3 | Local Community Facility construction | 0.2867 | $2,455,295 | $670,295 | $25,465 | $3,151,056 | 2 |
| CF4 | Local Community Facility construction | 0.5339 | $4,832,741 | $1,319,338 | $25,465 | $6,177,545 | 3 |
| CF5 | Local Community Facility construction | 0.2723 | $2,441,020 | $666,398 | $0 | $3,107,419 | 2 |
| | Subtotal | 1.4341 | $12,238,376 | $3,341,077 | $76,396 | $15,655,849 | |
| | Public Art | | | | | | |
| PA1 | Regional Community Facility | | $659,001 | $179,907 | $0 | $838,908 | 4 |
| PA2 | Local Community Facilities | | $367,151 | $100,232 | $0 | $467,384 | 5 |
| | Subtotal | | $1,026,152 | $280,140 | $0 | $1,306,292 | |
| | Total Construction Costs | | $35,231,222 | $9,618,124 | $97,484 | $44,946,830 | |
| | Construction Contingency | | | | | $2,473,009 | |
| TOTAL NON ESSENTIAL COMMUNITY FACILITY CONSTRUCTION COSTS | | | | | | $47,419,839 | |

Note Cost of Regional Community Facility LS5 has been adjusted to reflect residential catchment within the Precincts that will contribute to facility (41.4%) as facility will serve population of 120,000 people.

Project On Costs excludes construction and contingency

Priority / Staging

1 As residential catchments in adjoining Precincts establish, facility to serve 120,000 population.

2 As population in catchment area reaches 10,000.

3 At completion of residential development within the Precincts, facility to serve population of 40,000.

4 To be delivered with Aquatic and Indoor Recreation Centre.

5 To be delivered with Local Community Facilities.

Water cycle management facilities

Land

| Item | Facility | Area (ha) | Cost |
|---|---|---|---|
| | Future Land Acquisition | | |
| LAC | Land for Trunk Drainage Channels | 55.4503 | $35,951,687 |
| LAB | Land for Trunk Drainage Basins | 11.3700 | $18,520,446 |
| | Subtotal | 66.8203 | $54,472,132 |
| | Land Acquisition Contingency | | $6,536,656 |
| TOTAL ESSENTIAL DRAINAGE INFRASTRUCTURE LAND ACQUISITION COSTS | | 66.8203 | $61,008,788 |

Staging / Priority of infrastructure - As land affected by acquisition is developed or as required to service development.

LAC - Trunk Drainage Channels

| Item | Total Area | Acquisition Cost |
|---|---|---|
| DC1 | 0.9455 | $1,232,154 |
| DC2 | 0.3971 | $255,035 |
| DC4 | 0.2824 | $368,050 |
| DC5 | 0.3133 | $501,277 |
| DC6 | 2.3668 | $1,446,399 |

| Item | Total Area | Acquisition Cost |
|---|---|---|
| DC7A | 1.8283 | $731,338 |
| DC8 | 3.6433 | $2,132,773 |
| DC8A | 0.4972 | Council owned |
| DC9 | 1.8287 | $731,464 |
| DC10 | 0.3999 | $476,851 |
| DC11 | 0.2729 | $242,387 |
| DC12 | 0.2857 | $297,244 |
| DC13 | 0.7930 | $1,209,602 |
| DC15A | 0.2343 | $264,856 |
| DC16A | 0.1904 | $254,294 |
| DC18 | 1.1021 | $440,845 |
| DC19A | 1.1322 | $452,871 |
| DC20 | 3.1912 | $1,276,482 |
| DC20A | 0.2135 | $281,040 |
| DC21 | 0.2563 | $212,576 |
| DC23 | 0.4119 | $164,745 |
| DC24 | 2.2938 | $917,512 |
| DC25 | 0.8323 | $332,922 |
| DC26 | 1.1949 | $783,392 |
| DC28 | 1.6094 | $2,327,567 |
| DC30 | 1.4446 | $577,848 |
| DC32 | 3.1592 | $1,263,671 |
| DC33 | 4.6023 | $2,138,208 |
| DC34 | 0.1679 | $208,092 |
| DC36 | 0.7430 | $546,085 |
| DC38 | 0.5157 | $540,755 |
| DC40 | 1.0908 | $436,326 |
| DC41 | 1.2289 | $496,218 |
| DC42 | 0.0809 | $97,876 |
| DC44 | 0.6988 | $954,049 |
| DC46 | 0.4357 | $584,252 |
| DC47 | 0.4715 | $388,866 |
| DC49 | 0.3053 | $292,020 |
| DC51 | 1.2827 | $1,869,934 |
| DC53 | 1.0245 | $409,807 |
| DC53A | 0.0481 | $50,410 |
| DC54 | 0.8779 | $353,305 |
| DC55 | 0.5351 | $219,513 |
| DC56 | 1.3585 | $1,452,830 |
| DC60 | 0.5553 | $565,333 |
| DC61 | 0.6753 | $270,120 |
| DC62 | 0.1352 | $91,575 |
| DC63 | 3.0978 | $1,239,115 |
| DC64 | 0.8075 | $1,035,047 |
| DC65 | 0.4990 | $199,594 |
| DC66 | 1.2761 | $626,006 |
| DC67 | 1.4295 | $743,187 |
| DC68 | 0.3870 | $275,360 |
| DC69 | 0.2445 | $391,200 |

LAB - Trunk Drainage Basins

| Item | Total Area | Acquisition Cost |
|---|---|---|
| B5 | 1.4259 | $2,281,420 |
| B6 | 0.5423 | $867,685 |
| B8 | 0.8821 | $1,411,304 |
| B9 | 0.0109 | $15,735 |
| B10 | 0.7609 | $1,217,508 |
| B11 | 2.2508 | $3,205,597 |
| B12 | 0.3058 | |
| B13 | 1.8546 | $2,729,764 |
| B14 | 1.3321 | $2,088,823 |
| B15 | 0.8328 | $1,075,706 |
| B16 | 0.9374 | $1,499,805 |
| B17 | 2.2928 | $3,668,454 |
| B18 | 0.6628 | $1,060,501 |
| B19 | 1.0110 | $1,158,059 |
| B20 | 2.0244 | $2,797,741 |
| B21 | 0.5808 | $810,780 |
| B22 | 1.3260 | $2,086,872 |
| B23 | 0.9568 | $1,129,087 |
| B25 | 1.6643 | $1,996,361 |
| B27 | 1.2901 | $1,852,492 |
| B29 | 1.4567 | $1,647,977 |
| B32 | 0.8157 | $873,673 |

Works

| Item | Facility | Length (m) | Width (m) | Area (ha) | Cost | Project On Costs | Demolition Allowance | Total Cost |
|---|---|---|---|---|---|---|---|---|
| | Basin Type | | | | | | | |
| 5 | A | NA* | NA* | 1.4259 | $3,133,514 | $855,449 | $50,931 | $4,039,894 |
| 6 | A | NA* | NA* | 0.5423 | $966,524 | $263,861 | $25,465 | $1,255,851 |
| 8 | B | NA* | NA* | 0.8821 | $1,410,103 | $384,958 | | $1,795,061 |
| 9 | B | NA* | NA* | 0.0109 | $979,597 | $267,430 | | $1,247,027 |
| 10 | B | NA* | NA* | 0.7609 | $748,050 | $204,218 | $25,465 | $977,733 |
| 11 | A | NA* | NA* | 2.2508 | $3,701,308 | $1,010,457 | $76,396 | $4,788,161 |
| 12 | B | NA* | NA* | 0.3058 | $1,011,416 | $276,117 | | $1,287,532 |
| 13 | B | NA* | NA* | 1.8546 | $1,824,960 | $498,214 | $76,396 | $2,399,571 |
| 14 | B | NA* | NA* | 1.3321 | $2,341,223 | $639,154 | $76,396 | $3,056,773 |
| 15 | B | NA* | NA* | 0.8328 | $1,005,450 | $274,488 | $76,396 | $1,356,334 |
| 16 | B | NA* | NA* | 0.9374 | $765,226 | $208,907 | $76,396 | $1,050,529 |
| 17 | B | NA* | NA* | 2.2928 | $4,802,195 | $1,310,999 | $25,465 | $6,138,660 |
| 18 | B | NA* | NA* | 0.6628 | $1,361,581 | $371,712 | | $1,733,293 |
| 19 | B | NA* | NA* | 1.0110 | $2,985,490 | $815,039 | | $3,800,529 |
| 20 | A | NA* | NA* | 2.0244 | $4,090,716 | $1,116,766 | $50,931 | $5,258,413 |
| 21 | B | NA* | NA* | 0.5808 | $852,512 | $232,736 | | $1,085,248 |
| 22 | C | NA* | NA* | 1.3260 | $2,247,541 | $613,579 | $50,931 | $2,912,050 |
| 23 | B | NA* | NA* | 0.9568 | $1,042,641 | $284,641 | $25,465 | $1,352,747 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 25 | B | NA* | NA* | 1.6643 | $2,801,058 | $764,689 | | $3,565,746 |
| 27 | B | NA* | NA* | 1.2901 | $1,544,971 | $421,777 | | $1,966,748 |
| 29 | C | NA* | NA* | 1.4567 | $3,487,060 | $951,967 | $25,465 | $4,464,493 |
| 32 | A | NA* | NA* | 0.8157 | $2,713,281 | $740,726 | | $3,454,006 |
| Catchment ID E9 | | NA* | NA* | | $355,606 | $97,080 | | $452,686 |
| Catchment ID E8c | | NA* | NA* | | $234,940 | $64,139 | | $299,079 |
| | Subtotal | | | 25.2168 | $46,406,961 | $12,669,100 | $662,102 | $59,738,163 |
| Item | Facility | Length (m) | Width (m) | Area (ha) | Cost | Project On Costs | Demolition Allowance | Total Cost |
| | Trunk Stormwater Drainage Channels | | | | | | | |
| DC1 | Channel Type 4 | 375 | 30 | 0.9455 | $332,245 | $90,703 | $0 | $422,948 |
| DC2 | Channel Type 4 | 400 | 30 | 0.3971 | $354,394 | $96,750 | $25,465 | $476,610 |
| DC4 | Channel Type 3 | 335 | 28 | 0.2824 | $266,592 | $72,780 | $0 | $339,371 |
| DC5 | Channel Type 3 | 195 | 28 | 0.3133 | $155,180 | $42,364 | $0 | $197,544 |
| DC6 | Channel Type 4 | 815 | 30 | 2.3668 | $722,079 | $197,127 | $25,465 | $944,671 |
| DC7A | Stablisation of existing watercourse | 0 | 0 | 1.8283 | $1,125,191 | $307,177 | $25,465 | $1,457,834 |
| DC8 | Stablisation of existing watercourse | 0 | 0 | 3.6433 | $2,242,138 | $612,104 | $0 | $2,854,242 |
| DC8A | Channel Type 1 | 225 | 15 | 0.4972 | $129,396 | $35,325 | $0 | $164,722 |
| DC9 | Stablisation of existing watercourse | 0 | 0 | 1.8287 | $1,125,386 | $307,230 | $0 | $1,432,616 |
| DC10 | Channel Type 4 | 140 | 30 | 0.3999 | $124,038 | $33,862 | $0 | $157,900 |
| DC11 | Channel Type 4 | 105 | 30 | 0.2729 | $93,029 | $25,397 | $0 | $118,425 |
| DC12 | Channel Type 4 | 215 | 30 | 0.2857 | $190,487 | $52,003 | $0 | $242,490 |
| DC13 | Channel Type 4 | 330 | 30 | 0.7930 | $292,375 | $79,818 | $25,465 | $397,659 |
| DC15A | Channel Type 4 | 120 | 30 | 0.2343 | $106,318 | $29,025 | $0 | $135,343 |
| DC16A | Channel Type 3 | 100 | 28 | 0.1904 | $79,580 | $21,725 | $0 | $101,305 |
| DC18 | Stablisation of existing watercourse | 0 | 0 | 1.1021 | $678,256 | $185,164 | $0 | $863,420 |
| DC19A | Stablisation of existing watercourse | 0 | 0 | 1.1322 | $696,760 | $190,215 | $0 | $886,975 |
| DC20 | Stablisation of existing watercourse | 0 | 0 | 3.1912 | $1,963,917 | $536,149 | $0 | $2,500,066 |
| DC20A | Channel Type 1 | 110 | 20 | 0.2135 | $63,260 | $17,270 | $0 | $80,531 |
| DC21 | Channel Type 4 | 85 | 30 | 0.2563 | $75,309 | $20,559 | $0 | $95,868 |
| DC23 | Stablisation of existing watercourse | 0 | 0 | 0.4119 | $253,466 | $69,196 | $0 | $322,663 |
| DC24 | Stablisation of existing watercourse | 0 | 0 | 2.2938 | $1,411,628 | $385,374 | $0 | $1,797,002 |
| DC25 | Stablisation of existing watercourse | 0 | 0 | 0.8323 | $512,214 | $139,834 | $25,465 | $677,514 |
| DC26 | Channel Type 4 | 380 | 30 | 1.1949 | $336,675 | $91,912 | $0 | $428,587 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DC28 | Channel Type 4 | 680 | 30 | 1.6094 | $602,470 | $164,474 | $152,793 | $919,738 |
| DC30 | Stablisation of existing watercourse | 0 | 0 | 1.4446 | $889,042 | $242,708 | $0 | $1,131,750 |
| DC32 | Stablisation of existing watercourse | 0 | 0 | 3.1592 | $1,944,207 | $530,769 | $0 | $2,474,976 |
| DC33 | Stablisation of existing watercourse | 0 | 0 | 4.6023 | $2,832,305 | $773,219 | $0 | $3,605,525 |
| DC34 | Channel Type 3 | 400 | 28 | 0.1679 | $318,318 | $86,901 | $0 | $405,219 |
| DC36 | Channel Type 2 | 305 | 25 | 0.7430 | $175,404 | $47,885 | $0 | $223,289 |
| DC38 | Channel Type 2 | 620 | 25 | 0.5157 | $356,559 | $97,341 | $101,862 | $555,761 |
| DC40 | Stablisation of existing watercourse | 0 | 0 | 1.0908 | $671,305 | $183,266 | $25,465 | $880,037 |
| DC41 | Stablisation of existing watercourse | 0 | 0 | 1.2289 | $756,265 | $206,460 | $0 | $962,725 |
| DC42 | Channel Type 4 | 320 | 30 | 0.0809 | $283,516 | $77,400 | $25,465 | $386,381 |
| DC44 | Channel Type 4 | 300 | 30 | 0.6988 | $265,796 | $72,562 | $0 | $338,358 |
| DC46 | Channel Type 2 | 115 | 25 | 0.4357 | $66,136 | $18,055 | $0 | $84,191 |
| DC47 | Channel Type 2 | 305 | 25 | 0.4715 | $175,404 | $47,885 | $25,465 | $248,755 |
| DC49 | Channel Type 4 | 420 | 10 | 0.3053 | $372,114 | $101,587 | $101,862 | $575,563 |
| DC51 | Channel Type 4 | 430 | 30 | 1.2827 | $380,974 | $104,006 | $50,931 | $535,911 |
| DC53 | Stablisation of existing watercourse | 0 | 0 | 1.0245 | $630,504 | $172,128 | $0 | $802,632 |
| DC53A | Channel Type 4 | 20 | 30 | 0.0481 | $17,720 | $4,837 | $0 | $22,557 |
| DC54 | Stablisation of existing watercourse | 0 | 0 | 0.8779 | $540,243 | $147,486 | $50,931 | $738,660 |
| DC55 | Stablisation of existing watercourse | 0 | 0 | 0.5351 | $329,339 | $89,910 | $0 | $419,248 |
| DC56 | Channel Type 4 | 375 | 30 | 1.3585 | $332,245 | $90,703 | $25,465 | $448,413 |
| DC60 | Channel Type 4 | 365 | 30 | 0.5553 | $323,385 | $88,284 | $25,465 | $437,134 |
| DC61 | Stablisation of existing watercourse | 0 | 0 | 0.6753 | $415,589 | $113,456 | $25,465 | $554,511 |
| DC62 | Channel Type 4 | 55 | 30 | 0.1352 | $48,729 | $13,303 | $50,931 | $112,963 |
| DC63 | Stablisation of existing watercourse | 0 | 0 | 3.0978 | $1,906,427 | $520,455 | $0 | $2,426,881 |
| DC64 | Channel Type 2 | 310 | 25 | 0.8075 | $178,279 | $48,670 | $76,396 | $303,346 |
| DC65 | Stablisation of existing watercourse | 0 | 0 | 0.4990 | $307,084 | $83,834 | $0 | $390,918 |
| DC66 | Stablisation of existing watercourse | 0 | 0 | 1.2761 | $785,330 | $214,395 | $0 | $999,726 |
| DC67 | Stablisation of existing watercourse | 0 | 0 | 1.4295 | $879,728 | $240,166 | $0 | $1,119,894 |
| DC68 | Channel Type 4 | 90 | 30 | 0.3870 | $79,739 | $21,769 | $25,465 | $126,973 |
| DC69 | Stablisation of existing watercourse | | | 0.2445 | $150,469 | $41,078 | $0 | $191,547 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Subtotal | | | 55.6948 | $30,344,538 | $8,284,059 | $891,291 | $39,519,888 |
| Item | Bioretention facilities for catchments not draining to basins | GPT Cost | Project On Costs | Area (ha) | Cost | Project On Costs | | Total Cost |
| 1.14 | Bioretention facility | $150,000 | $40,950 | 0.0208 | $78,326 | $21,383 | | $290,658 |
| 1.15 | Bioretention facility | $150,000 | $40,950 | 0.0689 | $259,454 | $70,831 | | $521,234 |
| 1.16 | Bioretention facility | $150,000 | $40,950 | 0.0492 | $185,270 | $50,579 | | $426,799 |
| 1.18 | Bioretention facility | $150,000 | $40,950 | 0.0448 | $168,701 | $46,055 | | $405,707 |
| 11.01 | Bioretention facility | $150,000 | $40,950 | 0.0560 | $210,877 | $57,569 | | $459,396 |
| 15.01 | Bioretention facility | $150,000 | $40,950 | 0.0617 | $232,341 | $63,429 | | $486,720 |
| 17.11 | Bioretention facility | $150,000 | $40,950 | 0.0218 | $82,091 | $22,411 | | $295,452 |
| 17.12 | Bioretention facility | $150,000 | $40,950 | 0.0665 | $250,416 | $68,364 | | $509,730 |
| 21.01 | Bioretention facility | $150,000 | $40,950 | 0.0996 | $375,059 | $102,391 | | $668,400 |
| 31.03 | Bioretention facility | $150,000 | $40,950 | 0.0264 | $99,413 | $27,140 | | $317,503 |
| 1.07b | Bioretention facility | $150,000 | $40,950 | 0.0104 | $39,163 | $10,691 | | $240,804 |
| 1.08b | Bioretention facility | $150,000 | $40,950 | 0.0485 | $182,634 | $49,859 | | $423,443 |
| 1.10a | Bioretention facility | $150,000 | $40,950 | 0.0114 | $43,004 | $11,740 | | $245,694 |
| 1.11a | Bioretention facility | $150,000 | $40,950 | 0.0083 | $31,293 | $8,543 | | $230,785 |
| 1.11b | Bioretention facility | $150,000 | $40,950 | 0.0384 | $144,601 | $39,476 | | $375,027 |
| 1.12b | Bioretention facility | $150,000 | $40,950 | 0.0542 | $204,098 | $55,719 | | $450,767 |
| 1.13a | Bioretention facility | $150,000 | $40,950 | 0.0283 | $106,568 | $29,093 | | $326,611 |
| 1.13b | Bioretention facility | $150,000 | $40,950 | 0.0351 | $132,174 | $36,084 | | $359,208 |
| 1.17b | Bioretention facility | $150,000 | $40,950 | 0.0038 | $14,309 | $3,906 | | $209,166 |
| 1.20b | Bioretention facility | $150,000 | $40,950 | 0.0013 | $4,895 | $1,336 | | $197,182 |
| 1.22a | Bioretention facility | $150,000 | $40,950 | 0.0333 | $125,396 | $34,233 | | $350,579 |
| 1.22b | Bioretention facility | $150,000 | $40,950 | 0.0263 | $99,037 | $27,037 | | $317,024 |
| 1.25a | Bioretention facility | $150,000 | $40,950 | 0.0198 | $74,560 | $20,355 | | $285,865 |
| 12.01a | Bioretention facility | $150,000 | $40,950 | 0.0340 | $128,032 | $34,953 | | $353,935 |
| 12.01b | Bioretention facility | $150,000 | $40,950 | 0.0052 | $19,581 | $5,346 | | $215,877 |
| 12.02a | Bioretention facility | $150,000 | $40,950 | 0.0273 | $102,802 | $28,065 | | $321,817 |
| 25.03b | Bioretention facility | $150,000 | $40,950 | 0.0060 | $22,594 | $6,168 | | $219,712 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 25.03c | Bioretention facility | $150,000 | $40,950 | 0.0214 | $80,585 | $22,000 | | $293,535 |
| 25.04a | Bioretention facility | $150,000 | $40,950 | 0.0211 | $79,455 | $21,691 | | $292,097 |
| 25.04b | Bioretention facility | $150,000 | $40,950 | 0.0240 | $90,376 | $24,673 | | $305,998 |
| 25.05a | Bioretention facility | $150,000 | $40,950 | 0.0219 | $82,468 | $22,514 | | $295,932 |
| 25.05b | Bioretention facility | $150,000 | $40,950 | 0.0084 | $31,631 | $8,635 | | $231,217 |
| 25.06b | Bioretention facility | $150,000 | $40,950 | 0.0069 | $25,983 | $7,093 | | $224,026 |
| 25.06c | Bioretention facility | $150,000 | $40,950 | 0.0093 | $35,021 | $9,561 | | $235,531 |
| 25.07a | Bioretention facility | $150,000 | $40,950 | 0.0183 | $68,911 | $18,813 | | $278,674 |
| 25.07b | Bioretention facility | $150,000 | $40,950 | 0.0092 | $34,644 | $9,458 | | $235,052 |
| 7.11b | Bioretention facility | $150,000 | $40,950 | 0.0101 | $38,033 | $10,383 | | $239,366 |
| E11a | Bioretention facility | $150,000 | $40,950 | 0.0150 | $56,485 | $15,420 | | $262,855 |
| E11b | Bioretention facility | $150,000 | $40,950 | 0.0104 | $39,163 | $10,691 | | $240,804 |
| E13 | Bioretention facility | $150,000 | $40,950 | 0.0745 | $280,541 | $76,588 | | $548,079 |
| E16b | Bioretention facility | $150,000 | $40,950 | 0.0060 | $22,594 | $6,168 | | $219,712 |
| E17c | Bioretention facility | $150,000 | $40,950 | 0.0293 | $110,334 | $30,121 | | $331,405 |
| E6a | Bioretention facility | $150,000 | $40,950 | 0.0469 | $176,609 | $48,214 | | $415,773 |
| E6b | Bioretention facility | $150,000 | $40,950 | 0.0239 | $89,999 | $24,570 | | $305,519 |
| E7a | Bioretention facility | $150,000 | $40,950 | 0.0054 | $20,335 | $5,551 | | $216,836 |
| E7b | Bioretention facility | $150,000 | $40,950 | 0.0218 | $82,091 | $22,411 | | $295,452 |
| E8a | Bioretention facility | $150,000 | $40,950 | 0.0197 | $74,183 | $20,252 | | $285,385 |
| E8b | Bioretention facility | $150,000 | $40,950 | 0.0413 | $155,521 | $42,457 | | $388,929 |
| E8c | Bioretention facility | $150,000 | $40,950 | 0.0149 | $56,108 | $15,318 | | $262,376 |
| SE1 | Bioretention facility | $150,000 | $40,950 | 0.0195 | $73,430 | $20,046 | | $284,427 |
| SE6a | Bioretention facility | $150,000 | $40,950 | 0.0097 | $36,527 | $9,972 | | $237,449 |
| E17d | Bioretention facility | $150,000 | $40,950 | 0.0014 | $5,208 | $1,422 | | $197,580 |
| E17c | Bioretention facility | $150,000 | $40,950 | 0.0012 | $4,538 | $1,239 | | $196,726 |
| | Subtotal | $7,950,000 | $2,170,350 | 1.3988 | $5,267,464 | $1,438,018 | | $16,825,832 |
| Total Construction Costs | | | | 82.3104 | $82,018,963 | $22,391,177 | $1,553,393 | $116,083,883 |
| Construction Contingency | | | | | | | | $6,659,151 |
| Fill Disposal Allowance | | | | | | | | $36,995,814 |
| TOTAL ESSENTIAL DRAINAGE INFRASTRUCTURE COSTS | | | | | | | | $159,738,847 |

NA* means Not applicable

Staging / Priority of infrastructure - when surrounding development proceeds.
Project On Costs excludes construction and contingency

Transport management facilities
Land

| Item | Facility | Area (ha) | Cost |
|---|---|---|---|
| | Future Land Acquisition | | |
| LACR | Land for new Collector Roads | 4.3614 | $6,888,839 |
| LALR | Land for new Local Roads | 1.7768 | $2,628,140 |
| | Subtotal | 6.1382 | $9,516,979 |
| | Land Acquisition Contingency | | $1,142,037 |
| TOTAL ESSENTIAL ROAD INFRASTRUCTURE LAND ACQUISITION COSTS | | 6.1382 | $10,659,016 |

LACR - Collector Roads

| Item | Total Area | Acquisition Cost |
|---|---|---|
| CR1 | 0.4470 | $715,200 |
| CR14 | 0.5150 | $824,000 |
| CR15 | 0.3010 | $481,600 |
| CR16 | 0.3270 | $523,200 |
| CR17 | 1.2800 | $2,048,000 |
| CR18 | 0.4733 | $674,960 |
| CR1A | 0.4610 | $737,600 |
| CR21 | 0.0748 | $119,560 |
| CR22 | 0.4032 | $638,159 |
| CR35 | 0.0791 | $126,560 |

LALR - Local Roads

| Item | Total Area | Acquisition Cost |
|---|---|---|
| LR28 | 0.0254 | $40,640 |
| LR33 | 0.0912 | $145,920 |
| LR39A | 0.0628 | $100,480 |
| LR39B | 0.0480 | $76,800 |
| LR39C | 0.0680 | $108,800 |
| LR39D | 0.0899 | $143,840 |
| LR48 | 0.1254 | $189,990 |
| LR53 | 0.0516 | $82,560 |
| LR59A | 0.0886 | $141,760 |
| LR59B | 0.0522 | $63,375 |
| LR61 | 0.0459 | $73,440 |
| LR64 | 0.1440 | $230,400 |
| LR67 | 0.2641 | $400,360 |
| LR67A | 0.2014 | $244,360 |
| LR68 | 0.0238 | $38,080 |
| LR69A | 0.0716 | $114,560 |
| LR70 | 0.0650 | $104,000 |
| LR72 | 0.0402 | $64,320 |
| LR73 | 0.1150 | $184,000 |
| LR74 | 0.0219 | $35,040 |
| LR76 | 0.0808 | $45,415 |

Works

| Item | Facility | Length (m) | Cost | Project On Costs | Demolition Allowance | Total Cost | Staging / Priority |
|---|---|---|---|---|---|---|---|
| | Local Roads | | | | | | |
| LR3 | Upgrade road half width | 160 | $277,998 | $68,944 | $0 | $346,942 | *1 |
| LR5 | Upgrade road half width | 140 | $243,248 | $60,326 | $0 | $303,574 | *1 |
| LR6 | Upgrade road half width | 225 | $390,935 | $96,952 | $0 | $487,886 | *1 |
| LR11 | Upgrade road half width | 90 | $156,374 | $38,781 | $0 | $195,155 | *1 |
| LR13 | Upgrade road half width | 455 | $790,557 | $196,058 | $0 | $986,615 | *1 |
| LR13A | Upgrade road half width | 240 | $416,997 | $103,415 | $0 | $520,412 | *1 |
| LR13C | Upgrade road full width | 95 | $252,002 | $62,496 | $0 | $314,498 | *1 |
| LR16 | Upgrade road half width | 105 | $182,436 | $45,244 | $0 | $227,680 | *1 |
| LR18 | Upgrade road half width | 120 | $208,498 | $51,708 | $0 | $260,206 | *1 |
| LR22 | Upgrade road half width | 235 | $408,310 | $101,261 | $0 | $509,570 | *1 |
| LR24 | Upgrade road half width | 80 | $138,999 | $34,472 | $0 | $173,471 | *1 |
| LR26 | Upgrade road half width | 280 | $486,496 | $120,651 | $0 | $607,148 | *1 |
| LR27 | Upgrade road full width | 150 | $397,898 | $98,679 | $0 | $496,577 | *1 |
| LR28 | Upgrade road half width | 85 | $147,686 | $36,626 | $0 | $184,313 | *1 |
| LR33 | New road half width | 90 | $125,577 | $31,143 | $0 | $156,720 | *1 |
| LR35 | Upgrade road half width | 510 | $886,119 | $219,757 | $0 | $1,105,876 | *1 |
| LR36 | Upgrade road full width | 330 | $875,375 | $217,093 | $0 | $1,092,468 | *1 |
| LR37 | Upgrade road half width | 325 | $564,683 | $140,041 | $0 | $704,725 | *1 |
| LR39 | Upgrade road half width | 80 | $138,999 | $34,472 | $0 | $173,471 | *1 |
| LR39A | New road half width | 80 | $111,624 | $27,683 | $0 | $139,306 | *1 |
| LR39B | New road half width | 60 | $83,718 | $20,762 | $0 | $104,480 | *1 |
| LR39C | New road half width | 85 | $118,600 | $29,413 | $0 | $148,013 | *1 |
| LR39D | New road half width | 115 | $160,459 | $39,794 | $0 | $200,253 | *1 |
| LR46 | Upgrade road half width | 65 | $112,937 | $28,008 | $0 | $140,945 | *1 |
| LR46A | Upgrade road full width | 255 | $676,426 | $167,754 | $0 | $844,180 | *1 |
| LR46B | Upgrade road half width | 50 | $86,874 | $21,545 | $0 | $108,419 | *1 |
| LR46C | Upgrade road half width | 55 | $95,562 | $23,699 | $0 | $119,261 | *1 |
| LR48 | Upgrade road half width | 144 | $250,198 | $62,049 | $0 | $312,247 | *1 |
| LR53 | New road half width | 65 | $90,694 | $22,492 | In DC49 | $113,186 | *1 |
| LR57 | Upgrade road full width | 320 | $848,849 | $210,515 | $0 | $1,059,363 | *1 |
| LR59A | New road half width | 60 | $83,718 | $20,762 | In DC47 | $104,480 | *1 |
| LR59B | New road half width | 35 | $48,835 | $12,111 | $25,465 | $86,412 | *1 |
| LR61 | New road half width | 100 | $139,530 | $34,603 | $0 | $174,133 | *1 |
| LR64 | New road full width | 90 | $224,414 | $55,655 | $0 | $280,069 | *1 |
| LR67 | New road half width | 300 | $418,589 | $103,810 | In LS7 and LP42 | $522,399 | *1 |
| LR67A | New road full width | 160 | $398,959 | $98,942 | $0 | $497,901 | *1 |
| LR69 | Upgrade road half width | 90 | $156,374 | $38,781 | $0 | $195,155 | *1 |
| LR69A | New road full width | 90 | $224,414 | $55,655 | $0 | $280,069 | *1 |
| LR70 | New road half width | 65 | $90,694 | $22,492 | $0 | $113,186 | *1 |
| LR71 | Upgrade road full width | 190 | $504,004 | $124,993 | $0 | $628,997 | *1 |
| LR72 | New road half width | 100 | $139,530 | $34,603 | $0 | $174,133 | *1 |
| LR73 | New road half width | 100 | $139,530 | $34,603 | $25,465 | $199,598 | *1 |
| LR74 | New road half width | 30 | $41,859 | $10,381 | $0 | $52,240 | *1 |
| | Subtotal | 6,499 | $12,335,578 | $3,059,223 | $50,931 | $15,445,732 | |
| | Collector Roads | | | | | | |
| CR1 | Upgrade road full width | 475 | $1,582,573 | $392,478 | $0 | $1,975,051 | *1 |
| CR1A | New road full width | 225 | $667,275 | $165,484 | $50,931 | $883,690 | *1 |

| Item | Facility | Length (m) | Cost | Project On Costs | Demolition Allowance | Total Cost | Staging / Priority |
|---|---|---|---|---|---|---|---|
| CR7 | Upgrade road half width | 115 | $235,808 | $58,480 | $0 | $294,288 | *1 |
| CR7A | Upgrade road full width | 105 | $349,832 | $86,758 | $0 | $436,590 | *1 |
| CR8 | Upgrade road half width | 240 | $492,120 | $122,046 | $0 | $614,166 | *1 |
| CR9 | Upgrade road full width | 70 | $233,221 | $57,839 | $0 | $291,060 | *1 |
| CR10 | Upgrade road half width | 85 | $174,293 | $43,225 | $0 | $217,517 | *1 |
| CR11 | Upgrade road full width | 345 | $1,149,447 | $285,063 | $0 | $1,434,510 | *1 |
| CR12 | Upgrade road half width | 130 | $266,565 | $66,108 | $0 | $332,673 | *1 |
| CR14 | New road half width | 495 | $829,856 | $205,804 | $101,862 | $1,137,522 | *1 |
| CR15 | New road full width | 155 | $459,678 | $114,000 | $25,465 | $599,144 | *1 |
| CR16 | New road half width | 340 | $570,002 | $141,360 | $101,862 | $813,224 | *1 |
| CR17 | New road full width | 320 | $949,013 | $235,355 | $50,931 | $1,235,299 | *1 |
| CR18 | New road half width | 420 | $704,120 | $174,622 | $25,465 | $904,207 | *1 |
| CR19 | Upgrade road full width | 80 | $266,539 | $66,102 | $0 | $332,640 | *1 |
| CR19A | Upgrade road half width | 80 | $164,040 | $40,682 | $0 | $204,722 | *1 |
| CR21 | New road half width | 70 | $117,353 | $29,104 | $0 | $146,457 | *1 |
| CR21A | Upgrade road half width | 70 | $143,535 | $35,597 | $0 | $179,132 | *1 |
| CR22 | New road half width | 325 | $544,855 | $135,124 | $203,724 | $883,703 | *1 |
| CR24 | Upgrade road half width | 115 | $235,808 | $58,480 | $0 | $294,288 | *1 |
| CR25 | Upgrade road full width | 215 | $716,322 | $177,648 | $0 | $893,970 | *1 |
| CR26 | Upgrade road full width | 150 | $499,760 | $123,940 | $0 | $623,700 | *1 |
| CR27 | Upgrade road full width | 155 | $516,418 | $128,072 | $0 | $644,490 | *1 |
| CR27A | Upgrade road full width | 140 | $466,442 | $115,678 | $0 | $582,120 | *1 |
| CR28 | Upgrade road half width | 150 | $307,575 | $76,279 | $0 | $383,854 | *1 |
| CR29 | Upgrade road half width | 400 | $820,200 | $203,410 | $0 | $1,023,610 | *1 |
| CR29A | Upgrade road full width | 160 | $533,077 | $132,203 | $0 | $665,280 | *1 |
| CR30 | Upgrade road half width | 275 | $563,888 | $139,844 | $0 | $703,732 | *1 |
| CR31 | Upgrade road half width | 90 | $184,545 | $45,767 | $0 | $230,312 | *1 |
| CR35 | New road half width | 70 | $117,353 | $29,104 | $0 | $146,457 | *1 |
| CR38 | Upgrade road half width | 80 | $164,040 | $40,682 | $0 | $204,722 | *1 |
| CR39 | Upgrade road half width | 60 | $123,030 | $30,511 | $0 | $153,541 | *1 |
| CR40 | Upgrade road half width | 30 | $61,515 | $15,256 | $0 | $76,771 | *1 |
| CR42 | Upgrade road full width | 285 | $949,544 | $235,487 | $0 | $1,185,030 | *1 |
| CR43 | Upgrade road half width | 50 | $102,525 | $25,426 | $0 | $127,951 | *1 |
| CR44 | Upgrade road half width | 50 | $102,525 | $25,426 | $0 | $127,951 | *1 |
| CR45 | Upgrade road half width | 240 | $492,120 | $122,046 | $0 | $614,166 | *1 |
| D1 | Design of Collector Road upgrade of Fourth Avenue | Item | $1,199,423 | $0 | $0 | $1,199,423 | *7 |
| D2 | Design of Collector Road of Browns Road Extension | Item | $449,298 | $0 | $0 | $449,298 | *8 |
| | Centre line design of existing roads | 34,350 | $687,000 | $0 | $0 | $687,000 | *9 |
| | Subtotal | 6,860 | $18,505,534 | $4,180,489 | $560,240 | $23,933,263 | |
| | Creek Crossings | | | | | | |
| BR1 | Scalabrini Creek Fifth Avenue (replace collector road pavement) | 60 | $199,904 | $49,576 | $0 | $249,480 | *2 |
| BR2 | Bonds Creek Eighth Avenue (upgrade crossing to 100 ARI) | 110 | $4,675,459 | $1,159,514 | $26,853 | $5,861,827 | *1 |
| BR3 | Bonds Creek Ninth Avenue (replace local road pavement) | 130 | $344,845 | $85,522 | $0 | $430,366 | *1 |

| Item | Facility | Length (m) | Cost | Project On Costs | Demolition Allowance | Total Cost | Staging / Priority |
|---|---|---|---|---|---|---|---|
| BR4 | Bonds Creek Tenth Avenue (replace local road pavement) | 80 | $212,212 | $52,629 | $0 | $264,841 | *1 |
| BR5 | Unnamed Creek Twelfth Avenue (replace local road pavement) | 130 | $324,154 | $80,390 | $0 | $404,544 | *2 |
| BR6 | Bonds Creek Fourth Avenue (upgrade crossing to 100 ARI) | 175 | $4,892,022 | $1,213,221 | $26,853 | $6,132,097 | *2 |
| BR7 | Unnamed Creek Fourth Avenue (upgrade crossing to 100 ARI) | 100 | $2,918,555 | $723,802 | $26,853 | $3,669,209 | *2 |
| BR8 | Unnamed Creek Thirteenth Avenue (upgrade crossing to 100 ARI) | 95 | $2,878,128 | $713,776 | $26,853 | $3,618,757 | *1 |
| BR9 | Unnamed Creek Fourteenth Avenue (replace local road pavement) | 150 | $397,898 | $98,679 | $0 | $496,577 | *1 |
| BR10 | Unnamed Creek Seventeenth Avenue (replace collector road pavement) | 105 | $349,832 | $86,758 | $0 | $436,590 | *1 |
| BR11 | Unnamed Creek Sixteenth Avenue (replace local road pavement) | 70 | $185,686 | $46,050 | $0 | $231,736 | *1 |
| BR12 | Kemps Creek Gurner Road (upgrade crossing to 100 ARI) | 120 | $3,501,502 | $868,372 | $15,664 | $4,385,538 | *6 |
| BR13 | Unnamed Creek Eleventh Avenue (replace local road pavement) | 110 | $291,792 | $72,364 | $0 | $364,156 | *1 |
| PB1 | Pedestrian crossing of DC20 | Item | $97,862 | $24,270 | $0 | $122,131 | *4 |
| PB2 | Pedestrian crossing of DC19A | Item | $97,862 | $24,270 | $0 | $122,131 | *5 |
| PB3 | Pedestrian crossing of DC56 | Item | $97,862 | $24,270 | $0 | $122,131 | *3 |
| PB4 | Pedestrian crossing of DC14 | Item | $97,862 | $24,270 | $0 | $122,131 | *3 |
| PB5 | Pedestrian crossing of DC53 | Item | $97,862 | $24,270 | $0 | $122,131 | *3 |
| PB6 | Pedestrian crossing of DC26 | Item | $97,862 | $24,270 | $0 | $122,131 | *3 |
| PB7 | Pedestrian crossing of DC33 | Item | $97,862 | $24,270 | $0 | $122,131 | *3 |
| PB8 | Pedestrian crossing of DC30 | Item | $97,862 | $24,270 | $0 | $122,131 | *3 |
| PB9 | Pedestrian crossing of DC49 | Item | $97,862 | $24,270 | $0 | $122,131 | *3 |
| PB10 | Pedestrian crossing of DC63 | Item | $97,862 | $24,270 | $0 | $122,131 | *1 |
| CC1 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| CC5 | Channel Crossing Type 1 | Item | $279,835 | $69,399 | $0 | $349,234 | *3 |
| CC6 | Channel Crossing Type 1 | Item | $279,835 | $69,399 | $0 | $349,234 | *3 |
| CC7 | Channel Crossing Type 1 | Item | $279,835 | $69,399 | $0 | $349,234 | *3 |
| CC9 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |

| Item | Facility | Length (m) | Cost | Project On Costs | Demolition Allowance | Total Cost | Staging / Priority |
|---|---|---|---|---|---|---|---|
| CC10 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| CC11 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| CC18 | Channel Crossing Type 1 | Item | $279,835 | $69,399 | $0 | $349,234 | *3 |
| CC21 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| CC22 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| CC23 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| CC23A | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| CC24 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| CC25 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| CC26 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| CC27 | Channel Crossing Type 2 | Item | $357,473 | $88,653 | $0 | $446,126 | *3 |
| | Subtotal | | $27,559,614 | $6,834,784 | $123,078 | $34,517,476 | |
| | Intersections | | | | | | |
| IN2 | Roundabout Eighth Avenue/Western N-S Collector | Item | $157,631 | $39,093 | $0 | $196,724 | *1 |
| IN3 | Traffic Signals Fourth Avenue / Fifth Avenue | Item | $833,800 | $206,782 | $0 | $1,040,582 | *1 |
| IN4 | Roundabout Fourth Avenue / Eighth Avenue | Item | $157,631 | $39,093 | $0 | $196,724 | *1 |
| IN5 | Roundabout Gurners Ave / Fourth Ave | Item | $157,631 | $39,093 | $0 | $196,724 | *1 |
| IN6 | Roundabout Gurners Ave / Extension of Edmondson Ave | Item | $157,631 | $39,093 | $0 | $196,724 | *1 |
| IN7 | Roundabout Sixteenth Ave / North South Collector Street | Item | $157,631 | $39,093 | $0 | $196,724 | *1 |
| IN8 | Roundabout Fourth Ave / Thirteenth Ave | Item | $157,631 | $39,093 | $0 | $196,724 | *1 |
| IN9 | Roundabout Thirteenth Ave / North South Collector Street | Item | $157,631 | $39,093 | $0 | $196,724 | *1 |
| IN10 | Roundabout Fourth Ave / Eleventh Ave | Item | $157,631 | $39,093 | $0 | $196,724 | *1 |
| IN11 | Roundabout Fourth Ave / Tenth Ave | Item | $157,631 | $39,093 | $0 | $196,724 | *1 |
| | Subtotal | | $2,252,481 | $558,615 | $0 | $2,811,096 | |
| | Pedestrian Crossings | | | | | | |
| PC1 | Allowance for 50 Pedestrian Crossing/Refuge Works locations TBD | 50 | $1,248,302 | $309,579 | $0 | $1,557,881 | *2 |
| | Subtotal | | $1,248,302 | $309,579 | $0 | $1,557,881 | |
| | Public Transport Facilities | | | | | | |
| PT1 | Allowance for 42 bus shelters locations TBD | 42 | $891,291 | $221,040 | $0 | $1,112,332 | *1 |
| | Subtotal | 42 | $891,291 | $221,040 | $0 | $1,112,332 | |
| | Total Construction Costs | | $62,792,799 | $15,163,731 | $734,249 | $79,377,779 | |
| | Construction Contingency | | | | | $4,494,893 | |
| | TOTAL ESSENTIAL ROAD INFRASTRUCTURE COSTS | | | | | $83,872,673 | |

Note cost of BR12 has been apportioned 50% to the Austral and Leppington North Precincts and 50% to the Rossmore Precinct.

Priority / Staging

*1 When surrounding development proceeds.

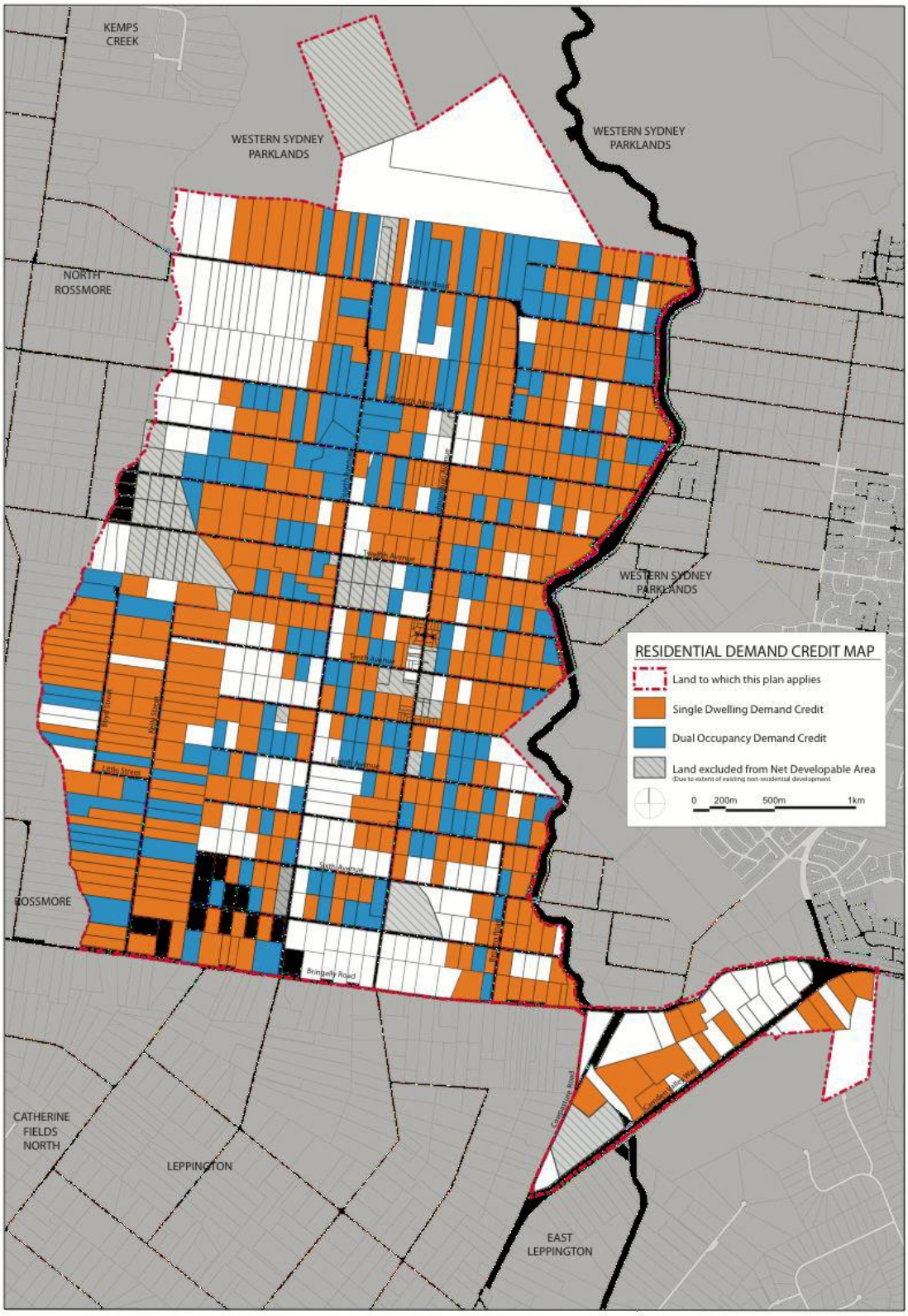
| Item | Facility | Length (m) | Cost | Project On Costs | Demolition Allowance | Total Cost | Staging / Priority |
|---|---|---|---|---|---|---|---|
| *2 | As adjoining road upgrades are carried out. | | | | | | |
| *3 | When the drainage channel is constructed. | | | | | | |
| *4 | When Open Space DP4 is constructed | | | | | | |
| *5 | When Open Space LP13 is constructed. | | | | | | |
| *6 | As and when surrounding development proceeds and after Rossmore Precinct rezoned. | | | | | | |
| *7 | Prior to construction of Fourth Avenue upgrade works. | | | | | | |
| *8 | Prior to construction of Browns Road Extension works. | | | | | | |
| *9 | Prior to development taking place | | | | | | |

NON-ESSENTIAL ROAD INFRASTRUCTURE CONSTRUCTION COSTS

| Item | Facility | Length (m) | Cost | Project On Costs | Demolition Allowance | Total Cost | Staging / Priority |
|---|---|---|---|---|---|---|---|
| | Street Tree Planting to Roads delivered by Council | | | | | | |
| | Planting to Local Roads half widths | 4589 | $64,566 | $0 | $0 | $64,566 | *1 |
| | Planting to Local Roads full widths | 1680 | $47,274 | $0 | $0 | $47,274 | *1 |
| | Planting to Collector Roads half widths | 3980 | $55,997 | $0 | $0 | $55,997 | *1 |
| | Planting to Collector Roads full widths | 2880 | $81,041 | $0 | $0 | $81,041 | *1 |
| | Subtotal | 13,129 | $248,878 | $0 | $0 | $248,878 | |
| | Total Construction Costs | | | | | $248,878 | |
| TOTAL NON ESSENTIAL ROAD INFRASTRUCTURE COSTS | | | | | | $248,878 | |

Appendix A
Demand Credit Analysis for Liverpool Precincts

Allowances for existing development in the calculation of open space and recreation, and community and cultural facilities contributions



# 6. AUSTRAL & LEPPINGTON NORTH DEMAND CREDITS

| Land Use | Single Dwelling Demand Credits | Dual Occupancy Demand Credits | Population Demand Credit |
|---|---|---|---|
| Environmental Living (4 Dwellings/ha) | 33 | 14 | 207.4 |
| Environmental Living (6 Dwellings/ha) | 20 | 6 | 108.8 |
| Low Density Residential | 300 | 133 | 1,924.4 |
| Medium Density Residential | 89 | 26 | 479.4 |
| Total | 442 | 179 | 2,720 |

Population Credits

| | |
|---|---|
| Single dwelling | 3.4 |
| Dual occupancy | 6.8 |
| Special use | 1.5 |

Land Use Coding

| | |
|---|---|
| Environmental Living (4 dwellings / ha) | EL |
| Environmental Living (6 dwellings / ha) | LL |
| Low density residential | LD |
| Medium density residential | MD |

Lots with Single Dwelling Demand Credit

| Lot No. | DP | Land Type |
|---|---|---|
| 19 | 3403 | LD |
| 18 | 3403 | LD |
| 17 | 3403 | LD |
| 16 | 3403 | LD |
| 15 | 3403 | LD |
| 1 | 233174 | LD |
| 2 | 233174 | LD |
| 12 | 3403 | LD |
| 111 | 1010191 | LD |
| 14 | 831988 | LD |
| 1 | 519215 | LD |
| 22 | 791237 | LD |
| 21 | 791237 | LD |
| A | 416820 | LD |
| 2 | 201865 | LD |
| 144 | 2475 | LD |
| 143 | 2475 | LD |
| 142 | 2475 | LD |
| 140 | 2475 | LD |
| 139 | 2475 | LD |
| 138 | 2475 | LD |
| 160 | 2475 | LD |
| 2 | 512264 | LD |
| 1 | 512264 | LD |
| 156 | 2475 | LD |
| 154 | 2475 | LD |
| 153 | 2475 | LD |
| 152 | 2475 | LD |
| 151 | 2475 | EL |
| 218 | 2475 | LD |
| A | 373652 | LD |
| B | 373652 | LD |
| 215 | 2475 | LD |
| 229 | 2475 | LD |
| 228 | 2475 | LD |

| Lot No. | DP | Land Type |
|---|---|---|
| 2 | 615379 | LD |
| 226 | 2475 | LD |
| 225 | 2475 | LD |
| 224 | 2475 | LD |
| 223 | 2475 | LD |
| 291 | 2475 | LD |
| 2 | 34883 | LD |
| 1 | 331146 | LD |
| 289 | 2475 | LD |
| 288 | 2475 | EL |
| 1 | 619379 | LD |
| B | 417374 | LD |
| 303 | 2475 | LD |
| 302 | 2475 | LD |
| 301 | 2475 | LD |
| 300 | 2475 | LD |
| 298 | 2475 | LD |
| 296 | 2475 | LD |
| 295 | 2475 | LD |
| B | 369323 | LD |
| 358 | 2475 | LD |
| 357 | 2475 | LD |
| 356 | 2475 | LD |
| 354 | 2475 | LD |
| 352 | 2475 | LD |
| 350 | 2475 | LD |
| 349 | 2475 | LD |
| 348 | 2475 | LD |
| 3600 | 1000185 | MD |
| 363 | 2475 | MD |
| 365 | 2475 | MD |
| 368 | 2475 | MD |
| 369 | 2475 | MD |
| 370 | 2475 | MD |
| B | 413204 | LD |
| A | 413204 | LD |
| B | 414227 | LD |
| 11 | 1103748 | MD |
| 36 | 3403 | MD |
| B | 411087 | LD |
| 2 | 395169 | LD |
| 1 | 619739 | LD |
| 2 | 619739 | LD |
| 2 | 631289 | LD |
| 1 | 631289 | LD |
| 431 | 6222608 | LD |
| 3601 | 1000185 | LD |
| 321 | 778465 | LD |
| 320 | 778465 | LD |
| 1 | 562807 | MD |
| 1 | 574738 | LD |
| 2 | 574738 | LD |
| 379 | 2475 | LD |
| 380 | 2475 | LD |
| 431 | 2475 | LD |
| B | 339407 | LD |
| A | 339407 | LD |
| 426 | 2475 | LD |
| 425 | 2475 | LD |

| Lot No. | DP | Land Type |
|---|---|---|
| 424 | 2475 | LD |
| 423 | 2475 | LD |
| 422 | 2475 | MD |
| 421 | 2475 | MD |
| 490 | 2475 | MD |
| 488 | 2475 | LD |
| 487 | 2475 | LD |
| 486 | 2475 | LD |
| 485 | 2475 | LD |
| 484 | 2475 | LD |
| 483 | 2475 | LD |
| 482 | 2475 | LD |
| 480 | 2475 | LD |
| 479 | 2475 | LD |
| 478 | 2475 | LD |
| 416 | 2475 | MD |
| 415 | 2475 | MD |
| D | 406540 | MD |
| 3 | 510228 | LD |
| 5 | 510228 | LD |
| 4 | 30409 | LD |
| 6 | 30409 | EL |
| 5 | 30409 | EL |
| 15 | 30409 | EL |
| 16 | 30409 | EL |
| 17 | 30409 | EL |
| 647 | 2475 | EL |
| 21 | 30409 | EL |
| 22 | 30409 | LD |
| 532 | 2475 | LD |
| 10 | 874699 | LD |
| 1 | 938137 | LD |
| 2 | 938137 | LD |
| 3 | 938137 | LD |
| 4 | 938137 | LD |
| 5 | 938137 | MD |
| 6 | 938137 | MD |
| 640 | 2475 | LD |
| A | 414563 | MD |
| B | 414563 | MD |
| C | 414563 | LD |
| 547 | 2475 | LD |
| 548 | 2475 | LD |
| 549 | 2475 | LD |
| 550 | 2475 | LD |
| 551 | 2475 | LD |
| 552 | 2475 | LD |
| 626 | 2475 | LD |
| 628 | 2475 | LD |
| 631 | 2475 | LD |
| 632 | 2475 | LD |
| 634 | 2475 | LD |
| 636 | 2475 | MD |
| 637 | 2475 | MD |
| 100 | 1022124 | LD |
| 2 | 201514 | LD |
| 3 | 201514 | LD |
| 671 | 2475 | LD |
| 672 | 2475 | LD |

| Lot No. | DP | Land Type |
|---|---|---|
| 673 | 2475 | LD |
| 674 | 2475 | LD |
| 676 | 2475 | EL |
| 721 | 2475 | EL |
| 722 | 2475 | LD |
| 726 | 2475 | LD |
| 4 | 201514 | LD |
| 101 | 1022124 | LD |
| 2 | 503020 | LD |
| 3 | 503020 | LD |
| 4 | 503020 | LD |
| A | 386133 | LD |
| 714 | 2475 | LD |
| 715 | 2475 | LD |
| 716 | 2475 | LD |
| 717 | 2475 | LD |
| 718 | 2475 | LD |
| 684 | 2475 | LD |
| 685 | 2475 | LD |
| 686 | 2475 | LD |
| 688 | 2475 | LD |
| 689 | 2475 | LD |
| 690 | 2475 | LD |
| 691 | 2475 | LD |
| 11 | 1044691 | LL |
| 2 | 548700 | LL |
| 12 | 1044691 | LL |
| 706 | 2475 | LD |
| 709 | 2475 | LD |
| 710 | 2475 | LD |
| 712 | 2475 | LD |
| 713 | 2475 | LD |
| 769 | 2475 | LD |
| 768 | 2475 | LD |
| 767 | 2475 | LD |
| 766 | 2475 | LD |
| 763 | 2475 | LD |
| 762 | 2475 | LD |
| 787 | 2475 | LD |
| 784 | 2475 | LD |
| 783 | 2475 | LD |
| 782 | 2475 | LD |
| 780 | 2475 | LD |
| 2 | 555992 | LD |
| 752 | 2475 | LD |
| 2 | 570646 | LD |
| 1 | 570646 | LD |
| A | 370483 | LD |
| 11 | 776297 | LD |
| 12 | 776297 | EL |
| 799 | 2475 | LD |
| 101 | 591853 | LD |
| 102 | 591853 | LD |
| A | 363000 | LD |
| 802 | 2475 | EL |
| 803 | 2475 | EL |
| 804 | 2475 | LD |
| 85 | 2475 | LD |
| 806 | 2475 | LD |

| Lot No. | DP | Land Type |
|---|---|---|
| 807 | 2475 | LD |
| 808 | 2475 | LD |
| 847 | 2475 | LD |
| 810 | 2475 | LD |
| 812 | 2475 | LD |
| 814 | 2475 | MD |
| 1 | 238636 | MD |
| 2 | 238636 | MD |
| 3 | 238636 | MD |
| 4 | 238636 | MD |
| 5 | 238636 | MD |
| 6 | 238636 | MD |
| 7 | 560787 | MD |
| 8 | 560787 | MD |
| 9 | 560787 | MD |
| B | 40482 | MD |
| A | 40482 | MD |
| 841 | 2475 | LD |
| 842 | 2475 | LD |
| 819 | 2475 | LD |
| 820 | 2475 | LD |
| 822 | 2475 | LD |
| 823 | 2475 | LD |
| 824 | 2475 | LL |
| 827 | 2475 | LL |
| 828 | 2475 | LL |
| 829 | 2475 | LD |
| 830 | 2475 | LD |
| 831 | 2475 | LD |
| 832 | 2475 | LD |
| 833 | 2475 | LD |
| 834 | 2475 | MD |
| 872 | 2475 | LD |
| 871 | 2475 | LD |
| 870 | 2475 | LD |
| 869 | 2475 | LD |
| 867 | 2475 | MD |
| 874 | 2475 | LD |
| 875 | 2475 | LD |
| 876 | 2475 | LD |
| 877 | 2475 | LD |
| 878 | 2475 | MD |
| 213 | 813479 | MD |
| 212 | 813479 | MD |
| 211 | 813479 | MD |
| 20 | 708107 | MD |
| 31 | 632173 | MD |
| 32 | 632173 | MD |
| 101 | 790560 | MD |
| 100 | 790560 | MD |
| 1 | 31151 | MD |
| 2 | 31151 | MD |
| 3 | 31151 | MD |
| 4 | 31151 | MD |
| 5 | 31151 | MD |
| 6 | 538235 | MD |
| 71 | 627424 | MD |
| 72 | 627424 | MD |
| 882 | 2475 | MD |

| Lot No. | DP | Land Type |
|---|---|---|
| 883 | 2475 | LD |
| 885 | 2475 | LD |
| 887 | 2475 | LD |
| 861 | 2475 | LD |
| 860 | 2475 | LD |
| 855 | 2475 | LD |
| 85 | 740973 | EL |
| 86 | 740973 | EL |
| 87 | 740973 | EL |
| 88 | 740973 | EL |
| 89 | 740973 | EL |
| 141 | 707894 | LD |
| 142 | 707894 | LD |
| 131 | 732036 | LD |
| 132 | 732036 | LD |
| 101 | 712544 | LD |
| 101 | 854174 | LD |
| 82 | 740973 | LD |
| 81 | 740893 | LD |
| 7 | 2756 | LD |
| 61 | 596624 | LD |
| 1 | 802655 | LD |
| 2 | 802655 | LD |
| 42 | 791236 | LD |
| 41 | 791236 | LD |
| D | 411796 | LD |
| C | 411796 | LD |
| B | 411796 | LD |
| A | 411796 | LD |
| B | 391036 | LD |
| 19 | 2756 | LD |
| 18 | 2756 | LD |
| A | 385901 | LD |
| 16 | 2756 | LD |
| 15 | 2756 | LD |
| 11 | 519909 | MD |
| 12 | 519909 | MD |
| 131 | 879822 | MD |
| 132 | 879822 | MD |
| 1 | 598602 | MD |
| 111 | 591857 | MD |
| B | 378927 | MD |
| 2 | 567541 | MD |
| 3 | 538092 | MD |
| 2 | 538092 | MD |
| 941 | 2475 | MD |
| 11 | 571579 | MD |
| 10 | 571579 | MD |
| 899 | 2475 | EL |
| 1900 | 614637 | EL |
| 1901 | 614637 | EL |
| 933 | 2475 | EL |
| 903 | 2475 | EL |
| 906 | 2475 | LD |
| 927 | 2475 | LD |
| 928 | 2475 | LD |
| 909 | 2475 | LD |
| 911 | 2475 | LD |
| 919 | 2475 | LD |
| 920 | 2475 | LD |

| Lot No. | DP | Land Type |
|---|---|---|
| 923 | 2475 | LD |
| 42 | 623270 | LD |
| 20 | 565535 | LD |
| 2 | 557622 | LD |
| 5 | 563539 | LD |
| 4 | 563539 | LD |
| 1 | 211782 | LD |
| 2 | 211782 | LD |
| B | 405649 | LD |
| 1 | 795818 | LD |
| A | 386802 | LD |
| B | 386802 | LD |
| 4 | 615872 | LD |
| 3 | 615872 | LD |
| 51 | 610394 | LD |
| 52 | 610394 | LD |
| A | 417196 | LD |
| B | 417196 | LD |
| 3 | 2756 | MD |
| 11 | 1007049 | MD |
| B | 408221 | MD |
| 1 | 581050 | MD |
| 2 | 581050 | MD |
| D | 408221 | MD |
| 1130 | 2475 | MD |
| 1128 | 2475 | MD |
| 1126 | 2475 | MD |
| 1119 | 2475 | LD |
| 1060 | 2475 | LD |
| 1059 | 2475 | LD |
| 1057 | 2475 | LD |
| 1049 | 2475 | LD |
| 1050 | 2475 | LD |
| 999 | 2475 | LD |
| 998 | 2475 | LD |
| 996 | 2475 | LD |
| 993 | 2475 | LD |
| 988 | 2475 | LD |
| 989 | 2475 | LD |
| 952 | 2475 | LD |
| 953 | 2475 | LD |
| 5 | 236726 | LD |
| 6 | 236726 | LD |
| 1004 | 2475 | EL |
| 1005 | 2475 | EL |
| 1006 | 2475 | EL |
| 1065 | 2475 | MD |
| 1066 | 2475 | MD |
| 1067 | 2475 | MD |
| 1114 | 2475 | MD |
| 1116 | 2475 | MD |
| 14 | 533382 | EL |
| 4 | 126820 | EL |
| 1145 | 2475 | EL |
| 1144 | 2475 | EL |
| 1102 | 2475 | LD |
| 1103 | 2475 | LD |
| 2 | 201643 | LD |
| 1013 | 2475 | LD |
| 1012 | 2475 | LD |
| 1011 | 2475 | LD |
| 1010 | 2475 | LD |

| Lot No. | DP | Land Type |
|---|---|---|
| 1007 | 2475 | LD |
| 1040 | 2475 | EL |
| 971 | 2475 | LD |
| 972 | 2475 | LD |
| 976 | 2475 | LD |
| 977 | 2475 | LD |
| 954 | 2475 | LD |
| 955 | 2475 | LD |
| 956 | 2475 | LD |
| 958 | 2475 | LD |
| 959 | 2475 | LD |
| 961 | 2475 | LD |
| 963 | 2475 | LL |
| 968 | 2475 | LL |
| 970 | 2475 | LL |
| 101 | 789832 | LL |
| 102 | 789832 | LL |
| 1017 | 2475 | LL |
| 1031 | 2475 | LL |
| 1078 | 2475 | LD |
| 1079 | 2475 | LD |
| 1101 | 2475 | LD |
| 1100 | 2475 | LD |
| 1099 | 2475 | LD |
| 1098 | 2475 | LD |
| 1148 | 2475 | MD |
| 1163 | 2475 | MD |
| 1161 | 2475 | MD |
| 1160 | 2475 | MD |
| 1 | 126822 | MD |
| 10 | 1124205 | MD |
| A | 355182 | MD |
| 1159 | 2475 | MD |
| 11 | 1124205 | MD |
| C | 337828 | LD |
| 2 | 501499 | LL |
| 1 | 501499 | LL |
| 14 | 19406 | LL |
| 2 | 513043 | LL |
| C | 389531 | LL |
| D | 389531 | LL |
| 2 | 531654 | LL |
| 2 | 205472 | LD |
| 3 | 205472 | LD |
| 5 | 205472 | LD |
| 6 | 205472 | LD |
| 1037 | 2475 | LD |
| 20 | 730327 | LD |
| 41 | 623270 | EL |
| 362 | 2475 | |

Lots with Dual Occupancy Demand Credit

| Lot No. | DP | Land Type |
|---|---|---|
| 3 | 233174 | LD |
| 112 | 1010191 | LD |
| 2 | 606317 | LD |
| 100 | 634734 | LD |
| 100 | 634734 | LD |
| 2 | 519215 | LD |
| 4 | 3403 | LD |
| B | 416820 | LD |
| 1 | 3403 | LD |
| 1 | 201865 | LD |
| 3 | 201865 | LD |
| 141 | 2475 | LD |
| 157 | 2475 | LD |
| 155 | 2475 | LD |
| 150 | 2475 | LD |
| 221 | 2475 | LD |
| 220 | 2475 | LD |
| 219 | 2475 | LD |
| 217 | 2475 | LD |
| 212 | 2475 | LD |
| 231 | 2475 | LD |
| 230 | 2475 | LD |
| 1 | 34883 | LD |
| C | 417374 | LD |
| 294 | 2475 | LD |
| A | 369323 | LD |
| 359 | 2475 | LD |
| 353 | 2475 | LD |
| 364 | 2475 | MD |
| 366 | 2475 | MD |
| 367 | 2475 | MD |
| 372 | 2475 | LD |
| 4 | 1117859 | LD |
| 12 | 1103748 | MD |
| 2 | 749642 | LD |
| 1 | 395169 | LD |
| 3 | 395169 | LD |
| 2 | 562807 | MD |
| 3 | 574738 | LD |
| 377 | 2475 | LD |
| 378 | 2475 | LD |
| 433 | 2475 | LD |
| 432 | 2475 | LD |
| 429 | 2475 | LD |
| 428 | 2475 | LD |
| 427 | 2475 | LD |
| 489 | 2475 | MD |
| 481 | 2475 | LD |
| 479 | 2475 | LD |
| 5 | 1117859 | MD |
| B | 389089 | MD |
| C | 406540 | LD |
| 495 | 2475 | MD |
| 6 | 1117859 | LD |
| 2 | 510228 | LD |
| 1 | 510228 | LD |
| 4 | 510228 | LD |
| 405 | 2475 | LD |

| Lot No. | DP | Land Type |
|---|---|---|
| 404 | 2475 | LD |
| 403 | 2475 | LD |
| 14 | 30409 | EL |
| 118 | 575004 | LD |
| 119 | 575004 | LD |
| 20 | 30409 | LD |
| 23 | 30409 | LD |
| 24 | 30409 | LD |
| 655 | 2475 | LD |
| 25 | 30409 | EL |
| 2 | 204217 | LD |
| 535 | 2475 | LD |
| 638 | 2475 | MD |
| 641 | 2475 | LD |
| 545 | 2475 | LD |
| 546 | 2475 | LD |
| 629 | 2475 | LD |
| 633 | 2475 | LD |
| 635 | 2475 | MD |
| 13 | 776298 | EL |
| 723 | 2475 | LD |
| 724 | 2475 | LD |
| 687 | 2475 | LD |
| 711 | 2475 | LD |
| 765 | 2475 | LD |
| 779 | 2475 | LL |
| 781 | 2475 | LD |
| 761 | 2475 | EL |
| 760 | 2475 | EL |
| 790 | 2475 | LD |
| 32 | 878676 | LD |
| 10 | 776297 | LD |
| 798 | 2475 | LD |
| 103 | 591853 | LD |
| 846 | 2475 | EL |
| 845 | 2475 | EL |
| 844 | 2475 | LD |
| 811 | 2475 | LD |
| 840 | 2475 | LD |
| 839 | 2475 | LD |
| 817 | 2475 | MD |
| 821 | 2475 | LD |
| 825 | 2475 | LL |
| 835 | 2475 | MD |
| 873 | 2475 | LL |
| 859 | 2475 | LD |
| 858 | 2475 | LD |
| 886 | 2475 | LD |
| 884 | 2475 | LD |
| 856 | 2475 | EL |
| 83 | 740973 | EL |
| 84 | 740973 | EL |
| 9 | 2756 | LD |
| 121 | 738282 | LD |
| 122 | 738282 | LD |
| 102 | 712544 | LD |
| A | 391036 | LD |
| 112 | 591857 | MD |
| A | 378927 | MD |

| Lot No. | DP | Land Type |
|---|---|---|
| 940 | 2475 | MD |
| 942 | 2475 | MD |
| 102 | 621868 | MD |
| 898 | 2475 | EL |
| 936 | 2475 | LD |
| 935 | 2475 | LD |
| 934 | 2475 | EL |
| 904 | 2475 | LD |
| 905 | 2475 | LD |
| 907 | 2475 | LD |
| 908 | 2475 | LD |
| 926 | 2475 | LD |
| 929 | 2475 | LD |
| 930 | 2475 | LD |
| 912 | 2475 | LD |
| 913 | 2475 | LD |
| 914 | 2475 | LD |
| 921 | 2475 | LD |
| 922 | 2475 | LD |
| 924 | 2475 | LD |
| 43 | 623270 | LD |
| 21 | 565535 | LD |
| 1 | 557622 | LD |
| A | 388784 | LD |
| B | 388784 | LD |
| 2 | 2756 | LD |
| 2 | 596773 | LD |
| 1 | 596773 | LD |
| 6 | 2756 | LD |
| A | 408221 | MD |
| 1 | 581189 | MD |
| 1123 | 2475 | LD |
| 1120 | 2475 | LD |
| 1058 | 2475 | LD |
| 1048 | 2475 | LD |
| 997 | 2475 | LD |
| 986 | 2475 | LD |
| 951 | 2475 | LD |
| 1063 | 2475 | MD |
| 1064 | 2475 | MD |
| 1115 | 2475 | MD |
| 1113 | 2475 | MD |
| A | 416093 | MD |
| B | 416093 | MD |
| 1164 | 2475 | EL |
| 1146 | 2475 | EL |
| 1077 | 2475 | LD |
| 1008 | 2475 | LD |
| 1009 | 2475 | LD |
| 978 | 2475 | LD |
| 975 | 2475 | LD |
| 974 | 2475 | LD |
| 973 | 2475 | LD |
| 1 | 126820 | LL |
| 969 | 2475 | LL |
| 964 | 2475 | LL |
| 960 | 2475 | LD |
| 957 | 2475 | LD |
| 3 | 519215 | LD |

| Lot No. | DP | Land Type |
|---|---|---|
| 725 | 2475 | LD |
| 786 | 2475 | LD |
| 764 | 2475 | LD |

Lots with No Demand Credit

| Lot No. | DP | Land Type |
|---|---|---|
| 1 | 606317 | LD |
| 91 | 1050385 | LD |
| 15 | 831988 | LD |
| 158 | 2475 | LD |
| 214 | 2475 | LD |
| 213 | 2475 | LD |
| 222 | 650859 | LD |
| 297 | 2475 | LD |
| 299 | 2475 | LD |
| 355 | 2475 | LD |
| 37 | 3403 | LD |
| 1 | 749642 | LD |
| 1 | 204217 | LD |
| 627 | 2475 | MD |
| 630 | 2475 | MD |
| 639 | 2475 | MD |
| 707 | 2475 | LD |
| 708 | 2475 | LD |
| 809 | 2475 | LD |
| 813 | 2475 | LD |
| 843 | 2475 | LD |
| 818 | 2475 | MD |
| 857 | 2475 | EL |
| 868 | 2475 | LD |
| 111 | 875377 | LD |
| 112 | 875377 | LD |
| 9 | 2756 | LD |
| 62 | 596624 | LD |
| 102 | 854174 | LD |
| C | 385901 | LD |
| 2 | 598602 | MD |
| 910 | 2475 | LD |
| 915 | 2475 | LD |
| 917 | 2475 | LD |
| 918 | 2475 | LD |
| 12 | 1007049 | MD |
| 1125 | 2475 | MD |
| 1127 | 2475 | MD |
| 1129 | 2475 | MD |
| 1122 | 2475 | LD |
| 1056 | 2475 | LD |
| 1055 | 2475 | LD |
| 994 | 2475 | LD |
| 995 | 2475 | LD |
| 987 | 2475 | LD |
| 946 | 2475 | LD |
| 945 | 2475 | LD |
| 944 | 2475 | LD |
| 943 | 2475 | LD |
| 1 | 236726 | EL |
| 962 | 2475 | LL |
| 1014 | 2475 | LD |
| 1035 | 2475 | LD |

**Appendix B**
**Background Information**

AECOM Australia Pty Ltd (2011), *Austral and Leppington North (ALN) Precincts Transport Assessment*, prepared for NSW Department of Planning and Infrastructure, July

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MJ Davis Valuations Pty Ltd (2011), Section 94 Contributions and Infrastructure Delivery Plan - Austral and Leppington North Precincts

Newplan (2011), *Austral and Leppington North Precincts Infrastructure Delivery Plan*, Draft Report for Exhibition, prepared by Newplan, August

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