

LIVERPOOL CONTRIBUTIONS PLAN 2014 - East Leppington Precinct



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Liverpool Contributions Plan 2009

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1. Summary of the Plan

1.1. Preamble

The East Leppington Precinct is an urban release area in Sydney's South West Growth Centre. The Precinct traverses land in Camden, Campbelltown and Liverpool local government areas.

A range of new and augmented infrastructure needs to be planned, programmed, funded and delivered in order to sustain 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, and grants from the State or Commonwealth government. Much of the capital cost of local infrastructure in new urban areas is funded by development (i.e. section 94) contributions, as there is a clear relationship between the need for new or upgraded infrastructure and population growth attributable to 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:

- traffic and transport management facilities, such as new roads and intersections.
- water cycle management facilities, such as detention basins and stormwater channels; and
- open space and recreation facilities, such as recreation centres, sports fields, sports courts, playgrounds, walking trails and bike paths.

1.2. Summary of contribution rates and works schedule costs

Tables 1.1 and 1.2 on the following pages show the contribution rates applicable to development works and land acquisition the subject of this Plan, and the total value of works and land to be funded by contributions anticipated under this Plan.

Table 1.1: Monetary Contribution Rates

ESSENTIAL INFRASTRUCTURE		RESIDENTIAL DEVELOPMENT			ALL DEVELOPMENT
Item	Item Cost apportioned to East Leppington	\$ per additional person	\$ per residential lot for a dwelling house	\$ per attached dwelling, semi-attached dwellings and multi-dwelling housing	\$ per hectare of equivalent NDA
Open Space					
Land	\$5,590,060	\$1,581	\$5,376	\$4,111	
Works	\$5,314,097	\$1,503	\$5,110	\$3,908	
Subtotal	\$10,904,157	\$3,084	\$10,486	\$8,019	
Roads					
Land	\$1,063,104	\$301	\$1,022	\$782	\$16,172
Works	\$7,824,257	\$2,213	\$7,524	\$5,754	\$119,021
Subtotal	\$8,887,361	\$2,514	\$8,547	\$6,536	\$135,192
Drainage					
Land	\$8,866,385				\$126,740
Works	\$11,720,920				\$167,544
Subtotal	\$20,587,305				\$294,283
Plan Administration					
Allowance	\$372,889	\$105	\$359		\$5,330
Subtotal	\$372,889	\$105	\$359	\$0	\$5,330
TOTAL	\$40,751,712	\$5,703	\$19,392	\$14,555	\$434,806

1.3. Overview and structure of Plan

Section 94 of the Environmental Planning and Assessment Act 1979 (EP and A Act) authorises a consent authority 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 needs of the development.

This Plan has been prepared to authorise the imposition of section 94 contributions on development expected to occur in that part of the East Leppington Precinct that is situated in the Liverpool LGA.

This Plan has been prepared:

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

There are minimum requirements for section 94 contributions plans set out in Division 1 C Clause 27 of the EP and 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 2.6
The land to which the plan applies	Clause 2.8
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 4
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 section 94 contributions, and the imposition of section 94 conditions that allow deferred or periodic payment,	Clauses 2.16 and 2.17
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 section 94 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

The Plan is structured in the following Parts:

Part 1 (this Part) contains an introduction and summary schedules;

Part 2 contains provisions that describe the contributions framework, essential details of the Plan, and how section 94 contributions for development in the East Leppington Precinct will be imposed, settled and managed;

Part 3 documents the expected development in the Precinct and the likely demand for infrastructure arising from that development;

Part 4 discusses infrastructure costs and delivery, and for each infrastructure category describes the relationship between development and infrastructure which culminates in a contributions formula;

Part 5 contains schedules describing the proposed infrastructure addressed by the Plan; and also contains location maps of this infrastructure;

References and attachments.

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 and A Act, EP and A Regulation and the Standard Instrument – Principal Local Environmental Plan, and 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)

Attributable cost means the estimated cost for each item in the works schedules set out in Part 5 of this Plan, which may differ from the final actual cost of the item. It will be the value used in determining the amount of any offset of monetary contributions as a result of any works-in-kind proposal.

Council means Liverpool City Council

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

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

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

ILP means East Leppington Indicative Layout Plan.

LGA means local government area.

Liverpool Precinct 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 - Principal LEP*);
- 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 and 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 and A Act;

Planning agreement means a voluntary planning agreement referred to in section 93F of the EP and 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 - *Social Infrastructure and Open Space Assessment, East Leppington Precinct* prepared by Elton Consulting, June 2013.

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.

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 facilities for which contributions may be required as set out in Part 5 of this Plan.

2.2. Name of the Plan

This Plan is called the Liverpool Contributions Plan 2014 - East Leppington Precinct.

2.3. Land to which Plan Applies

This Plan applies to all of the land identified in Figure 2.1.

This Plan applies generally to all of the land situated within the East Leppington Precinct that is also within the Liverpool local government area (LGA).

2.4. Purposes of the Plan

The purposes of the Plan are to:

- Provide an administrative framework under which specific public amenities and services strategies to serve the Precinct may be implemented and coordinated.
- Ensure that adequate public amenities and services are provided for as part of any new development in the Precinct.
- 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 Precinct 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 Precinct.
- Enable the Council to be both publicly and financially accountable in its assessment and administration of the Plan.

2.5. Adoption of the Plan

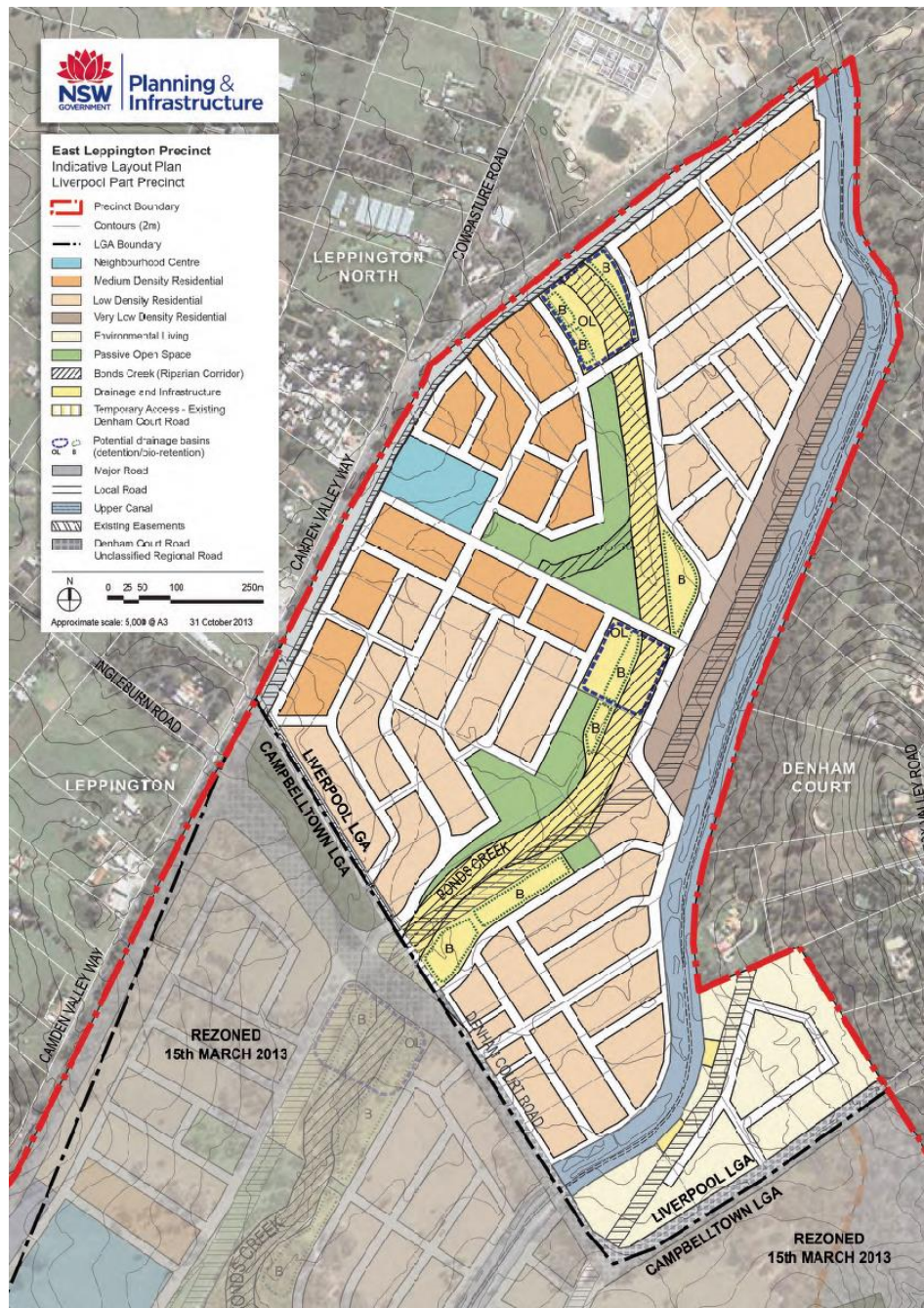
The Plan was adopted by Council on 26 May 2015 and came into effect on 3 June 2015.

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 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.



Source: Department of Planning and Infrastructure, ILP 12.6 Updated 4th July, 2013

Figure 2.1 Land to which this Plan applies

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.

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 4.4 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 4.2 to 4.4 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

2.8.1. 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.

2.8.2. 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.

2.8.3. 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.

2.8.4. 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.

2.8.5. 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

2.9.1. 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.

2.9.2. 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.

2.9.3. 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.

2.9.4. Formula for Bank Guarantee Amounts

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

Guarantee Amount = $P + P (CI \times Y)$, where:

P = Contribution due;

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

Y = Period of deferral (years).

2.9.5. 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.

2.9.6. 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 necessitate 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 East Leppington Precinct 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.

2.11. Adjustment to Contribution Rates and Contribution Amounts

2.11.1. 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.

2.11.2. 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).

2.11.3. 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.

Contribution at time of development consent

$$C_2 = \frac{C_1 \times \text{CPI}_2}{\text{CPI}_1}$$

Contribution at time of payment

$$C_3 = \frac{C_2 \times \text{CPI}_3}{\text{CPI}_2}$$

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

2.11.4. 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

$$C_2 = \frac{C_1 \times \text{LVI}_2}{\text{LVI}_1}$$

Contribution at time of payment

$$C_3 = \frac{C_2 \times \text{LVI}_3}{\text{LVI}_2}$$

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. [insert number(s)]
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

2.11.5. 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 MJ Davis December 2014 Section 94 Plan – Quarterly Land Values.

2.12. Review of Plan and contributions 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.

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 East Leppington Precinct forms part.

The East Leppington Precinct falls within three different local government areas, namely, Camden, Campbelltown and Liverpool with more than 50% of the development being contained in Campbelltown Council's local government area. This plan deals with that part of the East Leppington Precinct which falls within the Liverpool LGA and for which Liverpool City Council will serve as the consent authority. Liverpool City Council will also be the manager of the new local public infrastructure that will be required to be delivered in its jurisdiction.

Planning for housing development which is the overwhelming development type within the East Leppington Precinct requires that the public infrastructure to support the development and the incoming population is also prepared for. The neighbourhood centre containing 2,500m² of retail space will also contribute towards the demand for drainage infrastructure.

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 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.

A list of infrastructure requirements to meet that development has been quantified in the infrastructure studies referred to in Table 3.2, derived by the application of the provision standards to the estimate of expected dwellings and population.

This connection between expected dwellings and population, infrastructure standards, and the resultant infrastructure items and costs directly informs the contribution requirements in this Plan.

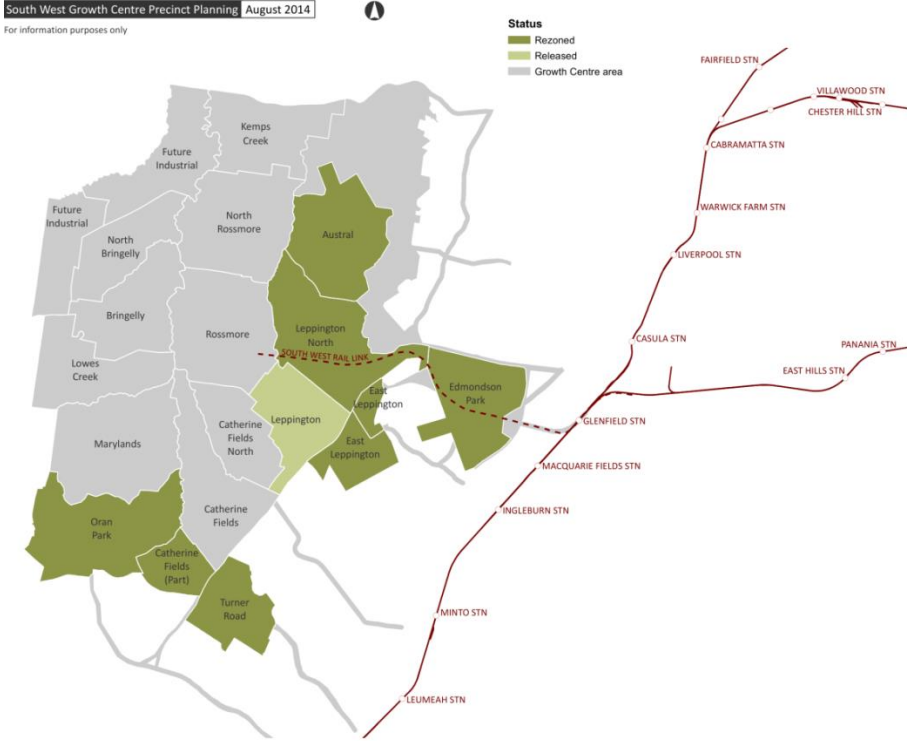
The following part of this Plan, Part 3, provides more detail on the servicing requirements expressed in the three main infrastructure studies outlined in Table 3.2.

Development and infrastructure planning context

3.1.1. Growth Centres Structure Planning

East Leppington Precinct is 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 East Leppington Precinct, are shown in Figure 3.1.



Source: East Leppington: Final Precinct Planning Report, 2012, Department of Planning and Infrastructure

Figure 3.1 South West Growth Centre released precincts

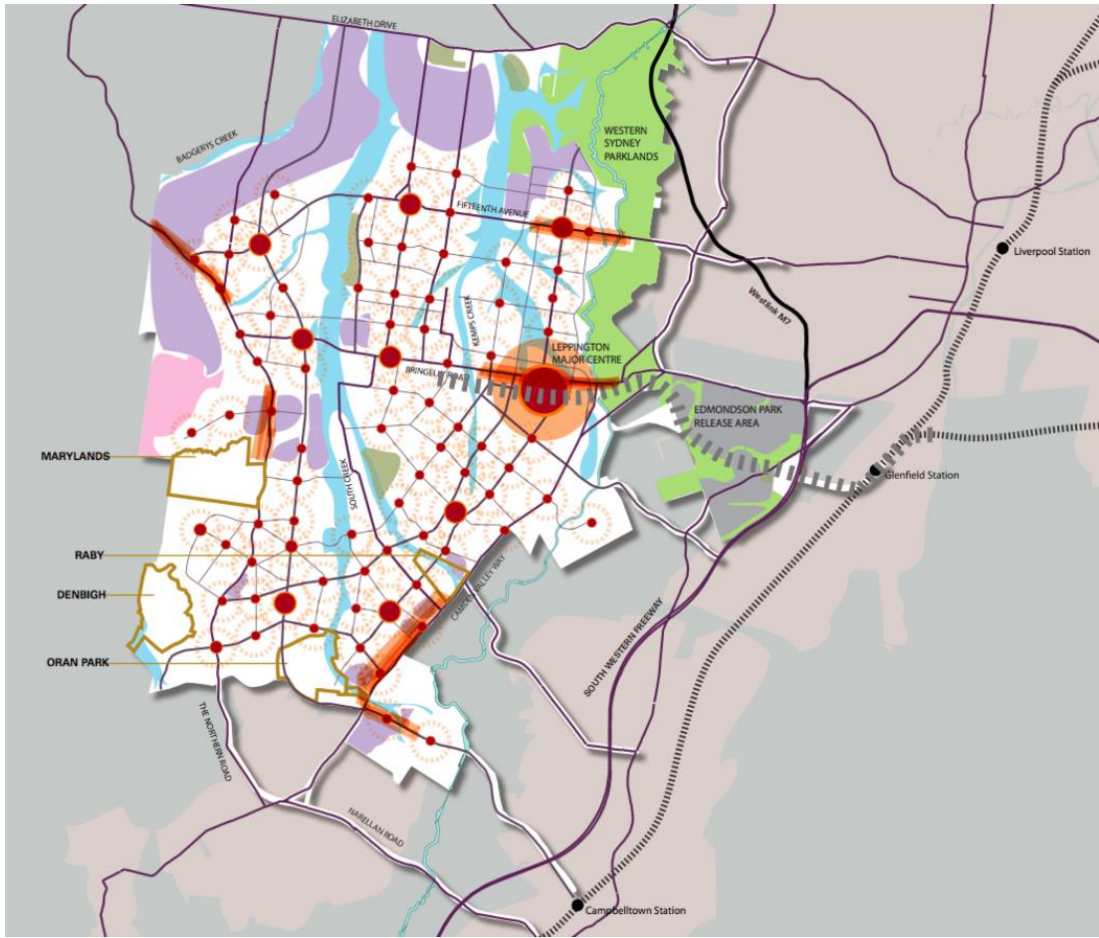
A structure plan has been prepared for the Growth Centre, a copy of which is included as Figure 3.2.

Apart from the construction of local neighbourhood centres, the structure plan proposes ten (10) new town or village centres in the South West Growth Centre. Infrastructure investment is underway to support the future Leppington Major Centre, including new rail line from Glenfield via Edmondson Park.

The Austral and Leppington North Precincts were released for precinct planning purposes by the Minister for Planning in November 2011. 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 Centre Structure Plan Edition 3, prepared by Department of Planning

Figure 3.2: South West Growth Centre Structure Plan

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 East Leppington Precinct, are shown in Figure 3.1.

The East Leppington Precinct was released for precinct planning purposes by the Minister for Planning in November 2011. Table 3.1 provides a context for the area the subject of this Plan in terms of the planned dwellings and population.

Table 3.1 Estimated dwelling and populations

District	Area (ha)	Additional dwellings	Projected population
South West Growth Centre (17 Precincts)	17,000	110,000	300,000
East Leppington Precinct	463	4,386	14,497
East Leppington Precinct (Liverpool)	106	1,143	3,535

Source: Growth Centres Commission (Structure Plan Explanatory Note); Indicative Layout Plan, Department of Planning and Infrastructure

3.1.2. Precinct Planning

A package of information on anticipated development and required infrastructure has been prepared for the East Leppington Precinct, including:

- Indicative Layout Plan for the Liverpool part of the Precinct. This will guide the planning and assessment of the precincts.
- Amendment to State Environmental Planning Policy (Sydney Growth Centres) 2006 to facilitate the formal rezoning of the land to enable urban development.
- Development Control Plans for each of the Council areas which make up the East Leppington Precinct.
- Contributions plans prepared by Liverpool City Council, (this Plan), and Camden and Campbelltown Councils’.
- Infrastructure Delivery Plan (IDP).

Research and studies have informed the preparation of plans and provided the Precincts’ urban infrastructure needs and costs. 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 December 2014 Section 94 Plan – Quarterly Land Values
Stormwater drainage works	Cardno, June 2013, Water Cycle Management Report, East Leppington
Roads and transport works	Cardno, June 2013, Traffic Assessment, East Leppington
Open space and recreation, community and cultural facilities works	Elton Consulting, June 2013, Social Infrastructure and Open Space Assessment, East Leppington Precinct
Centres	SGS (Spiller, Gibbons and Swan), March 2013, Employment and Retail Centres Study, East Leppington

3.1.3. Infrastructure Delivery Plan

Existing infrastructure and essential services within the East Leppington Precinct is consistent with the current predominantly rural land use. As such, there is limited existing infrastructure available in the Precinct to facilitate the proposed new urban development. Liaison with the relevant authorities suggests that the critical infrastructure such as water, sewer and electricity can be provided to the early stages of development. However, there will need to be commitments to further and substantial investment in the short, medium and long term to serve the ultimate development.

Infrastructure providers typically allocate resources for infrastructure delivery on the principles of efficiency, value for money and return on investment. This applies to the range of infrastructure delivery authorities, including private infrastructure companies (such as Jemena), State Owned Corporations (SOCs) (such as Sydney Water) or other government authorities (such as the Roads and Maritime Services). Private sector and SOCs in particular, seek to make investment in areas that will provide the greatest return and are therefore reluctant to invest in an area unless there is evidence of future returns based on strong and steady development.

Considering the extent of additional infrastructure to be delivered to the East Leppington Precinct, there needs to be willingness and cooperation between agencies, landowners and developers for the development to proceed in an orderly and economic way. This will require a joint approach and communication and understanding of the issues which discussed in the Infrastructure Delivery Plan.

The IDP collates information from existing background studies for the East Leppington Precinct, each of these contain detail appropriate to the current stage of planning. Initial advice from key infrastructure agencies regarding the infrastructure needs of the Precincts has been provided, however this will be developed and modified through future design development.

Servicing of the East Leppington Precinct can be achieved providing that a number of clear steps and processes are followed so that infrastructure is delivered in an orderly and cost efficient manner.

3.2. Expected development outcomes

3.2.1. Existing development in East Leppington Precinct - Liverpool Precinct

Current land use within the East Leppington Precinct comprises generally rural residential land and small lot agricultural activities including market gardens, grazing and poultry farms. Several businesses such as a childcare centres and commercial greenhouses are currently in operation along Camden Valley Way. Land within the Liverpool LGA is currently used predominantly for agricultural purposes.

3.2.2. Overview of expected development in East Leppington - whole precinct

The Precinct Plan for the East Leppington Precinct has been prepared with reference to the Structure Plan and the indicative dwelling targets, and achieves the following outcomes:

- Capacity for 4,386 dwellings and 14,497 people.
- A mix of housing types ranging from town houses and terrace style houses to single dwellings on both large and small blocks.
- A local centre in Camden/Campbelltown LGA's with a capacity of 16,500m² gross retail and commercial floor area.
- Medium density residential areas concentrated around the Local Centre.
- A community centre located adjacent to the Local Centre.
- A proposed neighbourhood centre has been located in Liverpool LGA with the capacity for 2,500m² of retail space.
- The location for a primary school is located in the centre of the Precinct within walking distance to the sports fields in Campbelltown LGA
- 5.9 hectares of active open space (2 sporting fields)
- 10.2 hectares for local parks
- 9.8 hectares of passive open space
- A local park co-located with the Leppington House Estate archeological ruins and cultural heritage elements that will remain in public ownership.
- Pedestrian paths and cycleways within the open space network are located along the post development flood prone corridors.
- Several pedestrian bridges over Bonds Creek providing additional access in the Precinct.
- On road cycle lanes and off-road pedestrian/shared paths on all roads.
- A pedestrian connection provided over the Upper Canal to facilitate pedestrian access across the south of the Precinct.
- Non-Certified Existing Native Vegetation is retained and protected to meet the requirements of the Biodiversity Certification.
- Two areas containing *Pimelea spicata* protected under an environmental conservation zone and appropriate management measures developed for these areas.
- The Scenic Hills are identified as having significant landscape and environmental values and will be retained.

The ILP sets out the proposed land uses in East Leppington.

Figure 3.3 sets out that part of the ILP, which pertains to Liverpool LGA and contains more detail of the proposed land uses in the Liverpool part of the East Leppington Precinct. The area is to comprise a mix of low and medium density residential development with medium density housing comprising almost 40% of the total housing proposed. A neighbourhood centre is also envisaged as well as land for public recreation and drainage and local roads infrastructure.

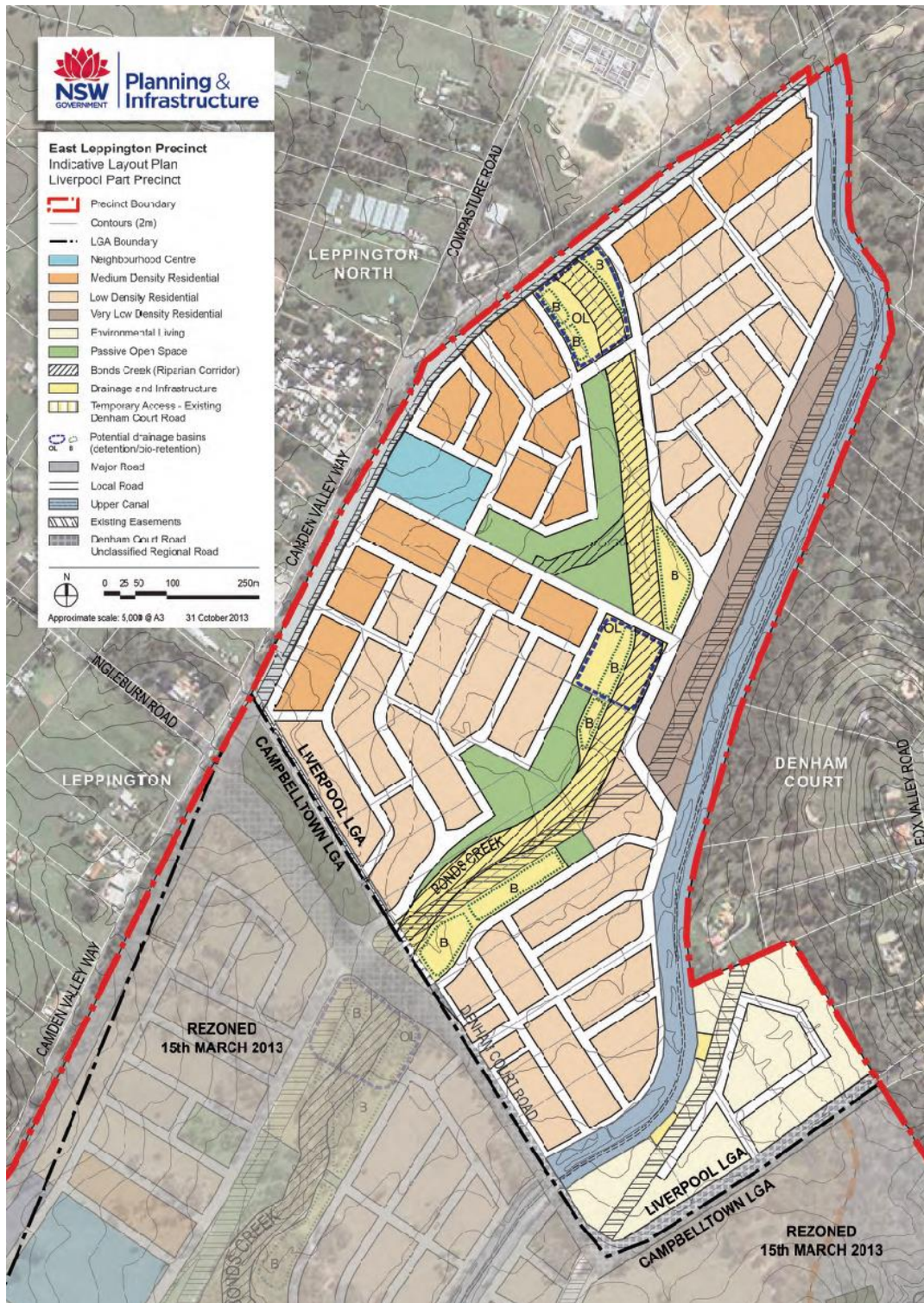


Figure 3.1 East Leppington - Liverpool Precinct: Proposed Land Uses

3.2.3. Overview of expected development

Table 3.3 outlines the expected extent of development in the Liverpool LGA portion of the East Leppington Precinct. These yields and quantities have been estimated using a Geographical Information System extract from ILP 12.6. The dwelling yields have been forecast through applying net dwelling density estimates to the development areas.

Table 3.2: Expected Net Developable Area – East Leppington Precinct – Liverpool LGA

Development type	Developable Area (ha)	
	East Leppington Precinct	East Leppington (Liverpool Precinct)
Residential (Net Developable Area¹)		
Low Density Residential	235.5	40.38
Medium Density Residential	18.7	17.75
Large Lot Residential	24.5	15.86
Total	278.82	69.15
Environmental		
Scenic Hills **	48.3	0.00
Conservation (E2) - Pimelea Spicata Denham Court Road	1.9	0.00
Conservation (E2) - Pimelea Spicata Scenic Hills	0.7	0.00
Conservation (E2) - Corner of St Andrews Road	1.2	0.00
Total	52.14	0.00
Open Space		
Active	5.9	0.0
Local Parks	10.2	1.76
Passive	9.8	3.95
Total	26.01	5.71
Other		
Centres	6.6	1.6
Mixed Use	1.0	0.00
School	3.0	0.00
Community Facilities	0.3	0.00
Community Facilities- affected by gas easement	0.05	0.00
Total	10.91	1.6

Source: Department of Planning and Infrastructure

1 Includes Local Roads consistent with the plan definition

3.2.4. Demographic characteristics - within the whole precinct

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

The report *Social Infrastructure and Open Space Assessment – East Leppington Precinct* prepared by Elton Consulting analyses the demographics and housing market conditions in the in similar release areas and in the surrounding Camden, Campbelltown and Liverpool LGAs.

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

“Analysis of the populations of nearby new release areas including West Hoxton, Horningsea Park, Prestons, Harrington Park and Mount Annan has been undertaken to identify the characteristics of households moving into the new residential areas of south west Sydney. This analysis shows:

In the 2006 Census, the predominant household type was a couple family with young children

The median age in the new release areas was 29 years (range 27-32), compared with 35 for Sydney as a whole. Children (0-14 years) made up 29% of the population, compared with 20% in Sydney as a whole. Conversely, the proportion of people aged 65+ years is well below the Sydney average

35% of residents were born overseas, (compared with 31% for Sydney as a whole)

Average household size generally ranged between 3.3 (Mount Annan) and 3.5 (Horningsea Park), but was as high as 3.7 in West Hoxton. By comparison, average household size for Sydney was 2.7 persons

Household income was above the Sydney average, reflecting high rates of workforce participation to pay off a mortgage, rather than high individual incomes

This examination of the current social profile of the East Leppington precinct shows that the existing population of the area differs significantly from the populations moving into the new residential areas in the wider area, particularly in terms of age, family structure, household type and income. It is assumed that the new population moving into East Leppington as it undergoes development will be similar to the populations moving into other new residential areas in the region.”

3.2.5. Dwelling occupancy rates - within the whole precinct

The amount and mix of expected residential development will inform an estimate of the population of an area. The need for social infrastructure is usually based on per capita benchmarks. Section 94 contributions are levied on a development-by-development basis and 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.

The analysis below derived from Elton’s Social Infrastructure and Open Space Assessment has been used to derive occupancy rate assumptions for the projected population.

In determining the most appropriate occupancy rates to be applied to East Leppington Precinct, average household size and trends in household size in new release areas in south west Sydney have been examined, based on ABS 2006 Census data (2011 small area Census data not being available at the time of preparation). This analysis has examined average household size in different types of dwellings (ie detached, attached and apartments), recognising that occupancy rates will reflect the mix of dwellings in a given area, with smaller, attached forms of housing generally accommodating smaller households.

The results of this analysis are shown in Table 3.4 below.

Table 3.3 Average household size in nearby areas from 2006 Census

Area	Detached	Semi-detached, town house, terrace	Flat, apartment	unit,
Assumed Oran Park	3.3	2.4	1.8	
Harrington Park	3.4			
Currans Hill	3.1	2.0		
Mount Annan	3.3	2.0		
Camden LGA	3.1	1.7	1.4	
Prestons	3.5	2.8	1.3	
West Hoxton	3.7	2.8		
Horningsea Park	3.5	3.2		
Cecil Hills	3.8	3.0		
Liverpool LGA	3.3	2.7	2.2	
Glenfield	2.9	2.4	1.9	
Macquarie Links	3.5	1.7	2.3	
Raby	3.2	2.2		
St Andrews	3.3	2.1		
Campbelltown LGA	3.1	2.5	1.7	
Sydney SD	3.0	2.4	1.9	

Source: Elton Consulting, 2013, Social Infrastructure and Open Space Assessment – East Leppington

The Elton report notes that:

This table shows that average household size in all dwelling types in new release areas within Liverpool LGA are significantly higher than in Camden release areas and nearby suburbs of Campbelltown. This is thought to reflect the cultural mix of the Liverpool area and prevalence of larger families amongst overseas-born households, relative to Camden which has lower levels of cultural diversity.

Taking into account the range of occupancy rates being achieved in adjacent equivalent release areas, the following occupancy rates are proposed to apply in East Leppington Precinct, and in the Liverpool part of the precinct:

- Detached dwelling: 3.4 persons
- Semi-detached, town house, terrace: 2.6 persons
- Low density rural residential: 3.4 persons.

Table 3.4 Dwelling occupancy rates assumed in this Plan

Dwelling type	Occupancy rate
Detached dwelling, detached dual occupancy (each dwelling)	3.4
Semi-detached, town house, terrace, attached dual occupancy (each dwelling)	2.6
Large Lots	3.4

3.2.6. Anticipated resident population – Liverpool Precinct

The anticipated population in the East Leppington Precinct 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 – East Leppington - Liverpool Precinct

Dwelling type	Projected dwellings	Assumed dwelling occupancy rate	Population
Low density residential	605	3.4	2,057
Medium density residential	438	2.6	1,139
Large Lots	85	3.4	289
Expected net population			3,485

3.2.7. Anticipated non-residential floor space – whole of precinct

The predominant land use in the East Leppington Precinct will be low density residential, reflecting the location of the Leppington Major Centre in the North Leppington Precinct.

Non-residential floor space is anticipated to be limited to a local retail centre, (Campbelltown LGA), a small area of mixed use and civic, cultural, education, and other public uses. A small neighbourhood centre is to be located in the Liverpool part of the Precinct

The scale of the anticipated non-residential floor space in the Precinct and the Liverpool LGA part is shown in Table 3.6. Figures for public uses have been excluded as these will not be subject to a contribution under this Plan.

It is possible that there may be other non-residential development take place within the residential areas. Contributions will be levied for the increased demand that they create for local infrastructure.

Table 3.6: Anticipated non-residential floor space – Whole Precinct and Liverpool Precinct

Land use category	Projected gross floor area (GFA m2)	
	East Leppington (whole of precinct)	Liverpool Precinct
Retail	19,000m ²	2,500m ²
Mixed Uses	N/A	N/A
Total	19,000m²	2,500m²

Source: Department of Planning and Infrastructure

3.3. Infrastructure demand arising from the expected development

The process used to quantify and cost the development infrastructure for the East Leppington Precinct ensured a rigorous and independent verification procedure has been used to confirm the cost assumptions. This included preliminary infrastructure costing from Cardno which were then checked by an independent QS and property valuer to set the final cost assumptions. These were then checked again by AECOM in preparing the detailed Section 94 calculations.

4. Strategy plans

4.1. Infrastructure costs and delivery generally

4.1.1. Apportionment of the infrastructure costs to expected development

The costs for public services and amenities were informed by the information contained in the studies informing the infrastructure planning of the area (refer Table 3.2).

The 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 amounts per dwelling). 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 stormwater drainage, roads and transport land and works, the estimated number of persons in East Leppington Precinct, (Liverpool LGA).
- in the case of open space and recreation facilities land and works, the expected additional resident population of the East Leppington Precinct (Liverpool LGA).
- in the case of community facilities land and works, the number of people (or future residents) the respective facility has been designed for. No community facilities are to be provided in Liverpool LGA.

The infrastructure included in this Plan has been sized to reflect the demand generated by the expected development under this Plan.

More details on this apportionment are discussed in the remainder of Part 5 of this Plan.

4.1.2. 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 a monetary contribution, dedication 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 item identified in this Plan as works-in-kind or provide another type of material public benefit as a means of satisfying development contributions required under the Plan (refer clause 2.18 of this Plan). A Works In Kind Agreement must be in place prior to commencing the works in accordance with the Council's Developer Contributions Works In Kind Policy.

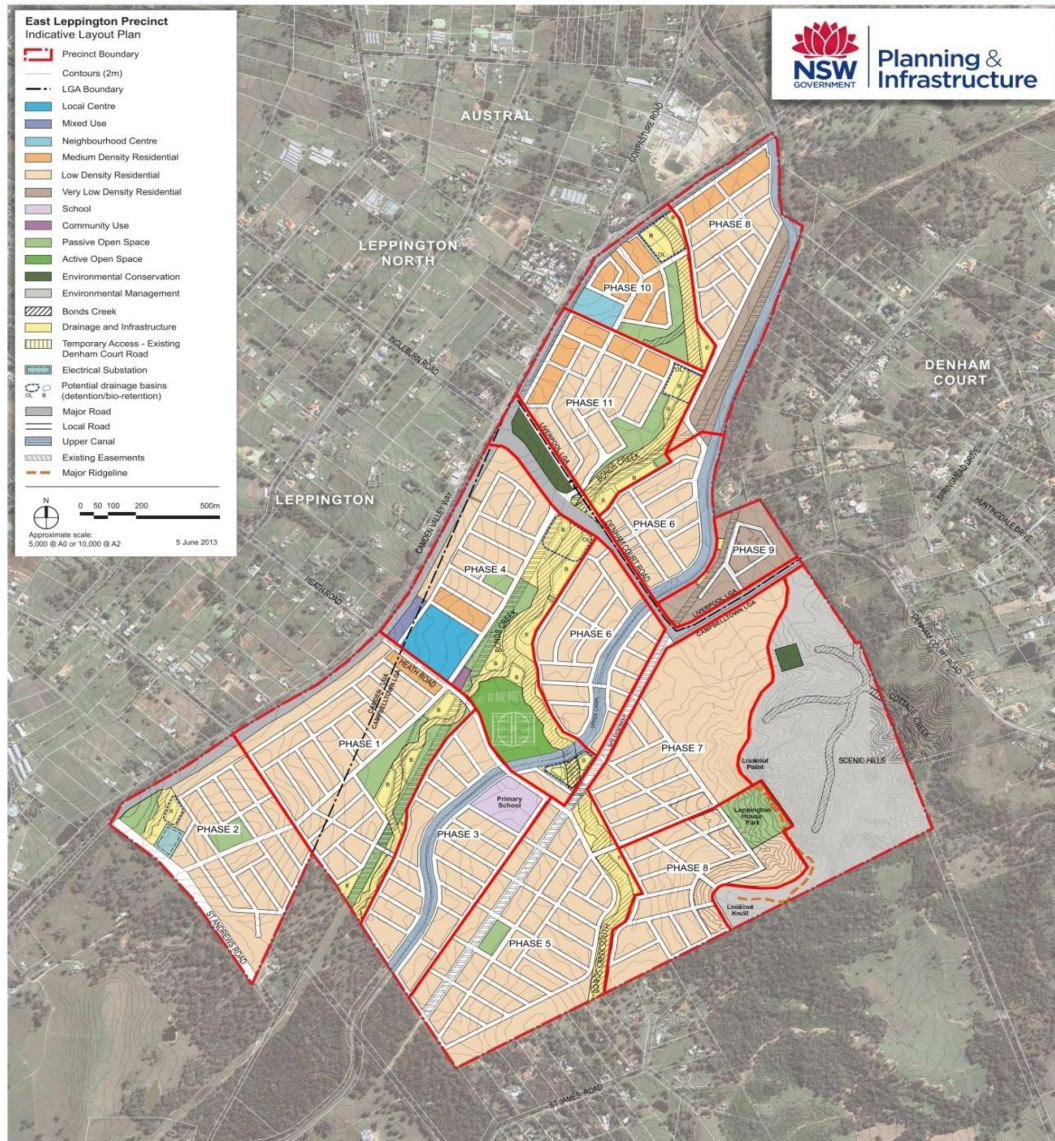
Substantial research has been applied to the derivation of the Plan's works schedule and the planning for the location of all facilities has been completed. Detailed design will be carried out in the development phase. The facilities will be developed in a manner that allows them to serve the demand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

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.

4.1.3. Proposed Development Staging

Based on existing infrastructure availability and the pattern of land ownership within the East Leppington Precinct, a proposed development staging plan has been produced and is presented as Figure 4.1. Cardno developed the development staging plan based on information provided by the major landowner in Cambelltown LGA, along with associated development projections.



Source Department of Planning and Infrastructure, 2013, East Leppington Infrastructure Delivery Plan

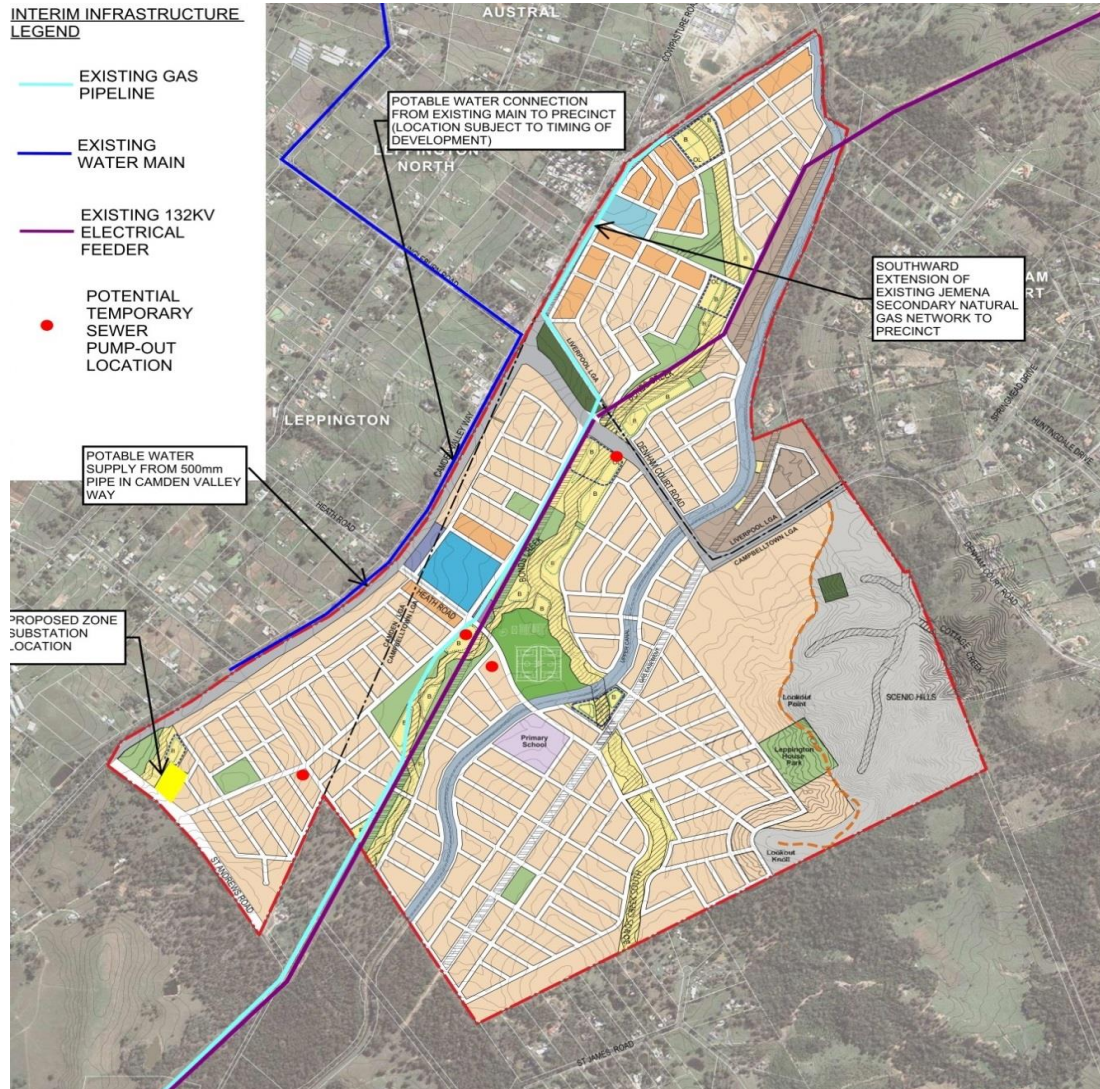
Figure 4.1 Indicative Development Staging Plan

The development staging plan proposes 11 separate development stages, commencing in the south west corner of the Precinct and progressing to the north and east. Construction of first lots is anticipated to commence in the southern parts of the precinct, as advised by the major landowner, with the release program thereafter consisting of approximately 250 lots per annum. Full delivery of development within the Precinct is likely to be achieved over approximately 16 years, with development complete in approximately 2029.

4.1.4. Existing Infrastructure and Interim Servicing Strategy

Existing infrastructure services networks in the East Leppington Precinct are generally limited, supplying only the existing semi-rural development in the Precinct. Advice has been sought from the relevant utility agencies to determine existing capacity of infrastructure either in the Precinct or within close proximity that could be augmented to allow initial development to occur within the Precinct.

A set of interim servicing strategies has been proposed by the utility agencies to provide for initial stages of development in the Precinct. A summary of these potential interim servicing arrangements is presented in the following figure and the proposals for each infrastructure type is discussed below.

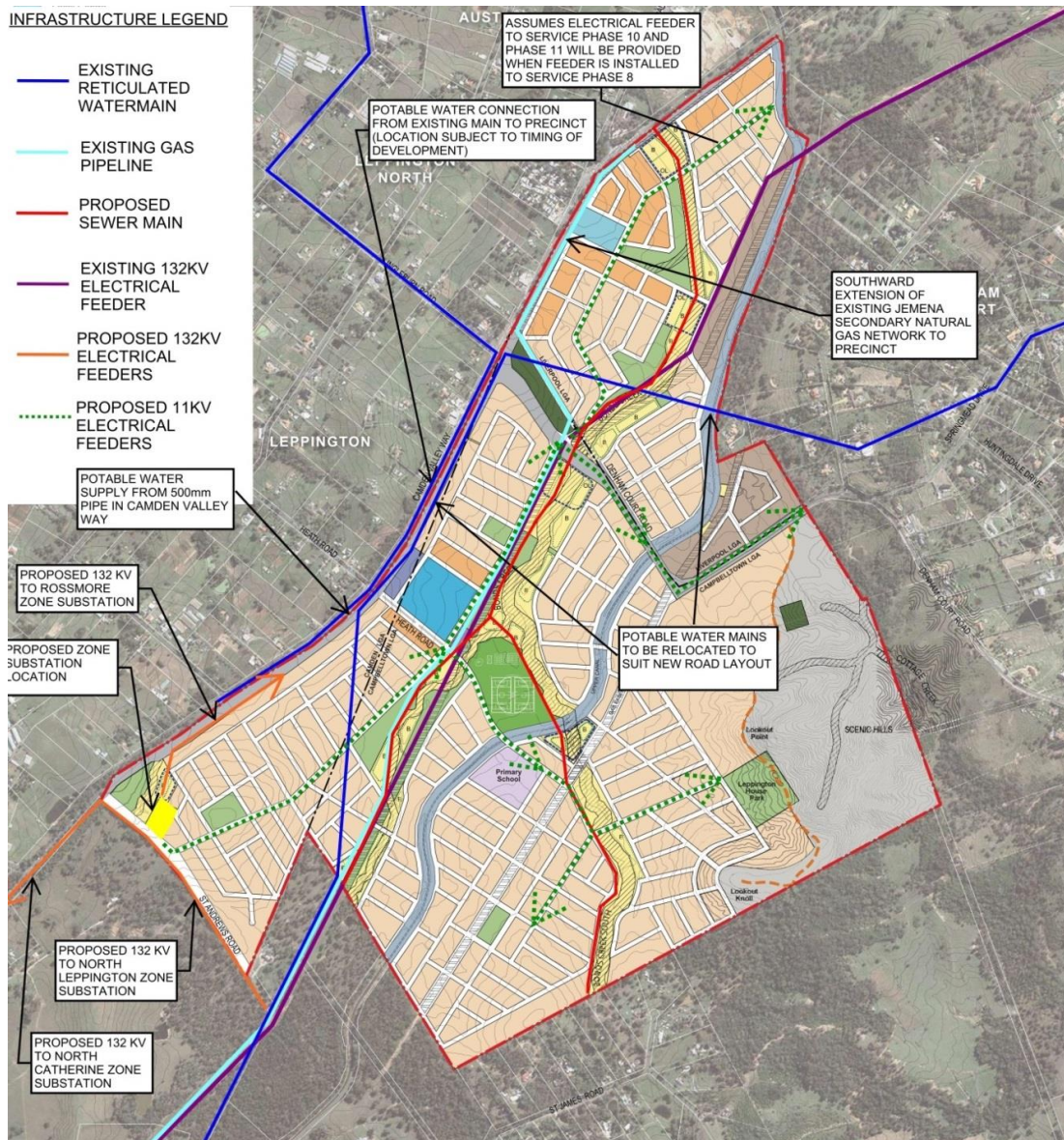


Source Department of Planning and Infrastructure, 2013, East Leppington Infrastructure Delivery Plan

Figure 4.2 Interim Servicing Strategy and Initial Development Areas

4.1.5. Ultimate Infrastructure Strategy

A description of the proposed ultimate servicing arrangements for the East Leppington Precinct is presented in the following figure. The details of the proposed trunk services infrastructure arrangements for the East Leppington Precinct is presented in the June 2013 IDP.



Source: Ultimate Trunk Services Infrastructure Plan (Source: Cardno 2013)

Figure 4.3 Ultimate Servicing Strategy

4.2. Open Space and Recreation Requirements (Whole Precinct)

This section focuses on the 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 Precinct are documented in the report *Social Infrastructure and Open Space Assessment* prepared by Elton Consulting in September 2012.

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

4.2.1. Existing Provision

The Precinct contains no existing community facilities, services or open space which might be used or adapted for use by the future population of East Leppington.

Some local level facilities and open space areas are located in adjacent areas. However these are not within local walking distance for the future East Leppington population and have been provided to meet the needs of their local catchments and generally will not have capacity to also meet the needs of the future East Leppington population.

While there is some spare capacity within sporting facilities in Campbelltown LGA, these will not be conveniently accessible to the East Leppington population, especially for local level activities.

Existing facilities in adjacent Growth Centre precincts are likely to be redeveloped to meet the needs of their future populations and will not be available in the future to also address demand from East Leppington

Any spare capacity which currently exists in facilities and open space within Camden and Liverpool LGAs is likely to be taken up by population growth in other release areas already approved.

This means that future demand for local level facilities, services and open space will need to be addressed by new social infrastructure to be provided within the East Leppington Precinct.

The needs of the future East Leppington population for district and regional level facilities, services and open space will be met by existing facilities and regional open space and by those proposed to be developed within the North Leppington Precinct. There will be no need to provide any regional facilities or open space within the East Leppington Precinct.

4.2.2. Recreational demand assessment based on forecast demographics

Initially there will 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 is to be provided.

It is anticipated that the proportions of empty nesters and older people will be similar to that usually experienced in new release areas, but, over time, will rapidly increase to approximate those in the wider district once services and public transport become well established.

Over time, the peaks in the age distribution associated with a predominance of young families will reduce and the population will become more diverse. Increasing proportions of young adults and older people will be attracted to the area once the Leppington Major Centre facilities and services are 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+ will also increase 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.

In this way, 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.

Demand for local open space relates to residents' expectations and aspirations. New developments will initially contain a predominance of families with children, adolescents and young people, and over time will include more

middle aged and older people, so that eventually it will have a population representative of the broader community.

From a recreational viewpoint the major target groups in new release areas are children aged 0-14 years, and adults 25-40 years.

Local open space is important for encouraging informal interaction and creating opportunities for new and existing residents to come together and build networks, both at a local neighbourhood and whole of community level. In addition open space which encourages extended family and social group activity, for walking and cycling as well as family gatherings, is required. The level of local open space will in part be informed by each Council's standards of local open space provision.

In addition to demographic influences on demand for open space and recreational facilities, changes in participation in the range of sports and activities also influence the need for provision of facilities in new areas.

Facilities for younger people such as outdoor courts, cycle tracks, skate/scooter/rollerblade facilities, BMX tracks, and more adventurous play areas, will be required.

There will be a demand for the informal use of parks for purposes such as social gatherings and outings for family and culturally diverse groups, particularly in areas of medium density development. Other informal uses for which there are high levels of demand include a range of playground experiences and dog walking areas.

4.2.3. Open space requirements

It is recommended that a total of about 41 hectares of open space be provided in East Leppington Precinct. This is based on standards for the provision of open space and recreation used by the three Councils in other parts of their LGA's, and the proportion of the total forecast population in each LGA, as shown in Table 4.1 below.

Table 4.1: Open Space Requirements: East Leppington

LGA	Forecast population within East Leppington precinct	Rate of provision per 1,000 people	Hectares of open space to be provided
Camden	2,174	2.83	5.9
Campbelltown	8,838	2.83	24.4
Liverpool	3,485	2.83	9.0
TOTAL	14,497	2.83	39.4

Source: Elton Consulting, 2013, Social Infrastructure and Open Space Assessment: East Leppington

The recommended amount of open space for informal / passive parks makes provision for:

Local parks being within walking distance of most dwellings

Minimum of 0.2 hectares' size for local parks

Two district / key suburb parks of a minimum size of 3 hectares.

The recommended amount of open space for sporting fields/active recreation makes provision for:

- 3 double playing fields (6 fields), at a rate of a local double playing field per 5,000 people. The forecast population is not high enough for a four-field district sporting complex at 1: 60,000 people.
- 3 double playing fields x 5 hectares per double playing field = 15 hectares. This land allocation allows for junior sports fields, sports courts and other active recreation facilities to be provided with each set of double playing fields.

Land not included in the open space budget includes:

Regional active and informal open space catered for in the Western Sydney Parklands.

50% of flood prone land or land similarly constrained, such as detention basins that is suitable for informal and passive open space. While it is sensible in terms of land use efficiency to use flood-prone land for some recreation purposes, there are concerns that this limits the usability and quality of the open space provided, as well as significantly increasing its maintenance costs. The proposed strategy for open space is based on the principle that flood-prone land may not be used for active sporting facilities, but may be considered for passive recreation uses.

Riparian land and other conservation land such as bushland, as its access and usefulness for recreation purposes may be limited. However, it should be noted that DP&I has adopted a position that 50% of the riparian corridor may be counted as open space.

Passive open space

It is noted that the draft ILP makes provision for one district level park, provisionally named Leppington House Park, which is a larger park of 3.8 ha, potentially providing “something for everyone” family activities. Opportunities to address the need for a second larger district park include the 2.75 ha park in the northern corner of the precinct.

Playgrounds

The recommended rate of provision of playgrounds for young children is one playground per 500 children aged 0-4 years. For playspaces for older children, the rate is one playspace per 500 children aged 5-12 years. Typically, in new release areas five plus years after development, children aged 0-4 represent about 10% of the population, and children aged 5-11 represent about 12%. This suggests there will be a need for about 3 playgrounds for young children and 3-4 for older children. Playgrounds and playspaces should be provided together in district parks to meet the need for “something for everyone” family activities.

There will be a need to provide local parks within walking distance of most dwellings. When the physical constraints of the East Leppington precinct are considered, particularly the main road network, the riparian corridor, the water supply canal, and the gas and electricity easements, there are five discrete catchments for children’s playgrounds within 500 metres of a central point.

For these reasons, five playgrounds for young children are recommended: two in the district parks, and in three local playgrounds.

Active open space

The recommended rate of provision of sporting fields is 1 double playing field per 5,000 people. Applying that rate to the proposed population of East Leppington means that three double playing fields (6 single fields) should be provided (totalling about 15 ha). That rate is consistent with that applied to the Austral-North Leppington and Oran Park-Turner Road precincts.

The draft ILP has proposed that only one double playing field be provided within East Leppington, totalling 5.9 ha.

The level of apparent under-provision, when compared with the recommended and accepted standard, is understood to have arisen as consequences of Campbelltown Council’s view that:

There is identified spare capacity in the sporting complexes located in suburbs of Campbelltown to the south and south-east of East Leppington. It has been assumed that this spare capacity will satisfy much of the demand arising from East Leppington, especially for district level facilities.

The distance to travel to the sporting complexes located in suburbs of Campbelltown to the south and south-east of East Leppington is in some cases less than 10 km, which is not a considerable distance to travel for sports activities, particularly club sports.

A range of central venues for key sports (hockey, netball, basketball, softball, Oztag and touch football) exist, and these sporting associations do not plan to outsource their competitions.

Participation in sport in Campbelltown needs to increase, rather than creating more teams. With exceptions, clubs and associations are generally not considering expanding the number of teams in the area.

Outdoor Courts

The land allocations recommended for sportsgrounds make provision for inclusion of outdoor sports courts.

The details of total open space for East Leppington by hierarchy and by type of open space is set out in Table 4.2

Table 4.2: East Leppington: Types of open space to be provided

Type of district and local open space	Recommended open space (ha)	ILP version
Informal / passive parks	25.23	10.2
Sporting fields / active recreation	10.0	5.9
Open space along riparian corridor	4.14	9.8
Total	39.37	26.0

Source: Elton Consulting: 2013, Social Infrastructure and Open Space Assessment: East Leppington

Table 4.3 sets out the same details for Liverpool LGA.

Table 4.3 Liverpool: Types of open space to be provided

Type of district and local open space	Liverpool: ILP version
Informal / passive parks	1.7
Sporting fields / active recreation	0.0
Open space along riparian corridor	4.1
Total	5.9

Source: Elton Consulting: 2013, Social Infrastructure and Open Space Assessment: East Leppington

4.2.4. Calculation of contributions

Contributions will be collected 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:

$$\text{Contribution per person (\$)} = \sum \frac{\$INF}{TP}$$

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 7 – works schedule).

TP = the estimated resident population (in persons) that will demand each facility - that is, the expected net additional population of the East Leppington (Liverpool) Precinct (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 set out below.

For convenience, these rates are reproduced in Table 4.4.

Table 4.4 Estimated residential development occupancy rates

Development type	Estimated occupancy rate
Detached dwelling	3.4
Semi-detached, town house, terrace	2.6
Large Lots	3.4

There are no community facilities to be provided in Liverpool as part of this Plan.

4.3. Water Management Infrastructure (Whole Precinct)

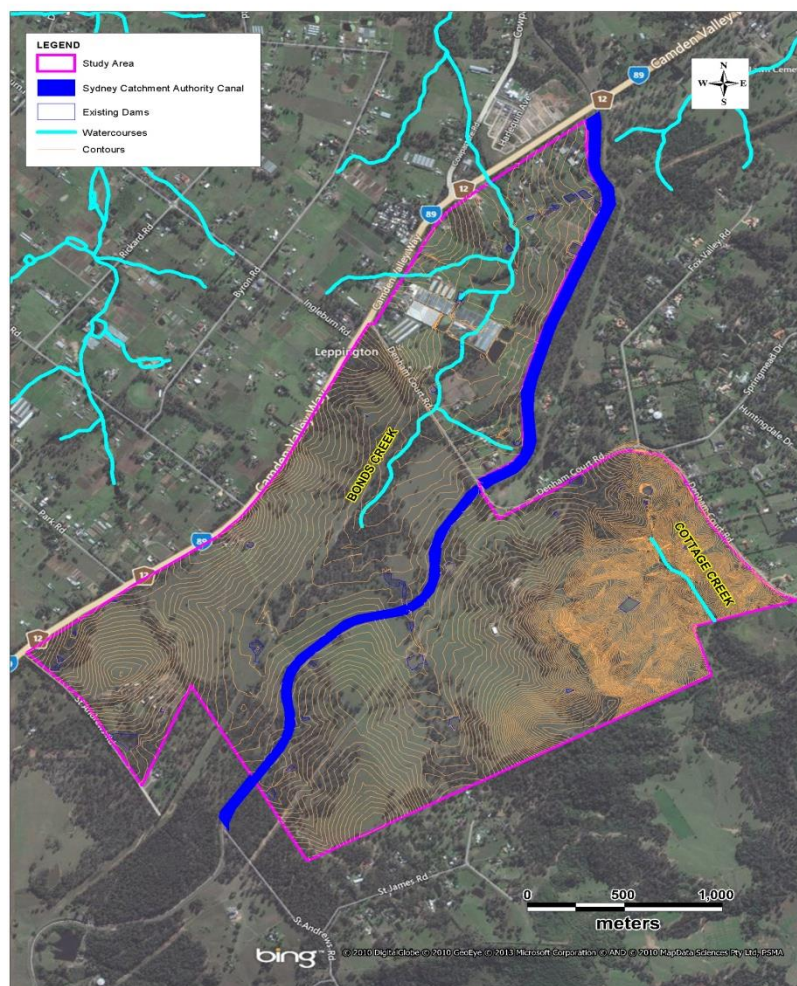
4.3.1. Existing Water Courses and Water Management

The main land use within the precinct is currently agriculture. There are some dams spread across the study area in drainage depressions.

There are two main Creeks within the study area. Cottage Creek located along the eastern boundary and Bonds Creek flowing from southwest to northeast centrally through the precinct.

A Sydney Catchment Authority (SCA) canal flows from southwest to northeast in direction along the east of the Liverpool part of the precinct.

Topographical information indicates surface water in the east of the precinct is conveyed to Cottage Creek, with the remaining being conveyed to Bonds Creek. A number of existing culverts convey overland flow beneath the SCA canal. The proposed study area is shown in Figure 4.3 and indicates the main watercourses within the catchment.



Cardno
6003 10
July 2013

Water Cycle Management Study
East Leppington

FIGURE 1.2
STUDY AREA

W:\Current Projects\600319\Reports\Figures V1\Fig1_1-Study Area Wor

Source: Cardno, 2012, East Leppington Water Cycle Management Report

Figure 4.4 Existing Water Courses and Water Management

4.3.2. Proposed water cycle management facilities

This outlines the relationship between the expected types of development and the demand for additional public facilities.

A Water Sensitive Urban Design (WSUD) approach has been developed to manage stormwater runoff in the East Leppington Precinct. The Water Cycle Management Report East Leppington prepared by Cardno Pty Ltd. Dated July 2013 establishes the framework for the management of stormwater quantity and quality related to the expected urban development of the Precincts.

The strategy informs where water management controls are to be located in the Indicative Layout Plan (ILP) and document requirements for the preparation of a site specific Development Control Plan (DCP).

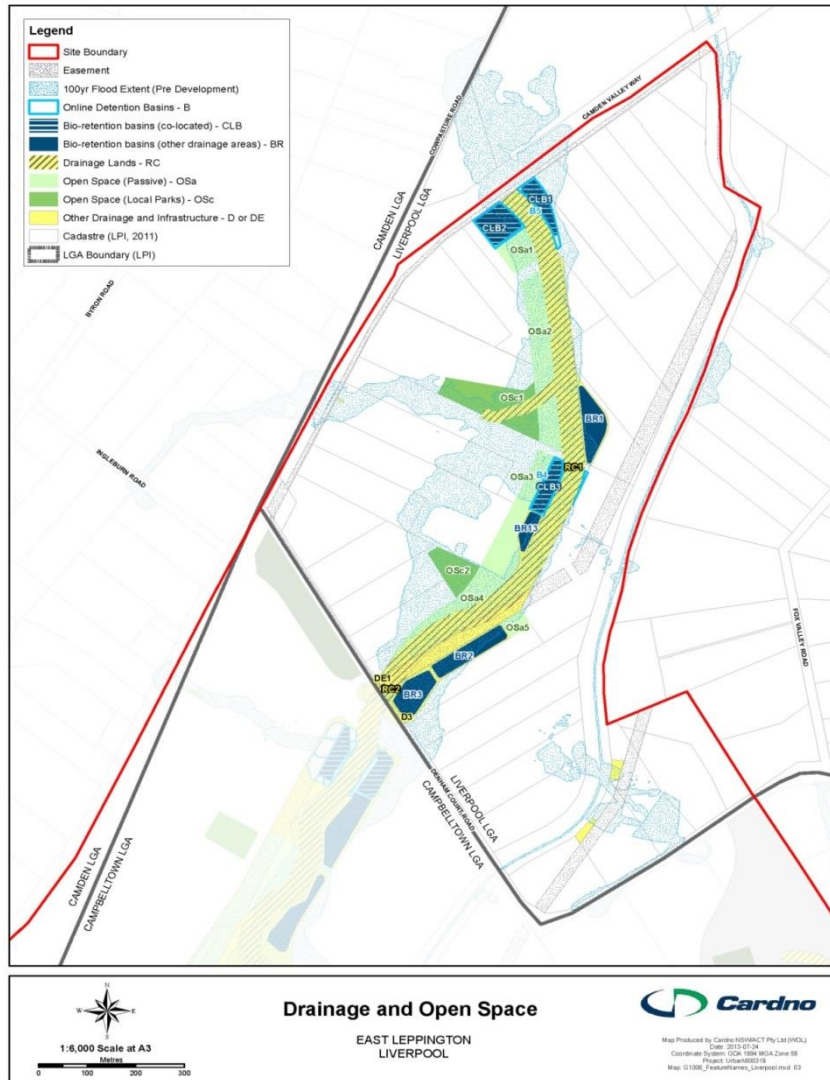
Retarding basins are required in order to maintain the existing flood behaviour downstream of the Precinct.

A portion of the Study Area within the Liverpool LGA may not be developed at the same time as those areas upstream of Denham Court Road. Retarding Basin B3 has been designed in order to attenuate peak flows during the 100 year ARI event to below pre-development levels and achieve negligible changes to flooding downstream of Denham Court Road.

Under ultimate developed conditions, a constructed naturalised channel along with two on-line basins are proposed within the Liverpool LGA and extends from Denham Court Road to Camden Valley Way. The flooding assessment indicates general decreases in flood depth would be expected with a significant reduction in flood extents contained within the proposed channel in comparison to existing conditions.

The Water Cycle Management report has demonstrated that flood behaviour and water quality can be appropriately managed within the East Leppington Precinct and can be accommodated within the proposed ILP.

The locations of proposed trunk infrastructure that comprises stormwater channels and basins for the East Leppington Precinct (Liverpool LGA) are shown in Figure 4.5.



Source: Cardno, 2013, East Leppington: Water Quality Management Report: GIS for Section 94 calculations

Figure 4.5 Proposed Drainage Channel and Basin Infrastructure Liverpool Precinct

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 and A Act. The facilities may include lot-scale 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.

The land acquisition and works costs associated with implementing the Water Management Strategy in Liverpool are outlined in Schedule 1.

4.3.3. Calculation of contributions

Contributions will be collected from residential and non-residential development.

Contributions are determined on a per hectare of Net Developable Area basis.

The monetary contribution per person is calculated as follows:

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

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 for drainage (in hectares) that will generate demand for each facility

Refer to Table 4.5 of this Plan.

Table 4.5 Expected Net Developable Area – Liverpool Precinct

Land Use	NDA (ha)	Equivalent NDA assuming 15dw/ha
Environmental Living (5 dwellings/ha)	9.48	3.16
Very Low Density Residential (12.5 dw/ha)	3.28	2.73
Very Low Density Residential (8.3dw/ha)	3.10	1.72
Lower Density Residential (15 dw/ha)	40.38	40.38
Medium Density Residential (25 dw/ha)	17.75	19.97
Sub Total Residential	74	68
Neighbourhood Centre	1.60	2.00
TOTAL	75.59	69.96

4.4. Transport Management Facilities (Whole Precinct)

This section outlines the relationship between the expected types of development and the demand for additional transport and traffic facilities.

Occupants of expected development in the East Leppington Precinct will use 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 in the North Leppington Precinct; and
- facilities for walking and cycling.

There are only minimal existing public transport services and walking/cycling facilities in the area but this is set to be transformed with the completion of the South West Rail Link. The limited existing (or absent) provision for walking and cycling will also not be appropriate to future demands.

The Indicative Layout Plan for the East Leppington Precinct and the East Leppington Precinct Traffic Assessment prepared by Cardno together identify a range of transport infrastructure works that will be required to mitigate the impacts and otherwise accommodate the expected development.

The plan provides 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 Precinct; and
- the scope and specification of those facilities,

are contained in the Transport and Traffic Assessment.

A summary of the main findings of the Transport and Traffic Assessment are set out below:

4.4.1. Proposed Road and Intersection Hierarchy

The East Leppington Precinct Traffic Assessment has undertaken a traffic assessment for the East Leppington precinct to assess its impact on the surrounding road network, as well as to provide advice on the precinct layout, the road hierarchy and the provision of public and active transport

The following outlines the findings from this assessment:

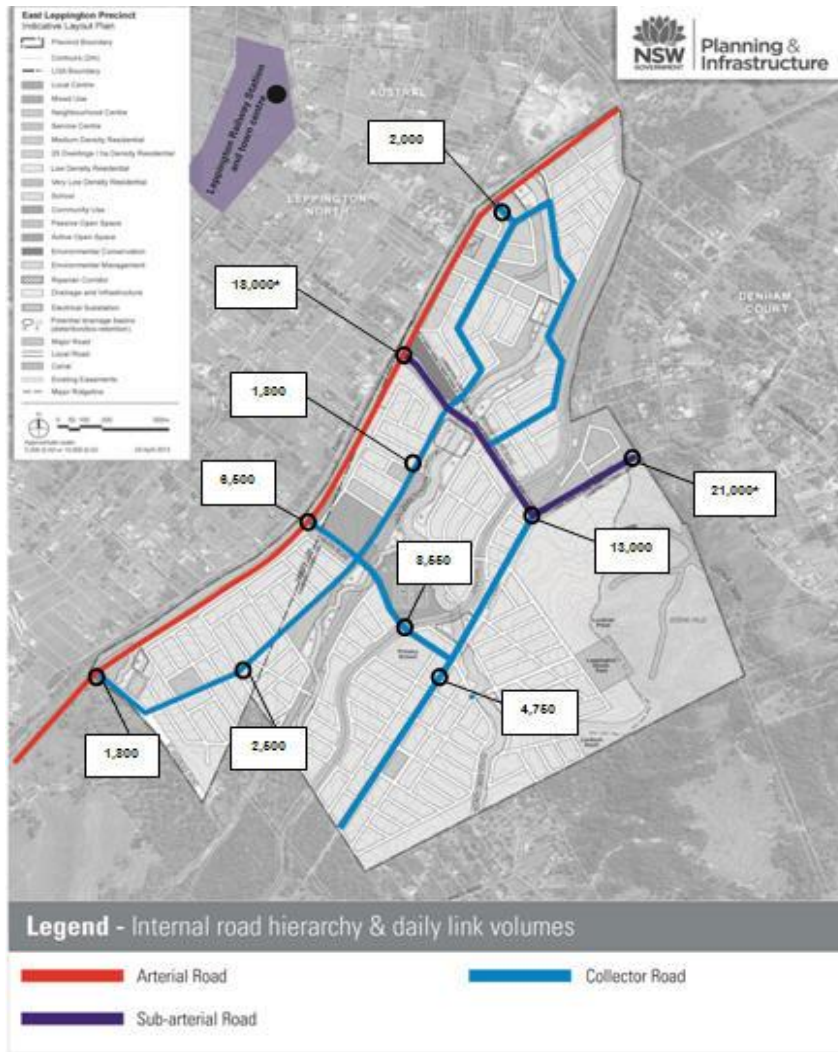
Based on the traffic modelling it is envisaged that Denham Court Road will carry approximately 18,000 vehicles daily within the boundaries of the East Leppington Precinct north of the roundabout. Based on the expected traffic volumes Denham Court Road will require two lanes in each direction north of the roundabout located at the southern connection to the development. It is envisaged that this upgrade will be required in 2026, that is, when volumes are expected to exceed 16,000 vehicles per day.

As the area develops, the road environment of Denham Court Road will change, transitioning from a rural arterial to an urban arterial.

This change, as well as the introduction of intersection controls such as roundabouts will sufficiently change the environment to the effect that existing safety deficiencies relating to expectancy, lighting and alignment could be reduced and therefore the existing alignment is considered acceptable.

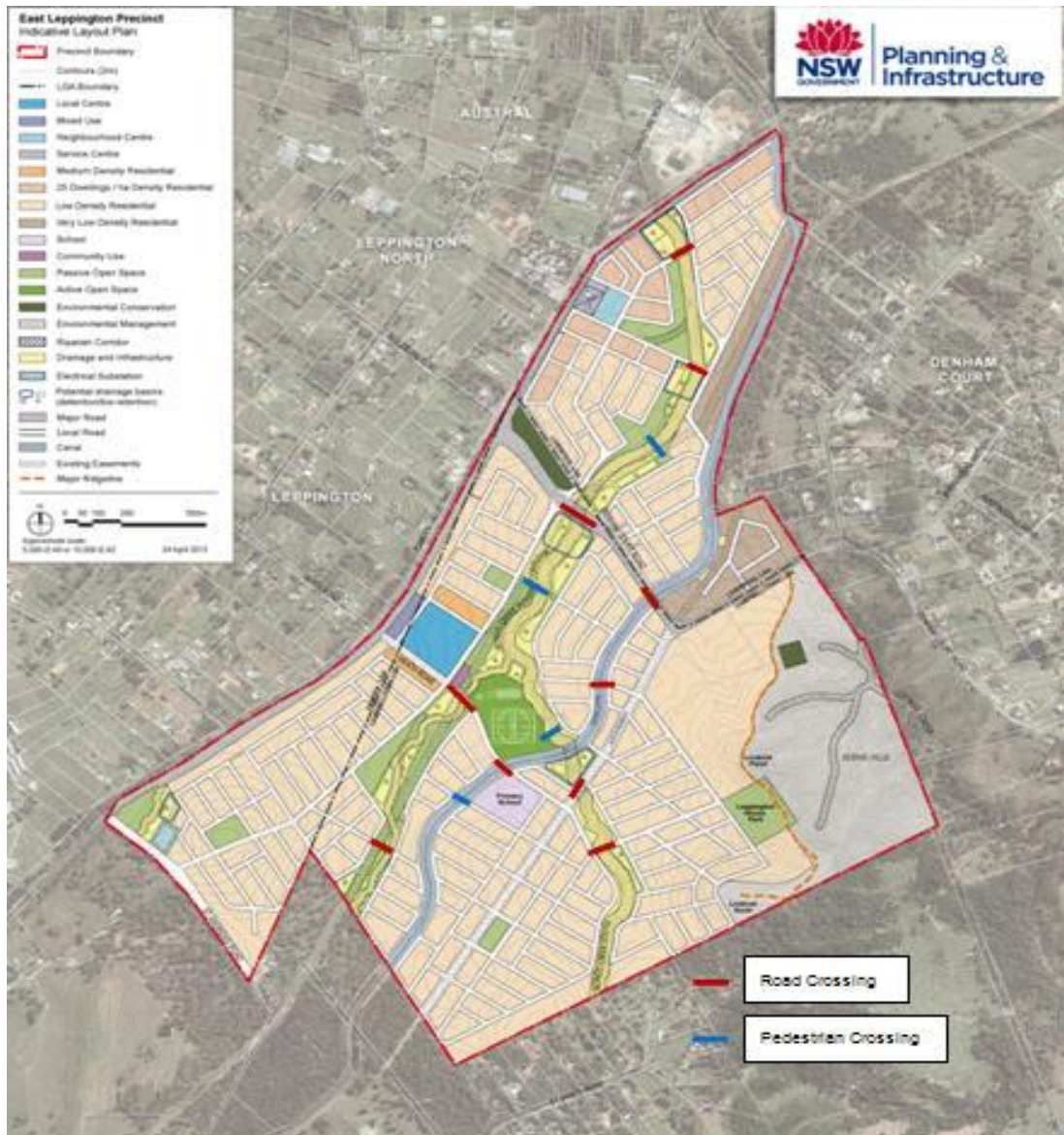
Collector roads have been identified within the Liverpool portion of the precinct to provide structure to the development patterns and to guide the local road network.

Locations of bridges have been informed by the results of this study and developed in consultation with the urban designer, in order to appropriately provide pedestrian and vehicular access and connectivity throughout the precinct. Figure 5.3 indicates the recommended locations of vehicular and pedestrian bridges.



Source: Cardno, 2013, East Leppington Transport and Traffic Assessment

Figure 4.6 East Leppington Internal Road Hierarchy & Daily Link Volumes (2036 – 10 year design horizon)

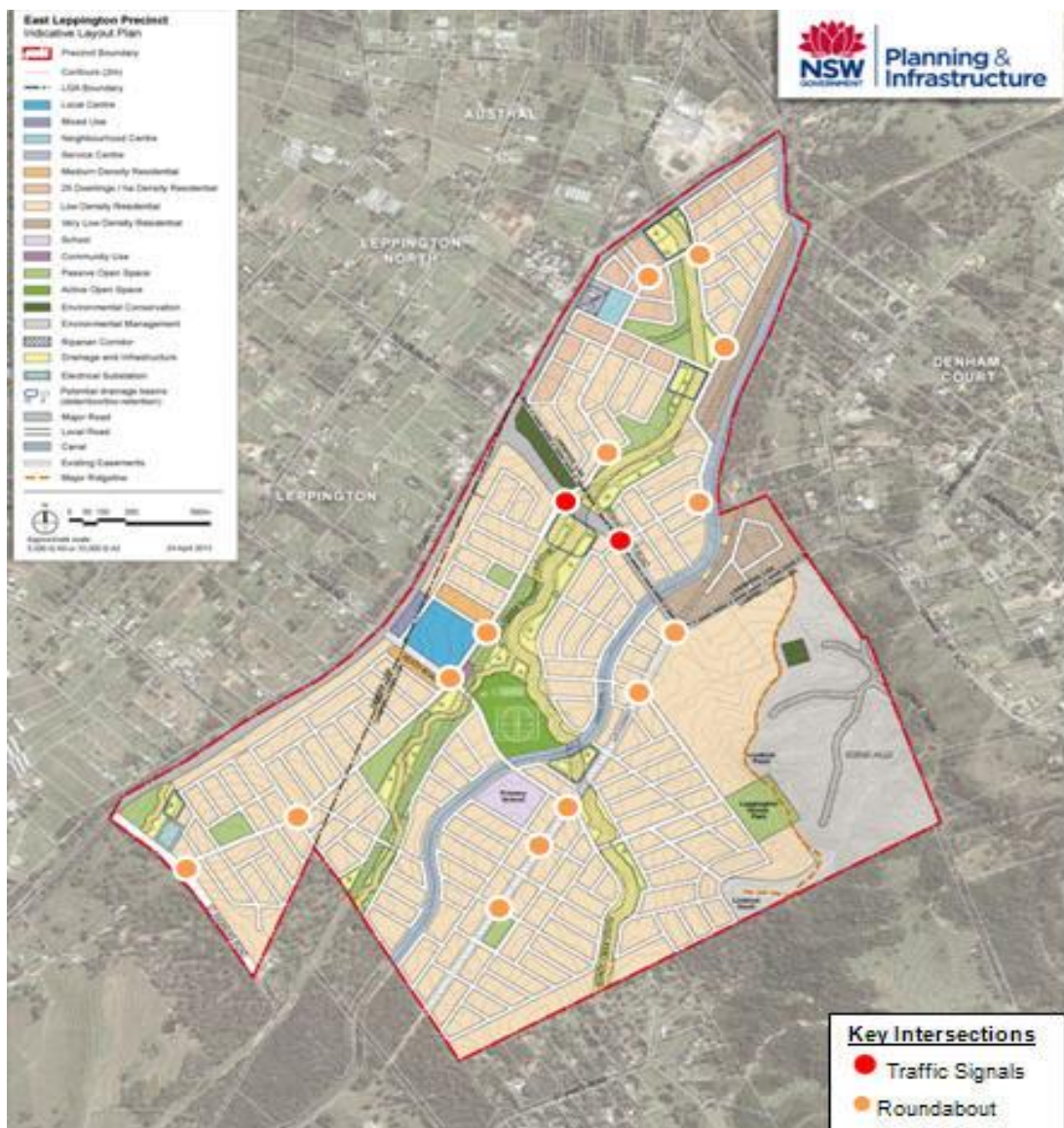


Source: Cardno, 2013, East Leppington Transport and Traffic Assessment

Figure 4.7 East Leppington Transport Section 94 Infrastructure: Vehicular and Bridge Locations

The selection of appropriate intersection treatments is dependent on a number of factors, including traffic operations, road function, road safety and surrounding environmental conditions. High level principles were adopted for the selection of intersection treatments, in particular the provision of roundabouts, within the East Leppington Precinct. These principles include the provision of roundabouts at collector road intersections to ensure satisfactory traffic operations within the precinct, as well as balanced traffic flow across all approaches when considering the provision of roundabouts.

The locations of these roundabouts are illustrated in Figure 4.8.



Source: Cardno, 2013, East Leppington Transport and Traffic Assessment

Figure 4.8 East Leppington Transport Section 94 Infrastructure: Intersections and Roundabouts

The following provides the key excerpts from Cardno’s findings:

4.4.2. Public Transport

The Growth Centres Development Code (2006) provides direction when planning and designing the growth centre precincts and outlines a number of policies to specifically address sustainable transport principles and the connectivity of the precincts.

The only new public transport service proposed to service the East Leppington precinct, which includes an additional regional bus route along Camden Valley Way, will not provide all East Leppington residents with a viable public transport option when deciding upon transport modes. The existing and planned bus stops on Camden Valley Way are well outside of the acceptable 400m distance for the majority of future East Leppington residents. Furthermore, the proposed regional bus route R4 that will run adjacent to the East Leppington site will not provide access to the new Leppington Railway Station on the South West Rail Link, passengers will instead be connected to further away Casula and Liverpool railway stations.

To ensure public transport is a viable travel option for East Leppington residents, the following range of measures should be considered as part of the precinct planning.

Direct bus service

Frequent and direct bus services linking East Leppington to the Leppington Railway Station are required.

Pedestrian path

Although the Leppington Railway Station will be located outside of the generally accepted 800 metres walking catchment for railway stations, a safe and direct pedestrian route to the Leppington Town Centre will encourage some residents to access the train station by foot. The footpath should be generally aligned with the road network and include signalised crossings where required to facilitate safe crossing movements for pedestrians and cyclists.

Cycling route

A safe and direct cycling route from the site to Leppington Railway Station will provide another healthy alternative transport mode that East Leppington residents can use to access rail services. The cycle route should have coherence, directness, safety, attractiveness and comfort to adhere to the principles outlined in the NSW Bicycle Guidelines. Well-located and weather-protected cycling storage facilities should be provided at Leppington Railway Station.

Interchange facilities

The Leppington Railway Station should facilitate easy transfer between transport modes, with facilities for cyclists, arriving and departing bus passengers, taxi customers, kiss & ride and park & ride users.

The South West Sector Bus Servicing Plan (SWS Bus Plan) defines district routes as ones that “link residential area with the nearest district centre and other modes operating to the nearest regional centre (e.g. train station or ferry wharf), or the nearest regional centre”. A district route servicing the East Leppington precinct is necessary to provide residents with a link to the Leppington Town Centre, Leppington Railway Station and other district and regional destinations.

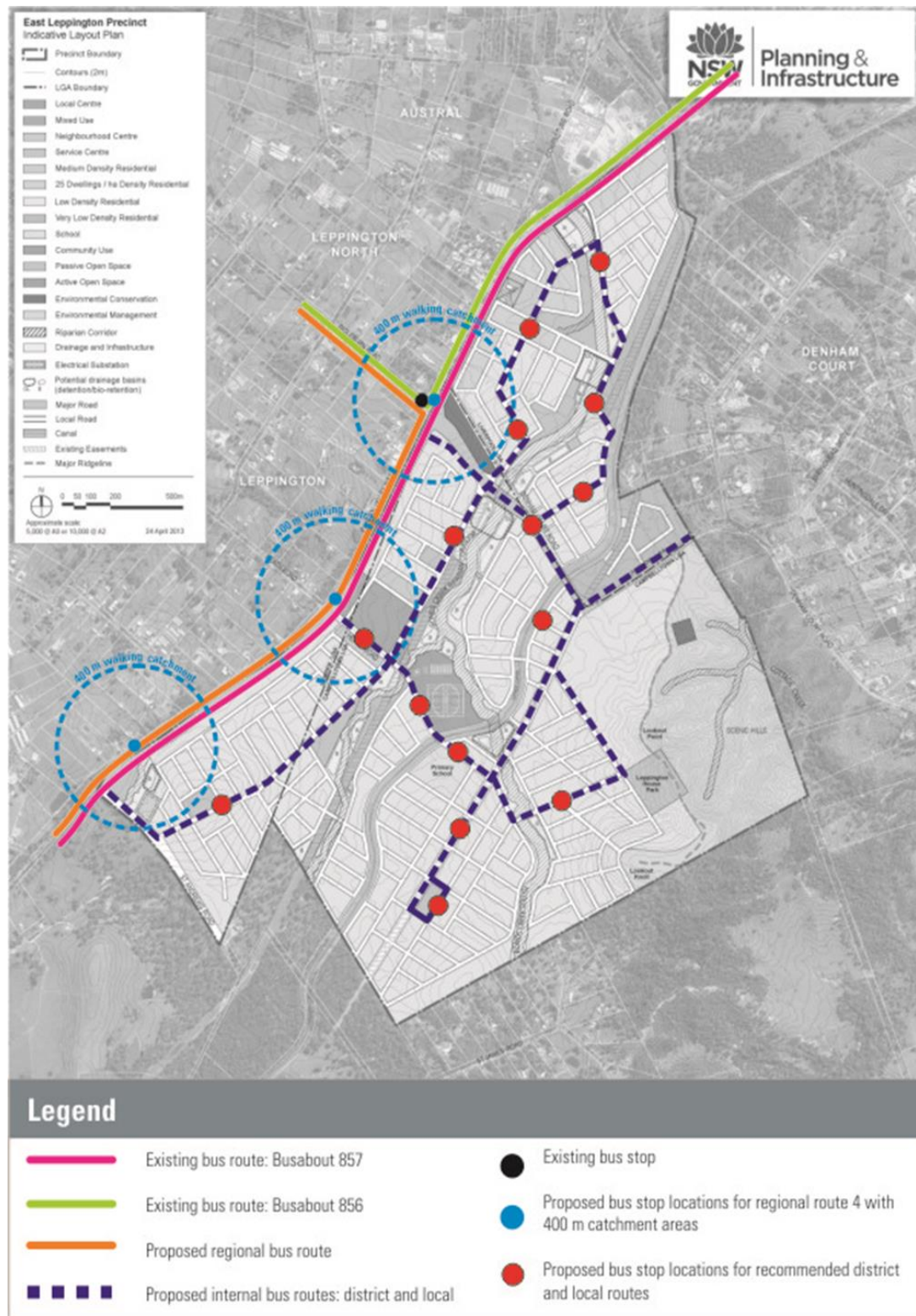
Local bus route servicing East Leppington

The SWS Bus Plan defines local routes as typically ‘shopper hopper’ services which only operate at very low frequencies, generally two-hourly or less, during off-peak periods to meet a specific need. A local route providing services within the East Leppington precinct with connection to the precinct’s local neighbourhood retail facilities is an important service to provide a viable alternative to private vehicles. The local route could also connect to local schools and the Leppington Town Centre.

School bus route servicing East Leppington

As the majority of the East Leppington precinct is outside of the primary school’s 400m walking catchment, a school bus route is recommended to reduce reliance on cars for dropping and collecting children from the school.

Figure 4.9 sets out the public transport improvements recommended



Source: Cardno, 2013, East Leppington Traffic and Transport Assessment

Figure 4.9 Proposed and Potential Bus Networks

Walking and Cycle Network

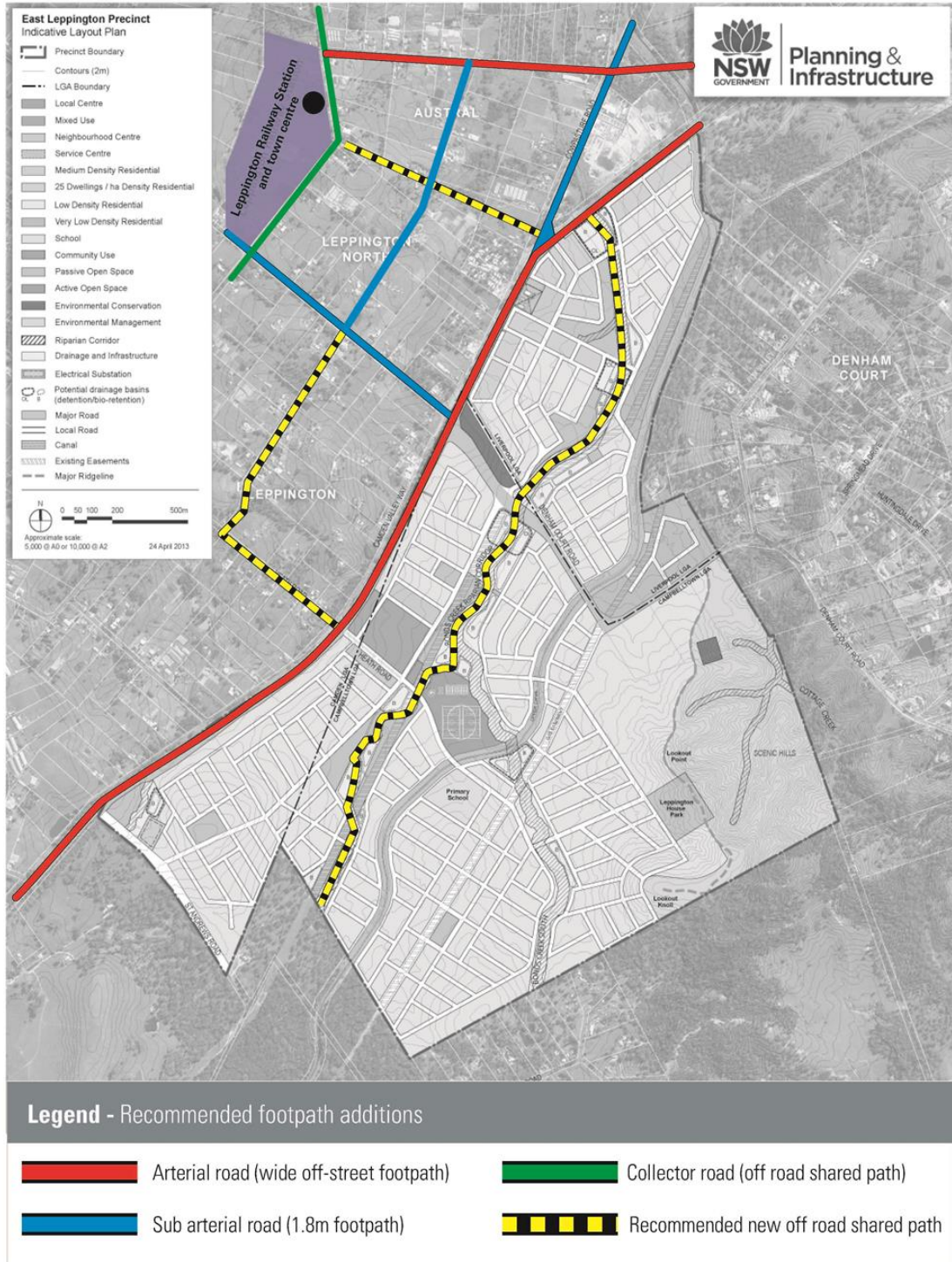
To deliver on the Growth Centres Development Code sustainable transport policies, appropriate pedestrian and cycling connections and facilities are recommended to allow access both within the East Leppington precinct and also with the Leppington town centre and railway station. Adherence to the development code when planning the East Leppington precinct will result in appropriate pedestrian connections and infrastructure.

The northern tip of the East Leppington precinct is around 1,500 metres from the new Leppington Railway Station and town centre, translating to a short cycle trip of around five minutes if well-connected and accessible cycling infrastructure is provided. To ensure that appropriate cycling connections and facilities are provided to connect East Leppington with the Leppington town centre and railway station by bike, additional cycle ways are recommended to provide connection with the planned and proposed cycle ways that will be provided as part of the Camden Valley Way upgrade and the development of Austral and North Leppington.

Figure 4.11 demonstrates the recommended cycle links that should be provided between East Leppington and the Leppington town centre and train station. These new connections have been added to the already planned routes as part of the Austral and North Leppington development.

The location and length of these routes has been determined with reference to the estimated demand and in conjunction with the urban design process.

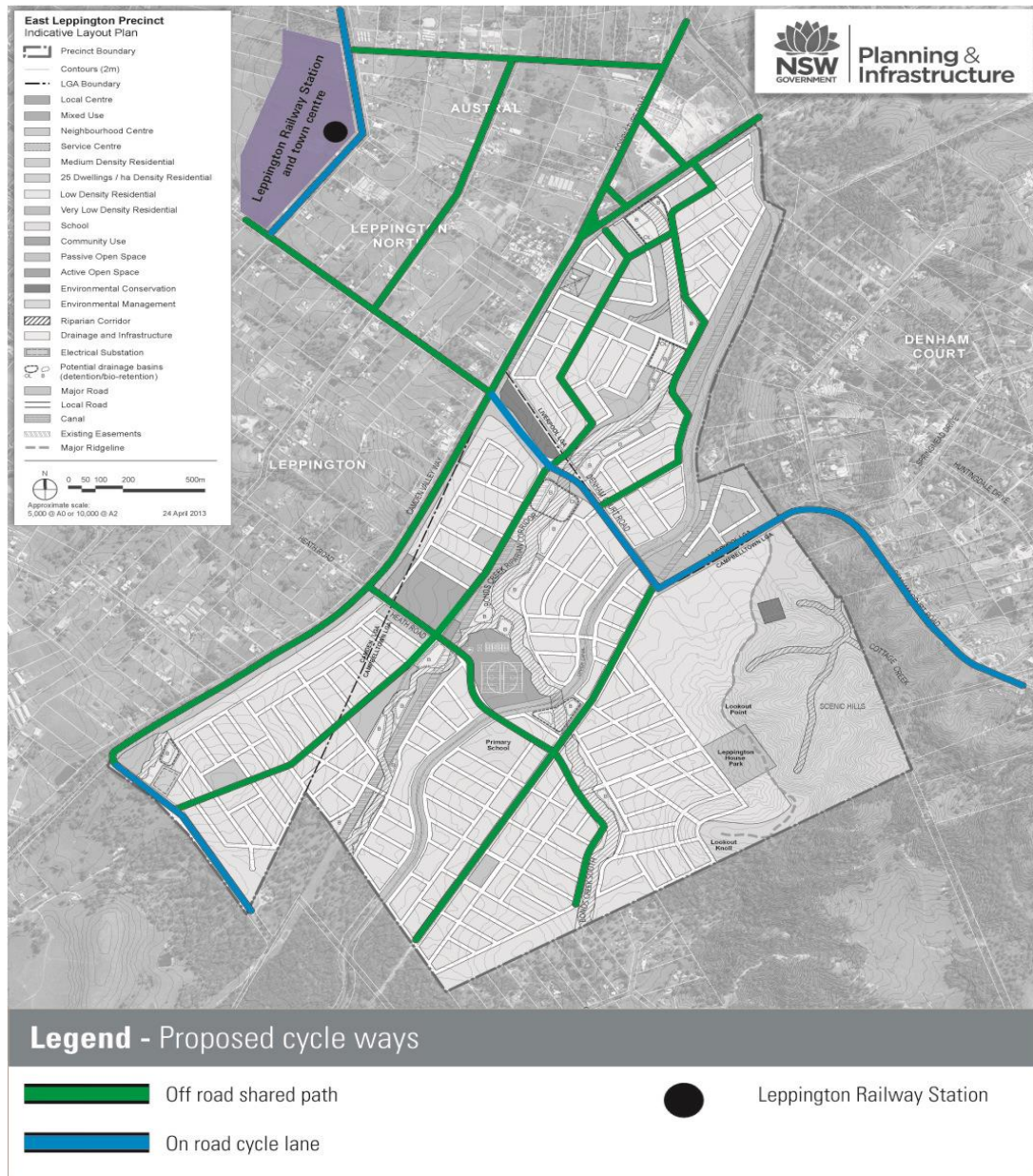
An accompanying Green Travel Strategy has been developed for the East Leppington precinct to ensure sustainable transport options are prioritised and public transport, walking and cycling facilities are provided and promoted. This strategy should be supported by development of a Green Travel Plan which is implemented as residents move into the area to help establish sustainable transport habits from the start.



Source: Cardno, 2013: East Leppington Transport and Traffic Assessment

Figure 4.10 East Leppington: Recommended Additions to the Proposed Pedestrian Network

A significant new pedestrian pathway is proposed along the open space and drainage spine of the precinct within the Liverpool LGA.



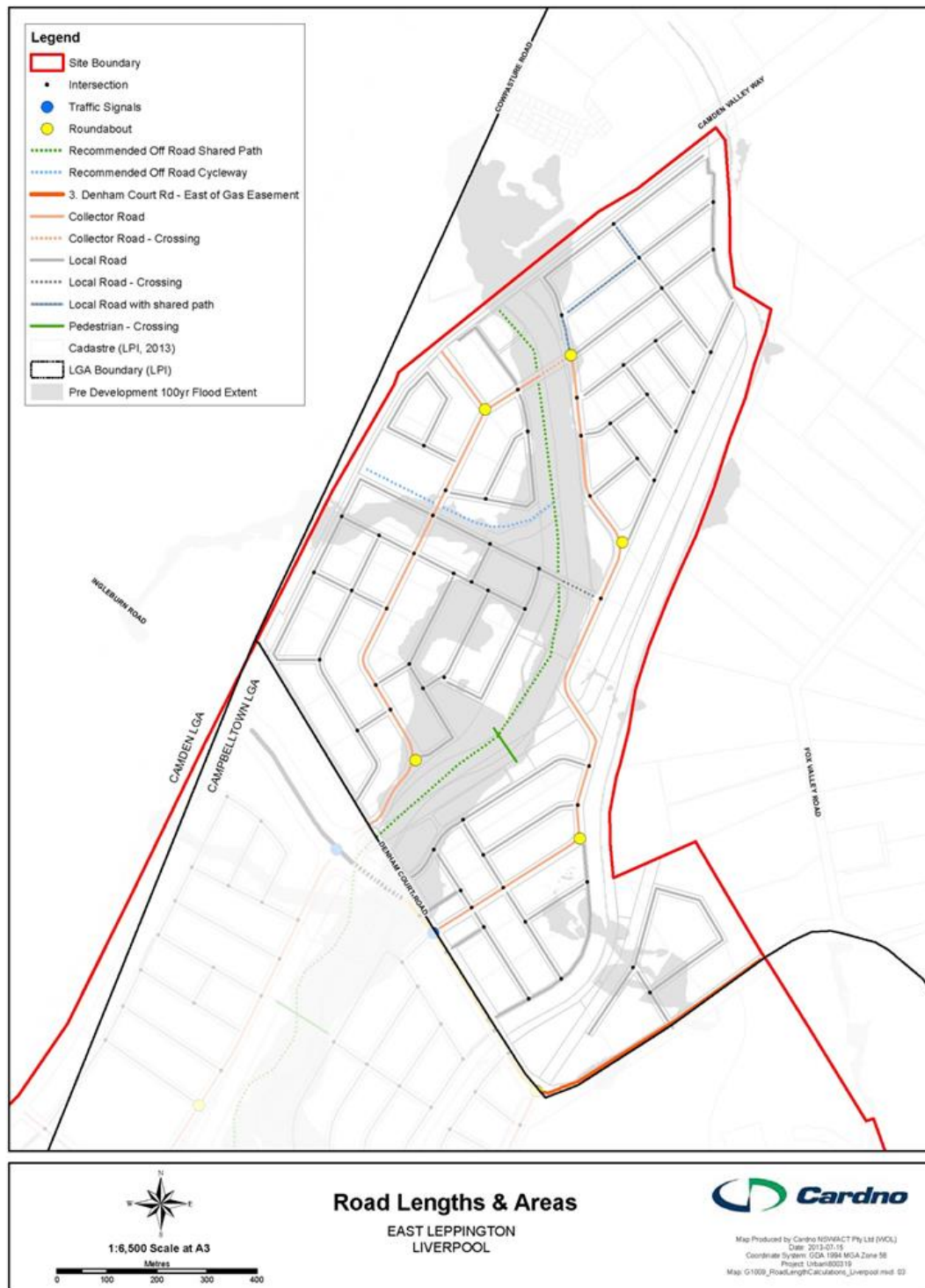
Source: Cardno, 2013: East Leppington Transport and Traffic Assessment

Figure 4.11 East Leppington: Recommended Additions to the Proposed Cycle Network

It is proposed that cycleways be provided off road adjacent to the two main collector roads in the Liverpool LGA with an additional cycleway adjacent to pedestrian walkway proposed within the open space and drainage spine in the Precinct.

Total Works Items Required

Figure 4.12 sets out the Transport and Traffic infrastructure items required for the Liverpool LGA part of the East Leppington Precinct.



Cardno, 2013, East Leppington Transport and Traffic Assessment, GIS for Section 94 calculations

Figure 4.12 Transport and Traffic Infrastructure Required. Liverpool LGA

4.4.3. Works Items Required

The Transport and Traffic Report outlined the land acquisitions and works items required to give effect to the Strategy. The items for Liverpool are contained in the Works Schedule attached. This Works Schedule shows the transport and traffic items which are serving the Liverpool LGA part of the East Leppington Precinct.

4.4.4. Calculation of contributions

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 per person and per dwelling basis and on a per hectare of Net Developable Area basis for non-residential development. Contributions will be collected from residential and non-residential development outside the B2 zone.

The monetary contribution per person is calculated as follows:

$$\text{Contribution per person (\$)} = \sum \left\langle \frac{\$INF}{TP} \right\rangle$$

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 attributable to residential development in the area to which this Plan applies (refer Part 5 – works schedule).

TP = the total estimated persons in the Liverpool part of the Precinct when fully developed – refer to Table 3.1 of this Plan.

For non-residential development

The monetary contribution per person is calculated as follows:

$$\text{Contribution per hectare of net developable land (\$)} = \sum \left\langle \frac{\$INF \times \text{Equivalent NDA}}{NDA} \right\rangle$$

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 for drainage (in hectares) that will generate demand for each facility

Refer to Table 4.6 of this Plan.

Table 4.6 Expected Net Developable Area – Liverpool Precinct

Land Use	NDA (ha)	Equivalent NDA assuming 15dw/ha
Environmental Living (5 dwellings/ha)	9.48	3.16
Very Low Density Residential (12.5 dw/ha)	3.28	2.73
Very Low Density Residential (8.3dw/ha)	3.10	1.72
Lower Density Residential (15 dw/ha)	40.38	40.38
Medium Density Residential (25 dw/ha)	17.75	19.97
Sub Total Residential	74	68

5. Work Schedules and Map

Infrastructure Map

The infrastructure referred to in the contributions plan is shown on the East Leppington 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).

5.1. Water Management: Land

Item	Area Ha	Total Cost
Bio-retention basins		
BR1	0.5554	\$778,882
BR13	0.2000	\$239,204
BR2	0.5547	\$448,740
BR3	0.5090	\$305,411
Total	1.8191	\$1,772,237
Bio-retention basins (co-located)		
CLB1	0.2690	\$161,401
CLB2	0.4545	\$583,265
CLB3	0.2915	\$193,120
Total	1.0150	\$937,787
Drainage Infrastructure		
D3	0.0554	\$33,240
DE1	0.0135	\$22,350
Total	0.0689	\$55,590
Drainage lands		
RC1	6.1434	\$3,725,751
RC2	0.0478	\$55,974
RC	1.3531	\$1,089,224
Total	7.5443	\$4,870,950
Online Detention Basins		
B4	0.1088	\$94,407
B5	0.2197	\$185,444
Total	0.3285	\$279,851
Subtotal	10.7758	\$7,916,415
Contingency	12%	\$949,969.83
Total		\$8,866,385

5.2. Water Management: Works

Item	Area Ha	Construction Cost	Project On Costs	Total Cost
Bio-retention basins				
BR1	0.5554	\$666,527	\$181,962	\$848,489
BR13	0.2000	\$240,000	\$65,520	\$305,520
BR2	0.5547	\$665,656	\$181,724	\$847,380
BR3	0.5090	\$610,822	\$166,754	\$777,576
Total	1.8191	\$2,183,005	\$595,960	\$2,778,965
Bio-retention basins (co-located)				
CLB1	0.2690	\$322,802	\$88,125	\$410,927
CLB2	0.4545	\$545,358	\$148,883	\$694,241
CLB3	0.2915	\$349,777	\$95,489	\$445,266
Total	1.0150	\$1,217,937	\$332,497	\$1,550,434
Drainage Infrastructure				
D3	0.0554	\$19,390	\$5,293	\$24,683
DE1	0.0135	\$4,741	\$1,294	\$6,035
Total	0.0689	\$24,131	\$6,588	\$30,719
Drainage lands				
RC1	6.1434	\$2,150,196	\$587,004	\$2,737,200
RC2	0.0478	\$16,727	\$4,566	\$21,293
RC	1.3531	\$473,575	\$129,286	\$602,861
Total	7.5443	\$2,640,498	\$720,856	\$3,361,354
Online Detention Basins				
B4	0.1088	\$650,000	\$177,450	\$827,450
B5	0.2197	\$650,000	\$177,450	\$827,450
Total	0.3285	\$1,300,000	\$354,900	\$1,654,900
Subtotal	10.7758	\$7,365,571	\$2,010,801	\$9,376,372
Construction Contingency				\$656,346
Fill Disposal Allowance				\$1,688,202
Total Cost				\$11,720,920

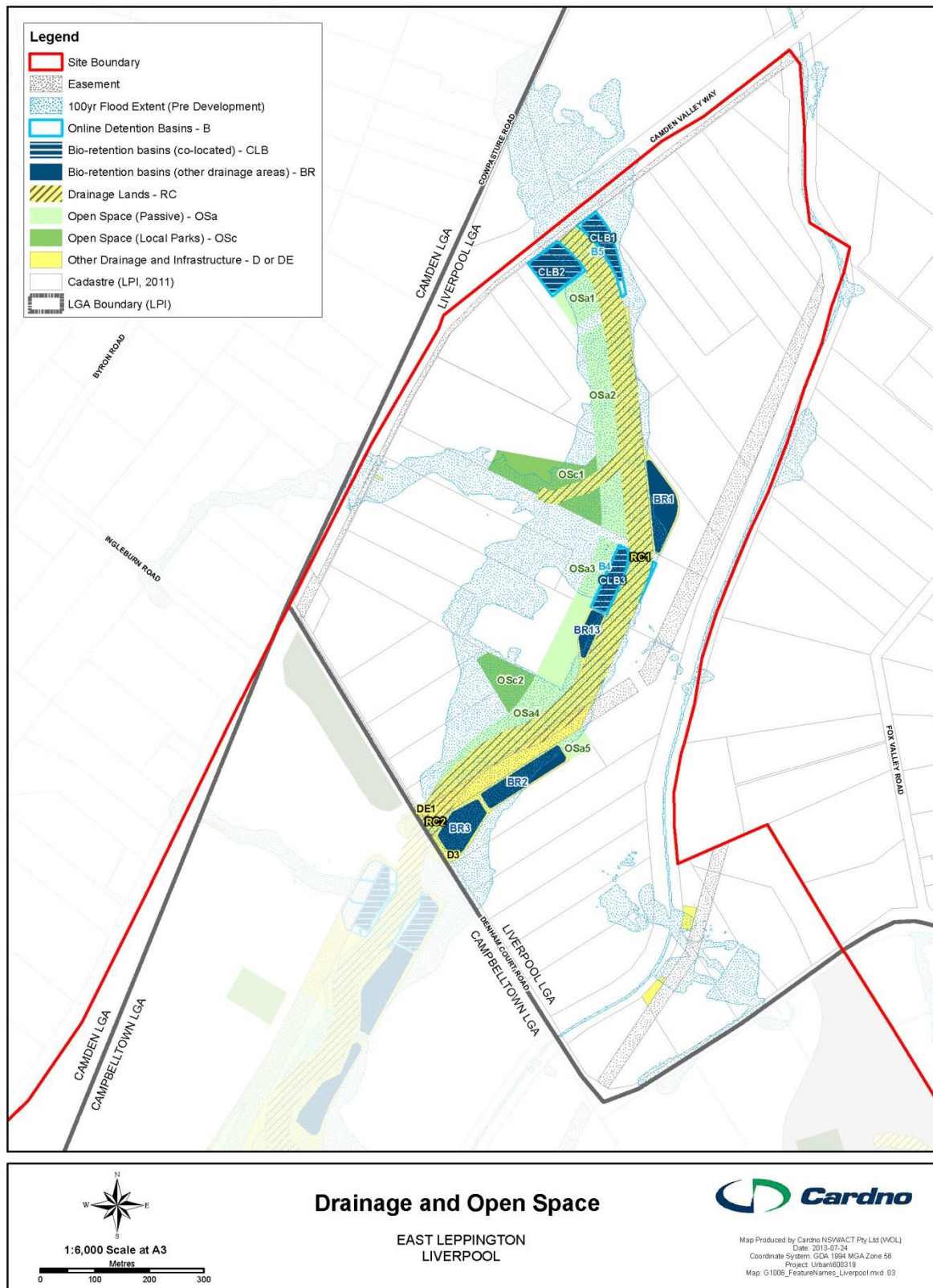
5.3. Open Space: Land

Item	Area (Ha)	Total Cost
Open Space (Local Parks)		
OSc1	0.3500	\$577,422
OSc1	0.8401	\$504,079
OSc2	0.5712	\$342,720
	1.7613	\$1,424,221
Open Space (Passive)		
OSa1	0.1193	\$196,828
	0.3774	\$226,413
OSa2	0.0061	\$10,027
	1.4631	\$877,864
OSa3	0.0567	\$93,566
	0.3827	\$229,608
OSa4	0.7094	\$1,170,555
	0.8374	\$502,411
OSa5	0.1348	\$222,372
	0.0621	\$37,259
	3.9520	\$3,566,904
Subtotal	5.7133	\$4,991,125
Contingency	12%	\$598,935
Total		\$5,590,060

5.4. Open Space: Works

Item	Area (Ha)	Cost	Project On Costs	Demolition Allowance	Total Cost
Open Space (Local Parks)					
OSc1	1.1901	\$862,724	\$235,524		\$1,098,247
OSc2	0.5712	\$471,073	\$128,603		\$599,676
Total	1.7613	\$1,333,797	\$364,127		\$1,697,924
Open Space (Passive)					
OSa1	0.4966	\$305,615	\$83,433		\$389,048
OSa2	1.4692	\$904,168	\$246,838		\$1,151,006
OSa3	0.4394	\$270,414	\$73,823		\$344,236
OSa4	1.5468	\$951,925	\$259,875		\$1,211,800
OSa5	0.1969	\$121,175	\$33,081		\$154,256
Total	4.1489	\$2,553,297	\$697,050		\$3,250,347
Total	5.9102	\$3,887,094	\$1,061,177		\$4,948,271
Construction Contingency					\$346,379
Plan of Management			0.00393		\$19,447
Total					\$5,314,097

5.5. Drainage and Open Space: Reference map



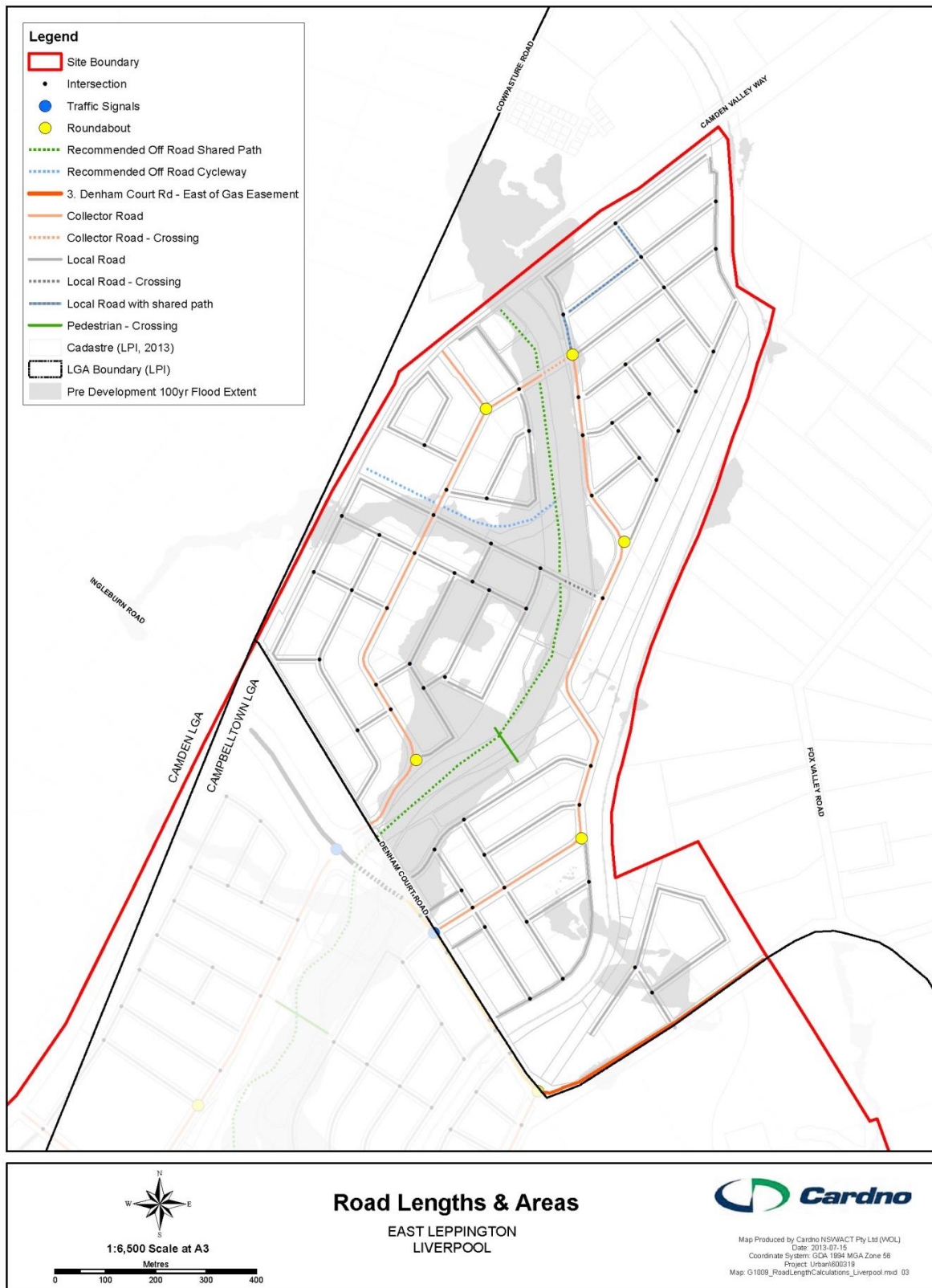
5.6. Transport and Traffic: Land

Item No	Item	Area Ha	Total Cost
Collector Roads			
CR1	New road from CVW (full road)	0.3	\$495,000
CR2	New road (full road)	0.15	\$90,000
CR3	Collector Road (half road)	0.365	\$219,000
Local Roads			
LR1	New road (full road)	0.152	\$91,200
CC1	Collector Road - Creek Crossing	0.05	\$30,000
LC1	Local Road - Creek Crossing	0.04	\$24,000
Subtotal			\$949,200
Land Acquisition Contingency		12%	\$113,904
Total			\$1,063,104

5.7. Transport and Traffic: Works

Item No	Item	Length (m)	Construction Cost	Project On Costs	Total Cost
CR1	New road from CVW (full road)	150	\$444,850	\$110,323	\$555,173
CR2	New road (full road)	75	\$222,425	\$55,161	\$277,586
CR3	Collector Road (half road)	365	\$611,914	\$151,755	\$763,669
LR1	New road (full road)	95	\$236,882	\$58,747	\$295,629
Roads Total			\$1,516,071	\$375,986	\$1,892,056
CC1	Collector Road - Creek Crossing	25	\$1,200,000	\$297,600	\$1,497,600
LC1	Local Road - Creek Crossing	25	\$1,200,000	\$297,600	\$1,497,600
Bridges Total			\$2,400,000	\$595,200	\$2,995,200
Roundabouts			\$788,156	\$195,463	\$983,619
Traffic Signals			\$450,000	\$111,600	\$561,600
Intersection Total			\$1,238,156	\$307,063	\$1,545,219
Pedestrian - Crossing		40	\$300,000	\$74,400	\$374,400
Pedestrian Total			\$300,000	\$74,400	\$374,400
Bus Shelters			\$63,664	\$15,789	\$79,452
Bus Shelters Total					\$79,452
Recommended Off Road Cycleway		190	\$45,360	\$11,249	\$56,610
Recommended Off Road Shared Path		1,240	\$296,036	\$73,417	\$369,453
Cycleway Total			4,806	\$341,396	\$84,666
Subtotal			7,610	\$5,795,623	\$1,437,315
Construction Contingency					\$511,867
Total					\$7,824,257

5.8. Transport : Reference map



6. References

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