

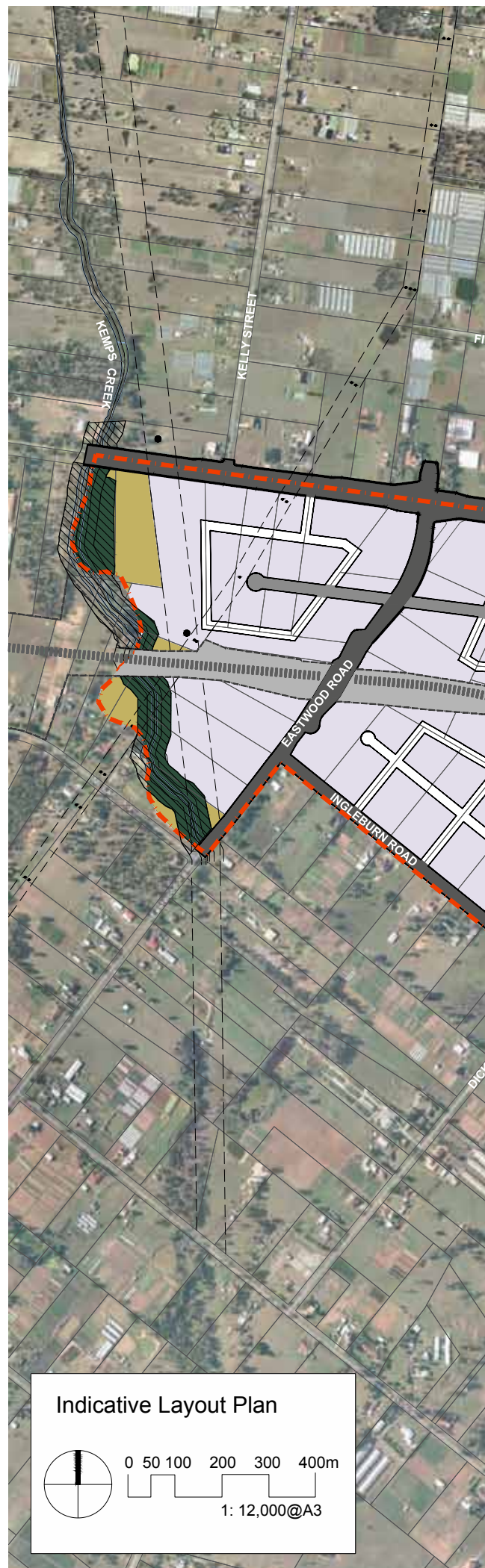


02

# **A1 - Indicative Layout Plan**

**LEGEND**

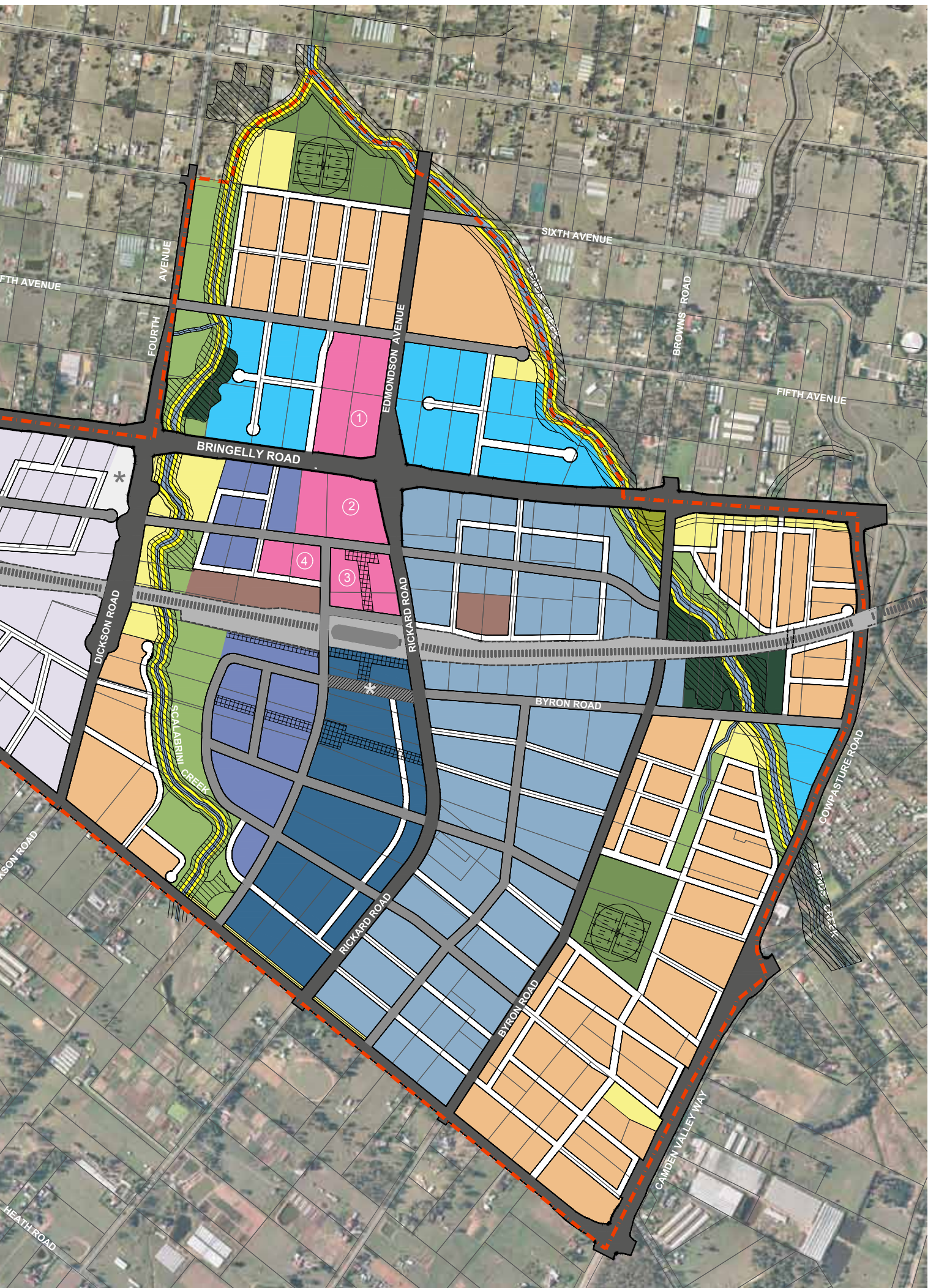
-  Site Boundary
-  Existing Creeks
-  Environmental Protection Overlay
-  Light Industrial
-  Civic Precinct : 1 - Indicative Aquatic/Indoor Recreation Location  
2 - Indicative TAFE Site  
3 - Indicative Cultural/Community Centre Location  
4 - Indicative Health Facility Location
-  Mixed Use
-  Commercial / Business Park
-  Bulky Goods Retail
-  Retail Core
-  Medium Density Residential
-  Rural Transition
-  Passive Open Space
-  Private Open Space
-  Active Open Space
-  Environmental Conservation
-  Drainage
-  Bus Interchange
-  Commuter Carpark
-  Indicative Substation Site
-  Major Roads
-  Primary Roads
-  Road Subject to Flood Plain Filling Assessment
-  Rail Corridor And Leppington Station
-  Transmission Easement
-  Plaza / Pedestrian Link



**Leppington Town Centre Masterplan**



Client:  
Department of Planning & Infrastructure  
10027-SK60 Rev 7 June 2012





GREEN L  
coles  
The Sargood  
Bing Lee  
Medical Centre

51 AVE  
OVE



ONE  
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# A2 - Tree & Plant Species

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## Introduction

Street tree selections are provided for the following locations:

- Nature Strip, Town Centre and small parks (Table 1).
- Larger Parks/Reserves/Town Centre/Open Space Areas (Table 2).

The selection of street trees should have regard to the following:

- Power/Gas/Water/Sewer/Cable Lines
- Street Lights
- Pruning and shaping resilience
- Infrastructure & Easements
- Driveways & Bus Stops
- Pedestrian Crossings
- House Frontages & Set Backs
- Lateral spreading habits
- Road Verge & Nature Strip widths
- Waste Service collections
- Vehicle vision lines
- Cultural and Heritage amenity.
- Above ground Services.
- Minimum setbacks from concrete structures.
- Road Authority requirements for street trees to meet road safety objectives.

Refer Table 2 for:

- Shrubs
- Climbers
- Groundcovers and sub-shrubs
- Native Herbs
- Native Grasses

For Waterfront/Riparian, Bushland Rehabilitation Areas & Bushland Corridors - refer table 3.

**Table 1 – Town Centre Streets and Plazas, Nature Strip Street Trees and Small Parks**

Species Name	Common Name	Height	Width	Native
<i>Acer palmatum</i> 'Senkaki'	Coral Bark Maple	4m	3m	
<i>Acer rubrum</i> '	October Glory' Red Maple	9m	7m	
<i>Acmena smithii</i> 'Red Head'	Red Head Acmena	6m	2m	yes
<i>Agonis flexuosa</i>	Willow Myrtle	8m	4m	yes
<i>Angophora costata</i> Dwarf 'Darni'	Dwarf Angophora	4m	2m	yes
<i>Bauhinia hookeri</i>	Mountain Ebony	10m	5m	yes
<i>Brachychiton populneus</i>	Kurrajong	8m	5m	yes
<i>Brachychiton rupestris</i>	Bottle Tree	8m	5m	yes
<i>Cercis canadensis</i> 'Forest Pansy'	Canadian Redbud	2m	3m	
<i>Cercis chinensis</i> 'Avondale'	Chinese Redbud	12m	4m	
<i>Cercis occidentalis</i>	Californian Redbud	5m	2m	
<i>Cercis siliquastrum</i>	Judas Tree	15m	5m	
<i>Cereus grandiflorus</i>	Night Blooming Cereus	5m	2m	
<i>Ceretopetalum gummiferum</i>	NSW Xmas Bush	6m	3m	yes
<i>Cupaniopsis anarcardiodes</i>	Tuckeroo	7m	3m	yes
<i>Elaeocarpus reticulatus</i>	Blue Berry Ash	8m	4m	yes
<i>Eucalyptus</i> : Dwarf grafted varieties only	Eg -'Summer Red', 'Orange Beauty', 'Wild Fire'	3m aprx		yes
<i>Fraxinus griffithii</i>	Evergreen Ash	6m	4m	
<i>Fraxinus oxycarpia</i>	Raywood varieties	10m	5m	
<i>Ginkgo biloba</i> 'Princeton Sentry'	Tall Narrow Ginkgo	10m	3m	
<i>Gordonia axillaris</i>	Poached Egg Camellia	7m	3m	
<i>Hymenosporum flavum</i>	Native Frangipani	7m	3m	yes
<i>Jacaranda mimosifolia</i>	Blue Haze Tree	15m	10m	
<i>Jubaea chilensis</i>	Chilean Wine Palm	8m	4m	

Species Name	Common Name	Height	Width	Native
<i>Juniperus chinensis</i> 'Keteleeri'	Corkscrew conifer	4m	3m	
<i>Juniperus chinensis</i> 'Spartan'	Spartan conifer	4m	2.5m	
<i>Koelreuteria paniculata</i>	Golden Rain Tree	5m	3m	
<i>Lagerstroemia</i> species	Crepe Myrtle	4m	3m	
<i>Laurus nobilis</i>	Bay Laurel	6m	3m	
<i>Leptosperum</i> species	tea tree species	3m	3m	yes
<i>Lirodendron tulipifera fastigatum</i>	Tulip tree	12m	5m	
<i>Lophostemon confertus</i>	Brisbane Brush Box	9m	6m	yes
<i>Magnolia grandifolia</i> 'Exmouth'	Magnolia 'Exmouth'	7m	3m	
<i>Magnolia grandiflora</i> 'Little Gem'	Magnolia 'Little Gem'	4m	2m	
<i>Magnolia grandifolia</i> 'Kay Parris'	Dwarf Perfumed Magnolia	4m	2m	
<i>Magnolia x soulangeana</i>	Tulip Magnolia	7m	4m	
<i>Magnolia soulangiana</i>	Saucer Flower	6m	6m	
<i>Melaleuca styphelioides</i>	Prickly Paperbark	6m	4m	yes
<i>Melaleuca decora</i>	White Cloud Tree	5m	2m	yes
<i>Melaleuca linariifolia</i>	Snow In Summer	6m	4m	yes
<i>Nyssa sylvatica</i> 'Autumn Cascade'	Weeping Blackgum	4m	3m	
<i>Nyssa sylvatica</i>	Black Tupelo	15m	6m	
<i>Parrotia persica</i>	Persian Witch Hazel	9m	3m	
<i>Pistacia chinensis</i>	Pistacia Nut Tree	13m	4m	
<i>Prunus</i> varieties	Flowering cherry s	4m	3m	
<i>Malus</i> varieties	Flowering apple	4m	3m	
<i>Pyrus</i> varieties	Flowering pear	6m	4m	
<i>Pyrus calleryana</i> 'Aristocrat'	Flowering Pear	6m	3m	
<i>Pyrus calleryana</i> 'Chanticleer'	Flowering Pear	9m	4m	



Species Name	Common Name	Height	Width	Native
<i>Pyrus calleryana</i> 'Bradford'	Bradford Pear	6m	3m	
<i>Pyrus calleryana</i> 'Edgedell'	Edgedell Pear	5m	3m	
<i>Pyrus calleryana</i> 'Glens Form'	Flowering Pear	8m	4m	
<i>Pyrus calleryana</i> 'Capital'	Flowering Pear	8m	4m	
<i>Pyrus betulaefolia</i> 'Southworth Dancer'	Flowering Pear	5m	4m	
<i>Sapium sebiferum</i>	Chinese Tallowwood	7m	3m	
<i>Quercus palustris</i> 'Pringreen'	Tall Narrow Oak	10m	3m	
<i>Syzygium australe</i> 'Pinnacle'	Narrow Syzygium	6m	2m	yes
<i>Syzygium paniculatum</i>	Brush Cherry	10m	4m	yes
<i>Tristaniopsis laurina</i> 'Luscious'	Water Gum	7m	3m	yes
<i>Zelkova serrata</i>	Zelkova	10m	4m	
<i>Zelkova serrata</i> 'Green Vase'	Wine Glass tree	10m	4m	
<i>Zelkova serrata</i> 'Mushashino'	Narrow Zelkova	8m	3m	

Table 2 – Larger Parks / Reserves / Town Centre / Open Space Areas

Species Name	Common Name	Height	Width	Native
<i>Angophora costata</i>	Sydney Red Gum	30m	10m	yes
<i>Angophora floribunda</i>	Rough Barked Apple	20m	6m	yes
<i>Angophora subvelutina</i>	Broad Leaf Apple	18m	6m	yes
<i>Araucaria araucana</i>	Monkey Puzzle Tree	35m	8m	yes
<i>Araucaria bidwilli</i>	Bunya Bunya Pine	40m	10m	yes
<i>Araucaria cunninghamii</i>	Hoop Pine	45m	6m	yes
<i>Brachychiton acerifolius</i>	Illawarra Flame Tree	30m	6m	yes
<i>Brachychiton discolor</i>	Lacebark Kurragong	30m	6m	yes
<i>Caloedendron capense</i>	Cape Chestnut	15m	8m	
<i>Carya illinoensis</i>	Pecan	30m	10m	
<i>Cedrus atlantica</i>	Atlas Cedar	30m	8m	
<i>Cedrus deodara</i>	Deodar Cedar	30m	6m	
<i>Cupressus funebris</i>	Funeral Cypress	20m	5m	
<i>Eucalyptus amplifolia</i>	Cabbage Gum	30m	5m	yes
<i>Eucalyptus bauerana</i>	Blue Box	25m	4m	yes
<i>Eucalyptus benthamii</i>	Camden White Gum	35m	8m	yes
<i>Eucalyptus crebra</i>	Narrow Leaf Red Iron Bark	30m	8m	yes
<i>Eucalyptus fibrosa</i>	Broad Leaf Red Iron Bark	30m	8m	yes
<i>Eucalyptus tereticornis</i>	Forest Red Gum	40m	8m	yes
<i>Eucalyptus viminalis</i>	Manna Ribbon Gum	50m	8m	yes
<i>Ficus macrophylla</i>	Moreton Bay Fig	30m	8m	yes
<i>Ficus rubiginosa</i>	Port Jackson Fig	18m	6m	yes
<i>Flindersia australis</i>	Australian Teak	25m	5m	yes
<i>Ginkgo biloba</i>	Maidenhair Tree	30m	8m	

Species Name	Common Name	Height	Width	Native
<i>Jacaranda mimosifolia</i>	Blue Haze Tree	15m	10m	
<i>Liriodendron tulipifera</i>	Tulip Tree	40m	8m	
<i>Livistona australis</i>	Cabbage Palm	20m	2m	yes
<i>Macadamia integrifolia</i>	Macadamia Nut Tree	15m	5m	yes
<i>Magnolia grandifolia</i>	Bull Bay Tree	18m	8m	
<i>Magnolia denudata</i>	Yulan Tree	18m	8m	
<i>Phoenix canariensis</i>	Canary Island Date Palm	15m	5m	
<i>Pinus pinea</i>	Italian Stone Pine	25m	4m	
<i>Podocarpus elatus</i>	Illawarra Pine	25m	8m	yes
<i>Quercus coccinea</i>	Scarlet Oak	15m	3m	
<i>Quercus palustris</i>	Pin Oak	25m	5m	
<i>Quercus robur</i>	English Oak	30m	6m	
<i>Schinus areira</i>	Peppercorn Tree	17m	5m	
<i>Syzygium luehmannii</i>	Small Leaf Water Gum	20m	8m	yes
<i>Ulmus parvifolia</i>	Chinese Elm	12m	5m	
<i>Zelkova serrata</i>	Zelkova	12m	4m	
<i>Washington robusta</i>	Mexican Fan Palm	25m	3m	

SHRUBS:
Acmena varieties
Banksia varieties
Bauhinia galpini
Brunfelsia - grandifolia/maliformis/ pauciflora varieties
Callistemon varieties
Cordyline fruticosa 'Kiwi'
Crinum pedunculatum
Dodonaea
Doryanthes excelsa
Eucalyptus:dwarf grafted varieties.
Gordonia axillaris
Grevillea varieties
Erica varieties
Eremophila varieties
Ixora chinensis (Prince of Orange)
Kunzea varieties
Indigofera australis
Leptospermum species
Loropetalum chinensis
Magnolia grandifolia 'Little Gem'
Magnolia stellata (Star Magnolia)
Melaleuca 'Revolution Gold'
Michelia figo (Port Wine Magnolia)
Myoporum montanum

SHRUBS (cont.):
Photonia 'Red Robin' and other smaller growth Photonia.
Viburnum varieties, eg odoratissimum
Syzygium varieties.
CLIMBERS:
Clematis aristate
Gelsemium sempervirens
Jasminum spp.
Hardenbergia violacea
Kennedia rubicunda
Mandevilla spp
Pandorea jasminoides
Trachelospermum jasminoides
GROUND COVERS & SUB SHRUBS:
Acacia cognate 'Mini Cog'
Anigozanthos "Bush Gems - varieties, eg Bush Haze, Bush Ranger
Dianella caerulea
Dichondra repens
Convolvulus mauritanicus
Goodenia hederacea
Hardenbergia violacea
Kniphofia "Maid of Orleans"
Melaleuca pentagona 'Little Penta'
Myoporum spp
Myoporum parvifolium

GROUND COVERS & SUB SHRUBS (cont.):
Plectranthus parvifolius
Rhodanthe anthemoides
Scaevola aemula
Sedum sempervirens
HEDGES:
Brunfelsia varieties
Buxus varieties
Loropetalum chinensis varieties
Michelia varieties
Murraya varieties
Photonia x fraseri 'Little Red Robin'
Viburnum varieties eg odoralissimum
NATIVE HERBS:
Dianella spp
Eremophila debilis (syn. Myoporum debile)
Lomandra spp (eg Tanika or Nyalla)
Plectranthus parvifolius
Pennisetum alopecureoides
Scaevola albida

NATIVE GRASSES:
Carex appressa
Danthonia racemosa
Dianella varieties Imperata cylindrical
Lomandra varieties incl 'Tanika' 'Nyalla' etc
Sorghum leiocladum
Themeda australis

### Table 3 – Waterfront/Riparian, Bushland Rehabilitation Areas & Bushland Corridors

In these areas, (within the Camden, Liverpool and Campbelltown LGA's) the Trees, Shrubs, Sub Shrubs and Grasses should be selected from within the Cumberland Plain Woodland (CPW) range.

Qualified Ecologists should also assist in any planting selection for rehabilitation, revegetation or restoration works within these areas.

<b>(a) Littoral Species (littoral means the foreshores, riverbanks and the plants of that habitat).</b>	
<b>Species Name</b>	<b>Common Name</b>
Baumea articulata	
Bolboschoenus fluviatilis	
Carex appressa	Tall Sedge
Cyperus exaltatus	
Gahnia sieberiana	Red Fruited Saw Sedge
Isolepis nodosa	Knobby Club Rush
Juncus usitatus	Common Rush
Philydrum lanuginosum	
Potamogeton tricarlinatus	
<b>(b) Macrophyte Species (Macrophyte means the conspicuous plants that dominate wetlands, shallow lakes and streams)</b>	
<b>Species Name</b>	<b>Common Name</b>
Baumea articulata	Jointed Twig Rush
Bolboschoenus fluviatus	Marsh Club Rush
Carex appressa	Ephemeral Marsh
Cyperus exaltatus	
Eleocharis sphacelata	Tall Spike Rush
Juncus usitatus	
Phragmites australis	Common Reed
Potamogeton tricarlinatus	
Philydrum lanuginosum	



51 AVE  
OVE

GREEN LANE  
coles  
The Sargood  
Bing Lee  
Medical Centre



ONE  
WAY  
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# A3 - Material Guidelines

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## Introduction

Leppington Major Centre (LMC) will have a unified and integrated character through a consistency of complementary materials, details, finishes and treatments.

Criteria for the selection and use of materials, elements and finishes within the public domain of LMC are:

- design – items are to be functional and meet the needs of LMC;
- aesthetics – items are to relate to the scale, style and character of LMC;
- availability and ongoing supply – selection of items such as furniture and pavements e.g. should have a long term view of availability and supply for replacement parts and servicing;
- cost – items are to be affordable and within the means of ongoing LMC public domain managers;
- maintenance – items must be easily maintained and not have onerous demanding ongoing maintenance requirements
- life span / longevity – items selected should be looking at as long a lifespan as feasible to ensure LMC public domain managers are not incurred with expensive recurrent replacement costs;
- workability – items should be chosen for their simplicity;
- sustainability – ESD principles of each item selected should be reviewed prior to final selection;
- accessibility – all items must conform to the Australian Disability Discrimination Act 1992 and relevant Australian Standards;
- vandal resistance – all items must be implemented with view to reducing vandalism and a suitable repair programme in place;
- safety - items must conform to relevant codes and Australian Standards.
- Engineering Standards - items must comply with Council's Engineering Specifications



Item	Element	Guideline
Concrete Insitu	Joints	<ul style="list-style-type: none"> <li>Expansion and control joints to align with building and alternative path edges where possible.</li> <li>Trip stops or equivalent to be used near trees - refer to Council's Engineering Specifications.</li> </ul>
	Base Course	<ul style="list-style-type: none"> <li>Compaction and material to be determined by consent authority - refer to Council's Engineering Specifications.</li> </ul>
	Finish	<b>Streets</b> <ul style="list-style-type: none"> <li>Even textured slip resistant surface to finish level Class B.</li> <li>Perpendicular Broom Finish with steel trowel margins</li> </ul>
	Colour	<ul style="list-style-type: none"> <li>Main path colour to be standard grey concrete.</li> <li>Feature concrete areas to be determined by consent authority. Dark tones can be used to create contrast with the main concrete colour, but limit area of coverage to reduce heat absorption.</li> </ul>
	Hazard and Directional Tactile Indicators	<ul style="list-style-type: none"> <li>Stainless Steel studs or product determined by consent authority.</li> <li>Provide 45% luminance contrast in accordance with (AS1428.4)</li> </ul>
	Testing/Slip Resistance	<ul style="list-style-type: none"> <li>Slip resistance test results required on sample installation.</li> </ul>
	Maintenance/Cleaning	<ul style="list-style-type: none"> <li>High pressure hosing / street sweeper.</li> <li>Maintenance program to be determined by consent authority.</li> </ul>
Unit Pavers	Unit Size	<ul style="list-style-type: none"> <li>To be determined by consent authority. Typically 400x400mm in stretcher bond pattern</li> </ul>
	Base Course	<ul style="list-style-type: none"> <li>Concrete slab support base approved by consent authority - refer to Council's Engineering Specifications.</li> <li>Pavers mortared onto concrete base</li> </ul>
	Joints/Sealants	<ul style="list-style-type: none"> <li>Expansion and control joints to align with building and alternative path edges where possible.</li> <li>To be determined by consent authority (Australian Standards)</li> <li>Pavers to be sealed in accordance with consent authority (AS)</li> </ul>
	Finish	<ul style="list-style-type: none"> <li>Streets/Pathways: semi-honed.</li> </ul>
	Colour	<ul style="list-style-type: none"> <li>To be determined by consent authority. Mid-tones are preferred to reduce glare and minimise heat absorption.</li> </ul>
	Hazard and Directional Tactile Indicators	<ul style="list-style-type: none"> <li>Stainless Steel studs or product determined by consent authority.</li> <li>Provide 45% luminance contrast in accordance with (AS1428.4)</li> </ul>
	Testing/Slip Resistance	<ul style="list-style-type: none"> <li>Slip resistant test results on loose tile samples with sealer and a sample installation.</li> </ul>
	Maintenance/Cleaning	<ul style="list-style-type: none"> <li>Sealant applied in outdoor dining areas</li> <li>High pressure hosing / street sweeper cleaning.</li> <li>Maintenance program to be determined by consent authority.</li> </ul>
	Tree Pit Edging	<ul style="list-style-type: none"> <li>Steel edging to be installed tree pit perimeter edges to contain pavers. Steel edging to be secured to support concrete slab subbase.</li> </ul>

Item	Element	Guideline
Lighting	Lighting Levels	<ul style="list-style-type: none"> <li>Streets/Road Reserves: P1 - P5</li> <li>Pathways (Including Cycleways): P1 - P4</li> <li>Public Activity Areas and Open Space (Excluding Car Parks): P6-P8</li> <li>Connecting Elements (Steps, Stairways, Ramps, Footbridges, Pedestrian ways): P9-P10</li> <li>Outdoor Carparks: P11 - P12</li> </ul>
	Poles	<ul style="list-style-type: none"> <li>Unpainted</li> <li>Proprietary Banner mounting system for Main Street</li> <li>Height of luminaires mounting determined by lighting engineer</li> </ul>
	Luminaries	<ul style="list-style-type: none"> <li>Luminaries to be consistent with lighting levels and Light spill requirements.</li> <li>To be determined by consent authority (AS)</li> </ul>
	Light Spill	<ul style="list-style-type: none"> <li>Lighting not to spill into residential areas.</li> <li>Lighting to focus on Street and Pedestrian pavements.</li> <li>To be determined by consent authority (AS)</li> </ul>
	Catenary Lighting	<ul style="list-style-type: none"> <li>Catenary lighting can be used in Town Square.</li> <li>To be determined by consent authority (AS)</li> </ul>
Furniture	Bollards	<ul style="list-style-type: none"> <li>Bollards to be used to control where maintenance vehicle access is required into pedestrian plaza areas</li> <li>Removable bollards required in emergency access and maintenance access areas.</li> <li>Bollards to be of consistent design.</li> </ul>
	Barriers	<p><b>Fence/Balustrade</b></p> <p><b>Structural</b></p> <ul style="list-style-type: none"> <li>Designated fencing to be provided along high level road medians and street edges to discourage pedestrian road crossing.</li> <li>Custom or proprietary fencing design to be determined by consent authority.</li> </ul> <p><b>Planting</b></p> <ul style="list-style-type: none"> <li>Designated hedge planting installed at medium level road edges and road medians to discourage pedestrian road crossing.</li> </ul>
	Rubbish Bins	<ul style="list-style-type: none"> <li>Rubbish Bins to be provided at pedestrian nodes, including crossing points. All rubbish bins to be of consistent design.</li> <li>Recycling Rubbish Bins to be provided in pedestrian gathering areas.</li> <li>Bin selection should consider bird/animal protection.</li> <li>Rubbish Bins and rubbish removal maintenance schedules to be determined by consent authority.</li> </ul>
	Bench Seating/ Feature Seating	<ul style="list-style-type: none"> <li>Bench seating to be provided at regular intervals in the Town Centre Streets.</li> <li>Timber slat seating and backrest supports preferred.</li> <li>Custom bespoke seating can be considered in the Town Square.</li> </ul>

Item	Element	Guideline
Furniture (cont.)	Bicycle Racks	<ul style="list-style-type: none"> <li>Provide bicycle racks on hardstand areas only.</li> <li>Locate clear of pedestrian thoroughfares.</li> <li>Surface mounted, with tamper-proof fixings. (source: Oran Park PDS)</li> </ul>
	Bicycle Rails	<ul style="list-style-type: none"> <li>Locate in accordance with Austroads Part 14 – Bicycles.</li> <li>To be fabricated in accordance with Camden Council Standard Pathway Rails SD06. (source: Oran Park PDS)</li> </ul>
	Drinking Fountains	<ul style="list-style-type: none"> <li>Drinking fountains to be universally accessible.</li> <li>Locate clear of pedestrian thoroughfares.</li> <li>Drinking fountain to be surface mounted. (source: Oran Park PDS)</li> </ul>
	Shelters	<p>Shelters and shade structures are to be:</p> <ul style="list-style-type: none"> <li>provided in open space areas and riparian corridors where sufficient immediate shade or weather protection is not available or where a sense of enclosure is considered desirable;</li> <li>provided over table and bench settings and table seats where weather protection is desirable;</li> <li>sited so that roof water is shed into garden areas;</li> <li>installed on hard wearing surface;</li> <li>surface mounted, with tamper-proof fixings;</li> <li>installed level, not at grade with pavement. (source: Oran Park PDS)</li> </ul>
	Viewing Platforms	<ul style="list-style-type: none"> <li>Boardwalks and Viewing Platforms maybe used to:</li> <li>provide access over spillways or viewing opportunities over water bodies;</li> <li>provide recreational or interpretational opportunities in riparian corridors or wetland areas;</li> <li>installed on hard wearing surface;</li> <li>surface mounted, with tamper-proof fixings;</li> <li>installed level, not at grade with adjacent surface. (source: Oran Park PDS)</li> </ul>
	Tables	<ul style="list-style-type: none"> <li>provided in association with benches in open space areas.</li> <li>installed on hard wearing surface.</li> <li>surface mounted, with anti-vandal fixings.</li> <li>installed level, not at grade with pavement. (source: Oran Park PDS)</li> </ul>
	Handrails and balustrades	<ul style="list-style-type: none"> <li>Handrails and balustrades to be in accordance with BCA and AS 1428. (source: Oran Park PDS)</li> </ul>

Street Trees	Tree Guards	<ul style="list-style-type: none"> <li>Tree Guards to be installed in major pedestrian gathering intersections. To be consistent design along street.</li> <li>To be determined by consent authority.</li> <li>Root guards to be installed.</li> </ul>
	Tree Pits	<p><b>Pit Covers</b></p> <ul style="list-style-type: none"> <li>Pit covers to be consistent along street and be flush with adjacent paving.</li> <li>To be determined by consent authority.</li> </ul> <p><b>Edging</b></p> <ul style="list-style-type: none"> <li>Steel edging required for trees in Unit Paving and Asphalt</li> </ul>
Playgrounds	Playing Surface	<p><b>High use areas (eg. District Playground)</b></p> <ul style="list-style-type: none"> <li>Rubber softfall to Australian Standards</li> </ul> <p><b>Low use areas (eg. Local Playground)</b></p> <ul style="list-style-type: none"> <li>Bark mulch to Australian Standards</li> </ul>
	Playground Equipment	<ul style="list-style-type: none"> <li>Refer Landcom Open Space Design Guidelines (2008), p25-26.</li> </ul>
Exercise stations	Exercise Equipment	<ul style="list-style-type: none"> <li>Exercise equipment to cater for a range of age groups.</li> <li>Provide proprietary items to Australian Standards installed to manufacturer's recommendations.</li> </ul>
Tactile indicators	Pedestrian walkways	<ul style="list-style-type: none"> <li>Provide tactile indicators on pedestrian crossing points as required by the consent authority. Consider other users impeded by tactile indicators such as wheelchairs and prams. Coordinate locations with pavement layout.</li> </ul>



02

## **A4 - Vision Workshop**

### Vision Workshop

A Vision Workshop was held with key stakeholders from Camden and Liverpool City Council representatives on Tuesday 3rd April 2012 at the Narellan Administration Centre in Narellan.

The workshop was facilitated by the AECOM project team: Greg Burgon, Nicole Dennis, Katie Joyner and Cameron Greatbatch.

The Department of Planning and Infrastructure was represented by Paul Robilliard and Matt Cooper.

The workshop was attended by :

- Heath James (Camden Council)
- Hendro Harsojo (Camden Council)
- Mairead O'Connell (Camden Council)
- Richard Smith (Camden Council)
- Lila Sawko (Camden Council)
- Denise Pritchard (Camden Council)
- Cheryle Yin Lo (Camden Council)
- Noelene Rudolf (Camden Council)
- Barry Millwood (Liverpool Council)

The workshop consisted of group exercises designed to draw out and define the vision for Leppington Major Centre from the group. This was followed by a presentation and discussion of 'Three Big Moves' that AECOM pitched as key structural solutions to existing issues under the Indicative Layout Plan as it stood in April 2012. There was then a time for general feedback and comments on the vision and identification of issues and opportunities from the group.

### Desired Future Place Character Exercise

The group was asked to call out answers to the question 'If Leppington Major Centre was a guest at a dinner party, what would they be like?'

There was a variety of responses describing Leppington's character presently and how they imagine the centre to be in the future. Responses also included descriptions of the existing and expected future community.

The following page presents the responses given.



# Who is Leppington?

## Place Character Exercise - Who is Leppington?

### Demographics

- Leppington should be a place for young couples, perhaps those who have done the city life and now want a larger house. Maybe they have one young child
- We see extended families living in the area, perhaps grandparents moving in with existing local families
- We anticipate a lot of second generation Australians in the area
- Many may speak English as a second language
- Many people stay in the area when they move house, possibly because of family and community ties
- Families do feel connected to the area - elders have established family
- Around 50% in the school system speak Cantonese. These young people are likely to buy in the area in the next 10 to 20 years
- Local people are not necessarily low-income earners
- Local market garden owners may be likely to stay in the area, but will form a small proportion of the eventual new population
- This is not likely to be a transient population, when families grow they generally stay and upsize, or upgrade their home
- We should cater for a variety of price-ranges and improve diversity - cater for elders and downsizers

### What is the attraction of Leppington?

- The railway station will be a key attractor
- People who study or work in the city currently have to go from Camden to Campbelltown into the city
- We should aspire to create a walkable city
- Many people have longer commutes to work and therefore less free time. Camden is on the opposite side of the city to the Global Arch
- Cafe culture is quiet. Many local people don't have the time to spend in the local area during the week as they are likely to be working or commuting. This reinforces the desire for a mix of uses and to provide local employment
- There appears to be a very different mentality between Narellan and Camden. There is a strong sense of local loyalty in each of these areas
- We should aim to plan for sports clubs, cafes and markets next to the town centre, to try and activate the town centre during different times of the week, and night and day
- The local library programs are very popular, however there is a lack of facilities/functions for younger people. Many may go to the pubs in Camden. There is little of interest in terms of shopping, clothes shops etc. Many will go to the clubs in Campbelltown
- There is a lack of facilities such as bowling clubs and RSLs in the SW
- We should not allow for big box type retail to dominate the town centre. Loading docks on the main street can kill the pedestrian environment
- We must allow development to happen. Small lots must amalgamate, but it is often too expensive for a wider vision to come to fruition. We must be very wary of this
- Implementation is really important. The vision must be realistic and achievable



### Group Typology Exercise

The group split into three groups of between three to four people. They were each asked to view a set of flashcards which consisted of a variety of photographs. The set of images comprised of public domain typology examples; some which may be perceived as successful and some as unsuccessful. The group was asked to select cards that represented their vision for Leppington Major Centre and to explain their views in regard to function and use, social interaction and sensory experience and cultural and traditional elements.

The groups responses are summarised as follows:

#### Group A

##### Streets

- The street examples chosen demonstrated good connections, which were active with passing traffic. The streets were shared with pedestrians and cyclists
- The group preferred examples that were active, landscaped and screened

##### Parks

- The park examples were chosen because they had active edges
- They suggested a festival atmosphere and social interaction
- There was shading, and a lot of activity

##### Plazas

- The group liked the sense of activity
- The plazas chosen were fairly small and intimate
- The spaces were active and vibrant
- The plazas were connected to the street
- The group liked to see outdoor trading in the plaza spaces. Night and day activities were preferred
- The group preferred to see seating in the shade and with hard surfaces

#### Group B

##### Streets

- The group preferred examples of mixed-use streets
- Bring cars, bikes and pedestrians together
- Encourage cars along streets to facilitate night-time surveillance
- Layer uses, ie shop-top housing
- Make streets bike-friendly

##### Parks

- The group preferred the multi-function of the chosen park spaces be the use of leads
- Public art should be encouraged in park spaces

##### Plazas

- The group liked the examples of children's play spaces
- The spaces should be large to bring together the different streams of the community
- Encourage the use of public art
- The group preferred examples where trees and other planting was evident
- Community garden may be an opportunity to link with the history of market gardens in the area

## Group C

### Streets

- There was a preference for pedestrian and cyclists together on the street
- Examples were preferred where people were encouraged to wander. We should be mindful of the uses and edges between land uses to encourage passive use of the street
- The group referred to streets that appeared to be safe environments for pedestrians to cross the road
- Smaller-scale streets were preferred where there were heritage elements

### Parks

- The parks selected showed social gathering and interaction
- They demonstrated multi-use of space
- Planter beds were picked-out as they contributed to the open space, as were community gardens. There might be the opportunity to link to past uses of the land by these means
- The group liked the informal spaces for picnics and dog-walking
- Street furniture was preferred where they encouraged social interaction. The interface between cyclists and pedestrians was preferred
- The group favoured the multi-function of stormwater drainage

### Plazas

- The group liked the principle of flow-on uses into the plaza spaces, for example cafes
- There is the opportunity to mix uses in the plazas
- Encourage seating and planting to be welcoming to people to want to simply stop and enjoy the space

## General Comments

Following the group typology exercise there was some discussion around the principles behind some of the successful and unsuccessful precedent examples. Key notes were:

- Some of the European examples in particular have had many years to evolve and this is difficult to replicate when designing a new centre
- Could perhaps use more cultural and traditional examples - Camden Council offered to provide some photographs
- Need to keep in mind that this is Western Sydney and what implications this may have on the need for shade, and where the prevailing winds come from
- Investigate the use of colonnades
- Investigate locating plazas facing onto the parks. This might be better for surveillance at night with active frontages
- Consider providing larger plazas for monthly local markets and think of how these spaces are used for the remainder of the month.
- Cycle routes need destinations and should link to the M7

## Three Big Moves

Greg took the opportunity to suggest some changes to the draft Indicative Layout Plan that could assist in achieving a high quality and more functional public domain. These were:

1. The reduction of open space around the heritage item on Byron Road and the relocation of the sports field to nearer the town centre
2. The nomination of the main street being two blocks west of Rickard Road
3. The suggested revision of the town centre block structure and sizing to allow for larger block sizes

The group had a series of queries, comments and suggestions related to each of the Three Big Moves:

- The dual function of sports facilities and drainage/detention doesn't always work. The

facilities can remain unusable for a long time after it has rained

- PR suggested that the stream categories are potentially being revised and we may not require this land to act as drainage. We may require less basin area
- There was concern regarding the backs of properties facing the creek in the current plan configuration. Opening up the creek to the sports field will help with this matter
- We don't want to be providing too much open space, there is already an over provision and this impacts on council in terms of upkeep and maintenance
- We should look at locating perimeter roads along the extent of the riparian corridor
- We need to address how the Main Street will be staged and how it will operate in the early stages of development in particular. This will be a challenge as Rickard Road is an existing street. How will we ensure that the loading and service access to retail is where we envisage it to be in the long term?
- Be mindful of critical mass. The DCP must control and guide opportunistic development, particularly in the early stages so that examples like how the Narellan town centre was developed can't happen again

### Refining the objectives

At the end of the workshop the group reflected on what was discussed, and was asked to revisit and refine the vision for Leppington. Thoughts included:

- Think about where we are going in terms of technology in the future and how we can facilitate this
- Consider lighting and integrated systems, interactive play and public art
- Public art strategies have to be integrated from early planning Stages
- Consider theming for public art strategies
- Look into playground companies that are designing play areas for the next generation
- Think of sustainability and the future
- Keep in mind the topography
- Think about who will pay for it
- Active streets may be more difficult to achieve in the future – people increasingly use on-line

shopping - centres must be more than retail destinations to be successful

- There is also the increasing trend to drive to one place, shop there and leave - need to devise ways to draw people out and through the centre
- It may be better to mix civic and retail uses up rather than have them on separate sides of the railway line
- Encourage a good mix of uses, and allow flexibility in mixed-use zones
- Consider permitting convenience shopping in the civic side to help encourage visitors to perform multiple tasks in the town centre

### Key Findings

The workshop revealed the following key findings:

#### People

- The expected incoming community will have a large proportion of families, extended families, high proportions of people with English as a second language in particular Cantonese speaking
- The community is not necessarily all low income, there is a diversity
- There is currently a lack of facilities and entertainment for youth and young adults
- The centre needs to provide for the diversity of the community by providing a public domain that caters to varying price points and cultural uses of public space
- There is a lack of free time in the local community particularly during weekdays due to long commuting times to employment - this affects the use of the public domain

#### Place

- There are currently strong local identities in regards to place - particularly between Narellan and Camden
- Need to understand staging and a strategy that is realistically implemented - principles must be consistent and easily stages
- The railway station will be a key attractor and destination which will support a variety of additional uses and services

- The centre needs to be walkable and people focuses in design - it should cater to the pedestrian experience
- Need a variety of activities and uses in order to achieve place activation

### **Streets**

- Streets should be well connected, active, vibrant and people focused
- There should be a strong focus designing and planning for the pedestrian and cyclist
- Streets should be mixed use
- Shop top housing should be encouraged
- Need to beware of vacant laneways and spaces in between places and destinations
- Passive uses should be encouraged on the street
- Smaller scale streets were preferred overall by the group

### **Parks**

- Parks with active edges that provided a variety of activities were preferred
- Parks which encouraged social interaction were highly desired
- Public art was requested in parks, integrated into play equipment, furniture and historical interpretation
- A community garden was desired to encourage social interaction and mark the past use of the area as market gardens
- Stormwater open spaces should have a variety of uses and functions

### **Plazas**

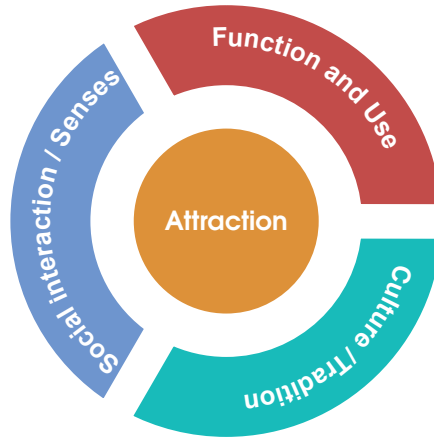
- Plazas that were active and vibrant, connected to the street and intimate were preferred by the group
- Plazas that included trading out and a variety of activities and complementary uses were desired, eg cafes, markets and vendors
- Plazas should provide day and night time activities and uses
- Children's play can be integrated into plazas including a larger proportion of the community
- A community garden could be integrated into a plaza as an historic element
- Plazas were desired that create a sense of welcome and invited people to stop, sit and enjoy

Leppington Major Centre  
PUBLIC REALM STRATEGY  
VISION WORKSHOP

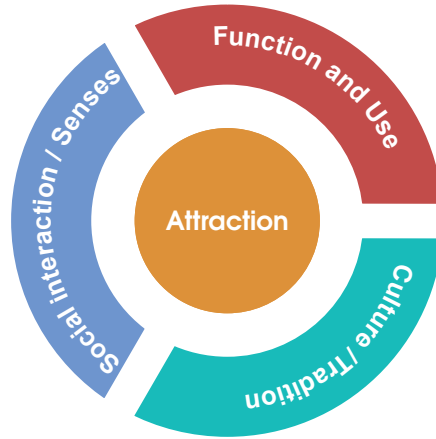


**STREETS**

Work in groups to choose the cards that best represent the character, look and feel of streets that you would like to see at Leppington Major Centre.



Leppington Major Centre  
PUBLIC REALM STRATEGY  
VISION WORKSHOP



PLAZAS

Work in groups to choose the cards that best represent the character, look and feel of town square that you would like to see at Leppington Major Centre.



Leppington Major Centre  
PUBLIC REALM STRATEGY  
VISION WORKSHOP



PARKS

Work in groups to choose the cards that best represent the character, look and feel of the parks and open space that you would like to see at Leppington Major Centre.

