



# **Campbelltown Health and Education Precinct**

## Vision and strategy

September 2017

# Contents

Executive summary	ii
History of success	ii
A new precinct vision	ii
Objectives	iii
Four new specialised economic sub-precincts	iii
<b>1 Developing this report</b>	<b>4</b>
1.1 Report objectives	4
1.1 Approach and timing	4
1.2 Structure of this report	5
<b>2 The case for establishing a precinct vision</b>	<b>6</b>
2.1 Strategic planning context	6
2.2 The need for jobs	8
2.3 The need for improved health and education	9
2.4 Reinforcing regional economic corridors	11
2.5 Rethinking the South West as Sydney's third city	14
2.6 Western Sydney health and education precincts	15
2.7 The value of precinct-based approaches	15
2.8 Supporting the delivery of other plans	17
<b>3 Precinct analysis</b>	<b>21</b>
3.1 Precinct study area	21
3.2 Local employment trends	22
3.3 Precinct catchments	24
3.4 2016 precinct business ecosystem	27
3.5 Plans of precinct partners	30
3.6 Challenges and barriers to growth	42
3.7 Local business success stories	45
<b>4 Towards a precinct vision</b>	<b>47</b>
4.1 Precinct vision statement	47
4.2 Precinct aspirations	47
4.3 Innovation district growth model	50
4.4 Economic structure plan	52
4.5 Precinct themes	60
4.6 Opportunity sectors	61
References	65
Appendix A: Stakeholder consultation list	66
Limitation of our work	68

# Executive summary

Through a series of workshops and consultations precinct stakeholders developed and agreed elements of a new vision and strategy for the Campbelltown Health and Education Precinct.

Campbelltown, in partnership with local stakeholders have established a new vision to transform the city through a new focus promoting the growth of health and education related economic opportunities. However in looking ahead to this future, we first look back to the long history of growth and development underpinning momentum behind Campbelltown, along with outlining the case for and components of a new specialised Health and Education Precinct to be developed.

## History of success

Dating back more than 40,000 years and beyond, the Tharawal people were the first to look after the land that now covers Campbelltown. European pastoralists such as Macarthur later established primary industries, while visionary post war city planners then shaped the urban and economic structure of Sydney recognising Campbelltown as an important centre.

During the 1970s and 80s the Macarthur Growth Centre delivered new industrial and housing estates, along with major tertiary health, education and retail facilities. The Macarthur Growth Centre has been referred to as one of Australia's greatest urban planning success stories. As a funding and delivery based infrastructure partnership between local, state and federal funding partners – it was a true example of a 'City Deal'.

However today Campbelltown is not without its challenge with relatively higher levels of social and economic disadvantage, many population health indicators below national averages, and poorer access to local jobs than elsewhere in Western Sydney.

In this context, the sectors of health and education have been identified as a local economic strength and driver of jobs growth – providing approximately 28% of all jobs in Campbelltown, as of 2016.

## A new precinct vision

**“To provide world leading education and specialist community based care in areas of paediatrics, Aboriginal health and gastro motility through new science based research and discovery”**

Today, planning for the Campbelltown Health and Education Precinct represents a beginning of the next phases of Campbelltown's journey. It casts a new vision, supported by strategies to guide expansion of investment and employment in the sectors of health, education, research and science.

The new vision aims to leverage Campbelltown's unique endowments described in this report in ways that also address local challenges of access to employment and population health. Set against the region's unique

demographic context, the vision aims to support Campbelltown to become one of Australia's largest urban growth centres over the next two decades.

This document provides;

- a rethink about Campbelltown's role in the new 'Western City'
- a repositioning of the traditional 'centre' of Campbelltown CBD towards its health and education assets
- a new vision, themes and focus for future precinct investment
- a new economic structure plan with priority sub-precincts
- opportunity sectors for investment attraction
- a proposed collaborative governance model and delivery framework
- a delivery framework and priority actions to guide precinct stakeholders to success.

Most importantly, this work casts a new vision for growth that governments, business and the community can buy into and support.

## Objectives

Underpinning this vision are the following four objectives to:

- become a nationally recognised centre in medical sciences education and grow centres of excellence in community related and arts education,
- develop a greater presence in children's, maternal and indigenous health research and services,
- leverage the precinct's unique research strengths in gastro motility, paediatrics, Chinese and maternal medicine into local economic opportunity,
- grow Campbelltown's advanced manufacturing sector through engagement with the research and education strengths of Campbelltown and the South West.

## Four new specialised economic sub-precincts

Given the precinct's significant scale, four new economic sub-precincts have been identified to provide a focus for delivery and targeted investment attraction. These include:

1. **Health, medical and education city core** - Campbelltown's new city core that creates a focus for new investment in health, education and research, while also attracting skilled workers,
2. **Medical science and community related education core** - Campbelltown's economy will be fuelled by strong education institutions that drive productivity through improving the region's skills base,
3. **Civic, cultural and heritage urban core** - Developing high amenity urban appeal - infused with cultural arts, heritage and other community assets that create the places where precinct workers will seek to live and play,
4. **Future advanced health and manufacturing business area** - The proposed Nexus Business Park and existing business and industrial areas within the precinct to be reimaged as future locations for health related enterprises critical to growing a diverse high value economy.

We look forward to working further with Council and precinct stakeholders to deliver the vision outlined in this report.



# 1 Developing this report

Major precinct stakeholders were involved in the creation of this vision and strategy, with key messages and directions developed and tested with stakeholders through a series of workshops and consultations.

Deloitte Access Economics (Deloitte) was commissioned by Campbelltown City Council (Council) to prepare a strategy for the delivery of the Campbelltown Health and Education Precinct ('the precinct'). Deloitte were commissioned to prepare this strategy in response to the significant economic opportunity identified by Council to better leverage local health, education and research infrastructure if new approaches to economic development were developed.

## 1.1 Report objectives

The objective of this report is to advise Council on the most effective strategies to progress the Campbelltown Health and Education Precinct. Specific objectives involve how to:

- attract investment to Campbelltown,
- strengthen the local economy and grow jobs,
- inform future master planning for Campbelltown CBD,
- leverage the region's strengths in health, education and research to grow sectoral economic advantages within the local economy, and
- improve the liveability of the Campbelltown-Macarthur Centre with an emphasis on amenity, connectivity and lifestyle opportunities.

In particular, this report provides Council with:

- analysis of where the precinct is today, including mapping of its stakeholder ecosystem and major assets,
- presentation of a new vision for the precinct, including targeted investment themes that draw on the precinct's unique strengths and opportunities,
- a delivery framework stakeholders can work to in delivering new investment in Campbelltown, including priorities for government and opportunities and directions for private sector involvement.

In addition to the above, a new investment attraction prospectus will be developed to promote the precinct to government and investors.

## 1.1 Approach and timing

Three precinct stakeholder workshops were held to develop and test ideas in the creation of the vision and strategy for Campbelltown Health and Education Precinct.

The first workshop, held on 17 November 2016 focused on understanding existing precinct stakeholder plans, and views and ideas for a Health and Education Precinct in Campbelltown.

The second workshop, on 1 December 2016, began testing some of the medical research themes emerging from the previous workshop, as well as subsequent stakeholder consultations.

The final workshop, 2 February 2017, tested new ideas and concepts identified in workshops 1 and 2 and further confirmed the research themes unique to Campbelltown's Health and Education Precinct.

## 1.2 Structure of this report

This report is structured as follows:

- *Chapter 2: The case for establishing a precinct vision:* This chapter presents the arguments for and need to develop a precinct vision and strategy,
- *Chapter 3: Precinct analysis:* This chapter provides a range of analysis on the precinct that supports the development of the vision, and that can be used as a resource for precinct stakeholders when further developing and delivering precinct strategies,
- *Chapter 4: Precinct vision:* This chapter presents multiple elements of the new vision from spatial, sectoral and thematic perspectives to assist to develop a common understanding of the new vision and articulation to external stakeholders,
- *Chapter 5: Delivering the precinct vision:* This chapter describes how the precinct will be delivered and the required governance and action areas necessary to bring forward opportunities within the precinct, and for Campbelltown.

### Special acknowledgements

The following organisations assisted Deloitte Access Economics in the creation and authoring of sections of this report:

- Phillip Apelbaum, Director, Health Care Property Group,
- Bob Meyer, Director, Cox Richardson.

## 2 The case for establishing a precinct vision

The Campbelltown Health and Education Precinct has been identified as a priority economic development strategy for Campbelltown, and indeed South West Sydney; a range of factors build the case for this proposition and how it will reshape Campbelltown's economic future.

This chapter discusses seven key arguments for establishing the Campbelltown Health and Education Precinct, including;

- Strategic planning context,
- The need for jobs,
- The need for improved health and education,
- Reinforcing regional economic corridors,
- Rethinking the South West as Sydney's third city,
- Value of precinct based approaches,
- Leveraging other local plans and opportunities.

### 2.1 Strategic planning context

In building the case for a new precinct vision we examine the history of metropolitan planning that has led to the establishment of Campbelltown's current urban and economic structure. This context will be useful in latter discussions about policies and strategies to grow Campbelltown Health and Education Precinct.

#### 2.1.1 The Cumberland Plan

The concept of Campbelltown as a growth centre was born in Sydney's first Plan – the Cumberland County Plan of 1948. This plan aimed to establish a green belt to contain Sydney's sprawl, with a series of urban centres beyond the greenbelt identified in case population demand couldn't be met within the greenbelt. Campbelltown was one such urban centre. This approach was described in Professor Dennis Winston's 1947 book titled 'Sydney's Great Experiment'.

The Cumberland County Plan significantly underestimated Australia's post war population growth, requiring the establishment of Campbelltown urban centre through new plan for Sydney - the Sydney Region Outline Plan (SROP) of 1968. Interestingly, the miscalculated post war population growth rate of 2% per annum is roughly similar to that forecasted for Campbelltown and the South West over the next two decades<sup>1</sup> - meaning

---

<sup>1</sup> See: <http://forecast.id.com.au/campbelltown/population-households-dwellings>

the need for smart planning for growth is as important today as it was during the post war boom period.

### **2.1.2 Sydney Region Outline Plan (SROP)**

The 1968 SROP established new urban corridors along existing and proposed rail corridors and has, over the last half century become the single enduring blueprint for Sydney's growth. In this plan, Campbelltown along with Parramatta were identified as Sydney's two 'sub-regional' centres, with Sydney CBD the major 'regional-serving' centre of Sydney.

### **2.1.3 Macarthur Growth Centre**

During the 1970s and 1980s the Macarthur Development Board was established to deliver the Macarthur Growth Centre. The Macarthur Development Board built on this structure by negotiating between all levels of government and the private sector for the delivery of many of the major economic infrastructures that now define the Campbelltown CBD and Health and Education Precinct.

These include assets such as Macarthur Square, sites for Western Sydney University, TAFE NSW, Campbelltown Hospital, the Australian Botanical gardens Mt Annan, Menangle Park and Ingleburn and Minto employment areas. Innovatively, the Macarthur Development Board shaped much of the urban structure that now defines Campbelltown, with the Macarthur Growth Centre referred to as the most successful growth centre in Australia's history<sup>2</sup>.

Decades of subsequent investment and growth have strengthened Campbelltown's urban structure, and supported its transition from a once peri-urban location to a higher order conurbation providing employment in more advanced sectors such as manufacturing, health and education, among others.

### **2.1.4 City of Cities 2005**

In more recent periods, plans such as the 2005 'City of Cities' Sydney Metropolitan Plan identified the South West Growth Centre - a new growth centre located to Campbelltown's north-west and intended to provide more than 110,000 dwellings to house Sydney's expanding population. Centres such as Campbelltown were expected to provide many of the higher order employment, and tertiary health and education services required by new resident populations.

In 2014 Campbelltown was recognised as a Regional City, opposed to sub regional status.

### **2.1.5 Western Sydney Airport (WSA)**

In 2014, after decades of debate and speculation the federal government announced the establishment of a second Sydney airport to be located at Badgerys Creek, 22kms from Campbelltown City. Since this announcement state and federal authorities have also commenced investigations into a new rail corridor to link the future airport with other Sydney employment and residential centres.

### **2.1.6 Urban release areas and economic corridors**

In 2015, both the Greater Macarthur Land Release Investigation Area (45,000 new dwellings, 17,000 new jobs) and the Glenfield to Macarthur

---

<sup>2</sup> Tom Uren, 1994. 'Straight Left', published by Random House, page 266.



Urban Renewal Corridor (17,000 new dwellings, 20,000 new jobs) were identified.

Both these planning proposals build on and continue to reinforce the urban economic structure laid down for South West Sydney by planning and development authorities since the late 1940s. Indeed they build on the long established economic structure of Sydney as a city of three cities, namely Sydney CBD, Parramatta spanning to Penrith and the South West including Campbelltown.

### **2.1.7 The Greater Sydney Commission**

In November 2016 the newly established Greater Sydney Commission<sup>3</sup> released its Draft District Plan for South West Sydney. This plan recognises the role of the Campbelltown Health and Education Precinct in delivering higher order employment within the local economy. It also identified Campbelltown as becoming a 'Medical University City'.

The Commission proposes a new 'three cities' model for Sydney that describes Campbelltown as one of four satellite cities surrounding the future Western Sydney Airport, to be established by 2025. These satellite cities including Campbelltown, Liverpool, Blacktown and Penrith have been referred to as a 'string of pearls'. Combined, the Western Sydney Airport and the 'string of pearls' are to make up a suggested third city of Sydney – alongside Sydney CBD, and Parramatta.

With its prime focus around the future airport, this new narrative risks drawing much needed attention away from two of Australia's most stand out economic corridors: the Penrith to Parramatta corridor and the similarly significant Campbelltown to Parramatta corridor<sup>4</sup>.

This report argues these two corridors, and their associated economic centres form critical spines that should be the immediate focus of planning authorities and investors given their ability to establish agglomeration economies and jobs growth over the next decade; with the yet to be realised Western Sydney Airport becoming the focus for Sydney's longer term, fourth future city.

The vision and strategy for the Campbelltown Health and Education Precinct is grounded in both an understanding of the past, and practical interventions that will deliver economic success into the future. It is also based on a history of urban planning success.

## **2.2 The need for jobs**

As of the 2011 Census Campbelltown had a total of 65,055 employed residents. An estimated 54% (or 35,190) of these workers commuted out of the LGA each day for work. This is one of the highest daily commuter rates of any LGA in Sydney, placing additional social and economic burdens on local households.

---

<sup>3</sup> The Greater Sydney Commission is a new Relevant Planning Authority established by the NSW Minister in January 2016 and is responsible for new District and metropolitan planning.

<sup>4</sup> Both these corridors are discussed in Chapter 2 of this report.

In reality, this figure is likely to be as high as 60% if just half of Census respondents who 'inadequately described' their location of work are assumed to be commuters leaving Campbelltown LGA for work each day.

Campbelltown LGA also ranks poorly on the SEIFA Index of Disadvantage among NSW LGAs, as 1 of 10 most disadvantaged LGAs in metropolitan Sydney. In 2011 Campbelltown had a SEIFA Index of Disadvantage of 939, placing it 114th out of 156 NSW LGAs in 2011.

Suburbs such as Macquarie Links, Glen Alpine and Blair Athol had SEIFA Indexes of Disadvantage of 1,113, 1,089 and 1,052 respectively.

Economic strategies such as the Campbelltown Health and Education Precinct will be critical in addressing the local social and economic challenges facing Campbelltown's development.

### **2.2.1 Growth context and drivers**

Over the next two decades South West Sydney's population of more than one million will grow by an estimated 48% to more than 1.59 million (2016, NSW Planning). By 2036, this will mean that one in every three new NSW residents will reside in the South West. This kind of growth will have no parallels in Australia. It will also create additional pressure to provide access to health and education services, along with local employment.

## **2.3 The need for improved health and education**

Across a range of health and social indicators Campbelltown performs considerably poorer when compared to state and national averages.

According to the South West Sydney Local Health District<sup>5</sup>, Campbelltown has lower rates of self-reported health status, psychological distress, adequate physical activity, consumption of vegetables, smoking, influenza immunisations, pneumococcal immunisations, pap testing, mammograms and antenatal visits before 14 weeks gestation.

Relatively poor health status is also reported across SWSLHD for many of the health priority areas including: stroke, diabetes, asthma, fall related and high BMI attributable hospitalisations; cardiovascular, lung cancer and diabetes related deaths; and pregnancy outcomes in perinatal mortality and low weight births. Poor health status entails a higher burden and higher responsibility in healthcare provision across the spectrum from prevention to treatment and palliation.

Campbelltown also has a higher concentration of social housing tenancies and residents with disabilities than the State average. In 2011 Campbelltown had 7,717 disabled residents, representing 5.3% of all residents compared to 4.9% for NSW.

Combined, these factors place Campbelltown's economic and social future at a point of unacceptable risk.

Improvements in local health outcomes was identified as a high priority during precinct stakeholder workshops. While the social costs of poor health outcomes are often well demonstrated<sup>6</sup>, the longer term economic benefits

---

<sup>5</sup> South West Sydney Local Health District, Strategic Priorities report, 2016.

<sup>6</sup> NSW Intergenerational Report 2016, Future State NSW 2056, NSW Government

of improvements in local health will also benefit Campbelltown's economic performance.

Precinct strategies that directly improve population health outcomes for Campbelltown will have a significant longer term economic benefit for the region.

2.4 Reinforcing regional economic corridors

2.4.1 Existing economic corridors

Western Sydney’s economy is concentrated along two fundamental economic corridors, or spines. The first of these, the east-west spine from Penrith to Parramatta was recently examined by Western Sydney University (2017) in *The Penrith Fulcrum Economy: An Airport, a City, a Spine*. A second spine, argued in this report is the economic spine from Parramatta to Campbelltown.

These spines have evolved around the region’s main rail corridors, namely the Western line between Parramatta and Penrith, and the Cumberland line between Parramatta and Campbelltown.

A Western Sydney University report (2017) states that Sydney’s Western rail line is overwhelmingly Australia’s’ busiest rail corridor, providing heavily patronised services for the nation’s largest daily commuter flow. Analysis in this report shows that based on *adjusted* 2011 census data for place of work, a total of 191,082 jobs were located along the Penrith-Parramatta portion of the spine in 2011.

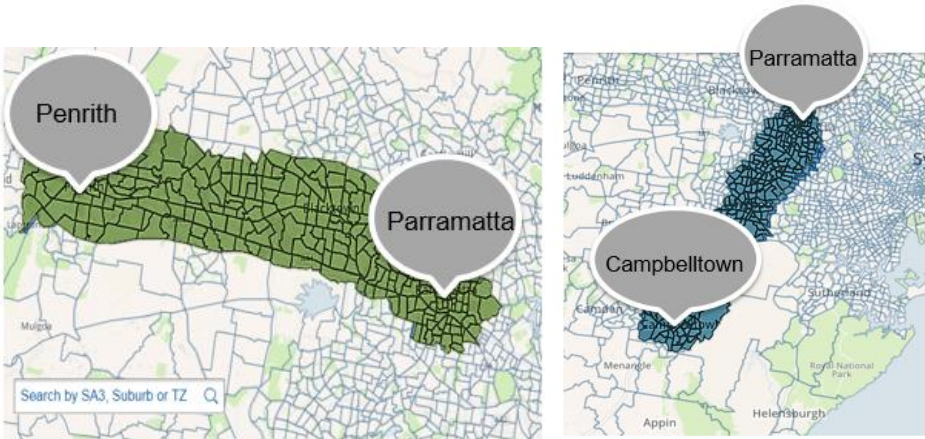
Similarly we argue that the second of these spines, from Parramatta to Campbelltown, is worthy of similar attention and analysis. Deloitte analysis shows that using available unadjusted 2011 Census data<sup>7</sup> yields the following results for the two corridors.

Figure 2.1: Jobs to worker ratios of existing economic corridors

Spine (km)	Jobs	Working residents	Jobs to worker ratio
Penrith to Parramatta (32km)	231,951	220,810	105%
Campbelltown to Parramatta (34km)	216,087	203,688	106%

Source: Deloitte analysis using NSW BTS data, 2017.

Figure 2.2: Corridor 1 Penrith to Parra Corridor 2 Campbelltown to Parra



<sup>7</sup> NSW Bureau of Transport Statistics

The jobs to worker ratio of 105% and 106% respectively within these two corridors is, by any standard, impressive.

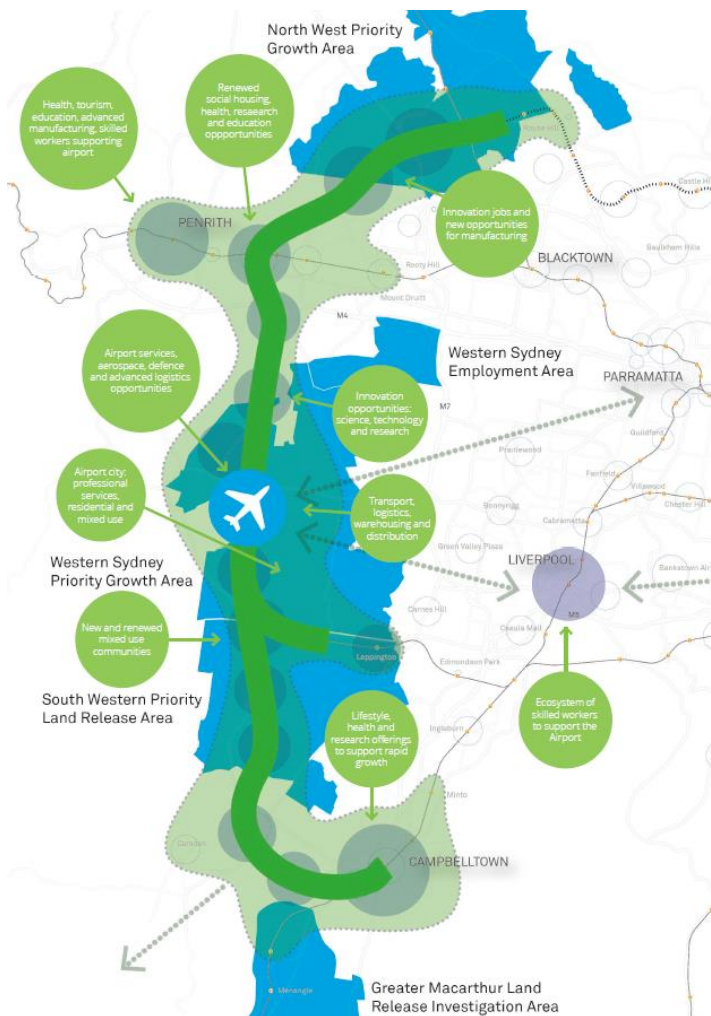
By comparison, the unadjusted jobs to worker ratio for Western Sydney is much lower at 70%, while Campbelltown's ratio is just 66%. This means there is only 0.7 jobs available in the region for every working residents – and just 0.66 in Campbelltown.

Thus, compared to the rest of Western Sydney and Campbelltown, these corridors are stand out economic performers.

Surprisingly, the above story rarely gains a mention in the organising principles used to guide metropolitan planning. Each of these corridors are also readily serviced by similar major motorways, along with major health, education and research facilities. They also exhibit relatively thick labour markets of highly skilled workers.

#### 2.4.2 A future economic corridor?

In addition to the abovementioned existing corridors, a future economic corridor – featuring heavy rail – is currently being envisaged and formally investigated for Western Sydney.



Source: A Network of Opportunity, Western Sydney Rail, Deloitte & ARUP, October 2016.

Council's submission (2016) to the Western Sydney Rail Needs Scoping Study supports a rail link extending from the South West, as far as

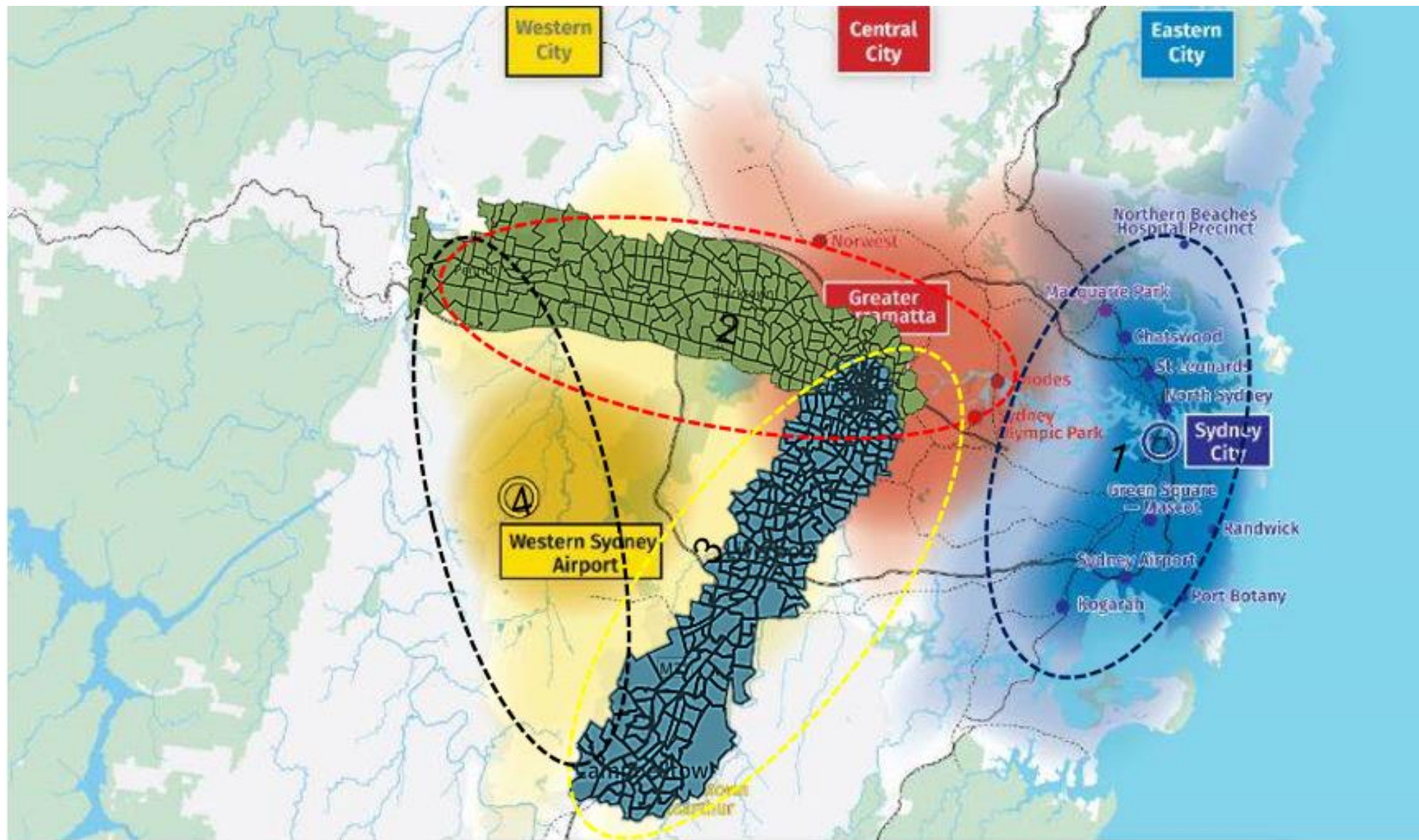
Campbelltown, through to the proposed airport site at Badgery's Creek Airport, up to Rouse Hill in the north.

This rail link would support the three city centres of Campbelltown-Macarthur, Liverpool and Penrith and offer a significant proportion of the workforce, to not only deliver the airport, but to also support it once operational.

Strategies such as the Campbelltown Health and Education Precinct will be critical in delivering the economic benefits of agglomeration already arising within the region's existing economic corridors, along with enabling the growth of the region's future corridors.



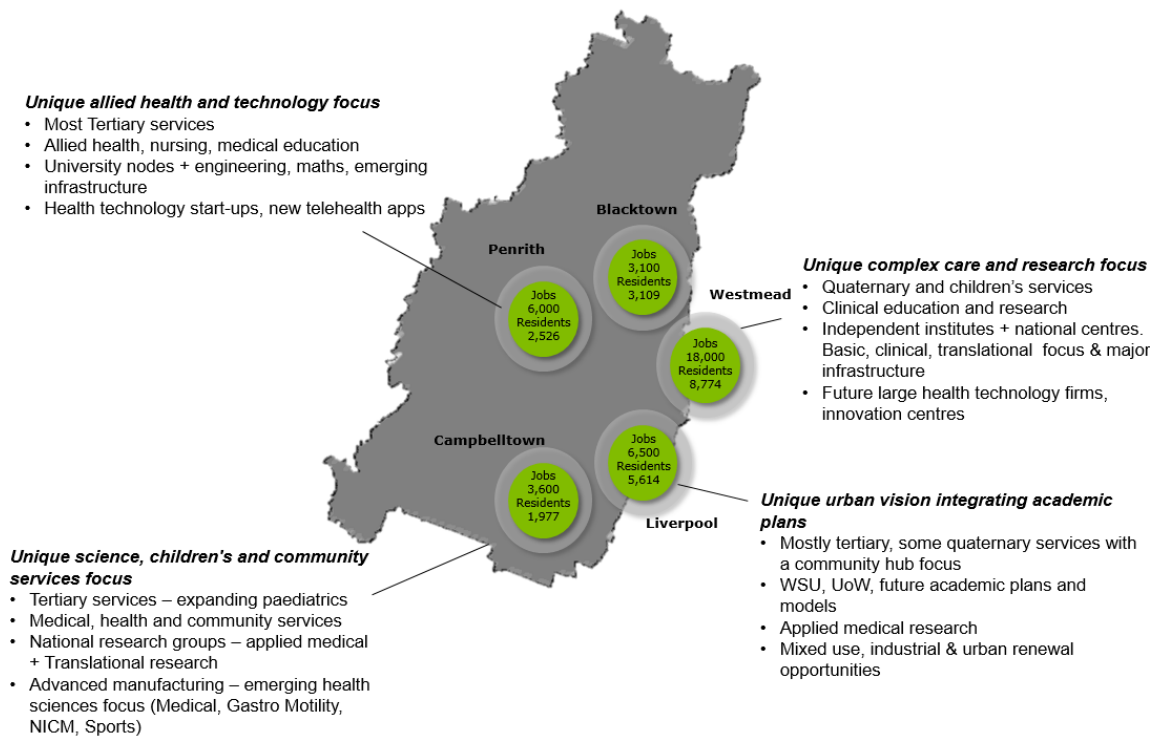
## 2.5 Rethinking the South West as Sydney's third city



Around these three corridors a 'Western City' could emerge – but not without the South West - in which the Campbelltown Health and Education Precinct is a prime anchor and enabler of a future fourth city

## 2.6 Western Sydney health and education precincts

Embedded within the regions' two existing corridors are five health and education precincts. Each of these precincts provide distinct and specialised health, education and research services that complement, rather than compete with Campbelltown unique focuses in health and education.



Source: Deloitte Access Economics, 2017

These precincts provide approximately 40,000 jobs. Most have developed local economic strategies to attract public and private investment and grow high order knowledge jobs connected to their relevant health, education and research specialisations.

As shown on the above diagram each of these precincts possess unique economic specialisations. In this context, Campbelltown should continue to deepen and expand its specialisations, rather than try and compete with other Health and Education Precincts.

## 2.7 The value of precinct-based approaches

Workshops conducted in the development of this vision discussed the merits of both place-based and virtual economic strategies to deliver economic objectives of the precinct. While we suggest that both approaches are required, the focus of the vision should be on new place based economic strategies, supported where appropriate by new virtual strategies.

There are two reasons for this position, including:

### 2.7.1 Place matters for prosperity

'Building the Lucky Country #5: The purpose of Place – Reconsidered' rejects a common belief that technology has "trumped the tyranny of distance and place no longer matters". Rather, place and cities are becoming more important for driving growth, ensuring international

competitiveness, increased attractiveness for skilled and creative workers and overall prosperity for Australia.

Further, knowledge-intensive services display “clustering effects” referred to as economies of agglomeration which are relevant for the health and education and technology-related enterprises expected to grow in the Campbelltown Health and Education Precinct. Economies of agglomeration occur when the productivity of knowledge workers increases at an exponential rate when they are located in close proximity to each other, their interactions stimulating creativity and innovation for the economy – further driving productivity for the knowledge economy.

To facilitate this type of growth, precinct based strategies are critical. Two famous quotes best demonstrate this:

*“It seems that every time a new technology comes along that slashes communications costs, pundits emerge declaring the death of distance, or some other catchphrase suggesting that geography no longer matters. The truth is exactly the opposite. Falling transport and communication costs are powerful drivers of concentration.” Professor Mario Polèse, 2013.*

*“We are, by nature, social creatures who congregate; it’s our cultural DNA. We are not good at surviving in isolation. We rely on communities to support and sustain us, and if those communities are to survive and prosper, we must engage with them and nurture them.” Hugh Mackay, 2014.*

### **2.7.2 Precinct-based strategies deliver outcomes other interventions can not**

One of Australia’s leading precinct practitioners, Dr Terry Cutler<sup>8</sup> notes the following advantages of precinct-based strategies as their ability to:

- provide the scale to attract good people, funding, facilities and global partnerships,
- support first-class facilities to support first-class research and learning,
- provide proximity and access to people and capabilities that are task-critical, as well as to the end-users of outcomes (thus nesting problem-solving within an engaged community),
- facilitate synergies, serendipity, focus and, most importantly, multidisciplinary and transdisciplinary capabilities (allowing unstructured conversations across disciplines and entities),
- provide a catalyst for intergovernmental coordination and for economic development strategies (combining new facility and infrastructure development, the coordination of information technology platforms and hubs, and the expression of new business models),
- address the inbuilt human need for face-to-face social contact (fostering social capital),
- unlock latent intellectual capital and underused assets,
- secure better public (socioeconomic) outcomes for the investment of time, effort and money,
- facilitate a more creative, culturally attuned innovation ecosystem.

“There is no such thing as a national innovation system; actually, Australia’s innovation system is an

---

<sup>8</sup> MJA report reference, Cutler et al

agglomeration of distinct regional and subregional ecosystems. This structure cannot be driven from above.” Terry Cutler, 2015.

In fact, plans by central agencies to drive innovation are better directed at supporting smart local strategies, not leading them, hence the need for a local strategy that central agencies can buy into and support.

## 2.8 Supporting the delivery of other plans

### 2.8.1 (DRAFT) Campbelltown City Transformation Plan

Council recently commissioned a Campbelltown CBD Transformation Plan which provides analysis to guide longer term economic development and growth of the Campbelltown CBD.

The draft plan identifies Council as the single largest land owner in the Campbelltown CBD, controlling 70% of all lands in the centre. It also more than considers the potential use of Council land holdings (see figure 2.3) to support development of the CBD.

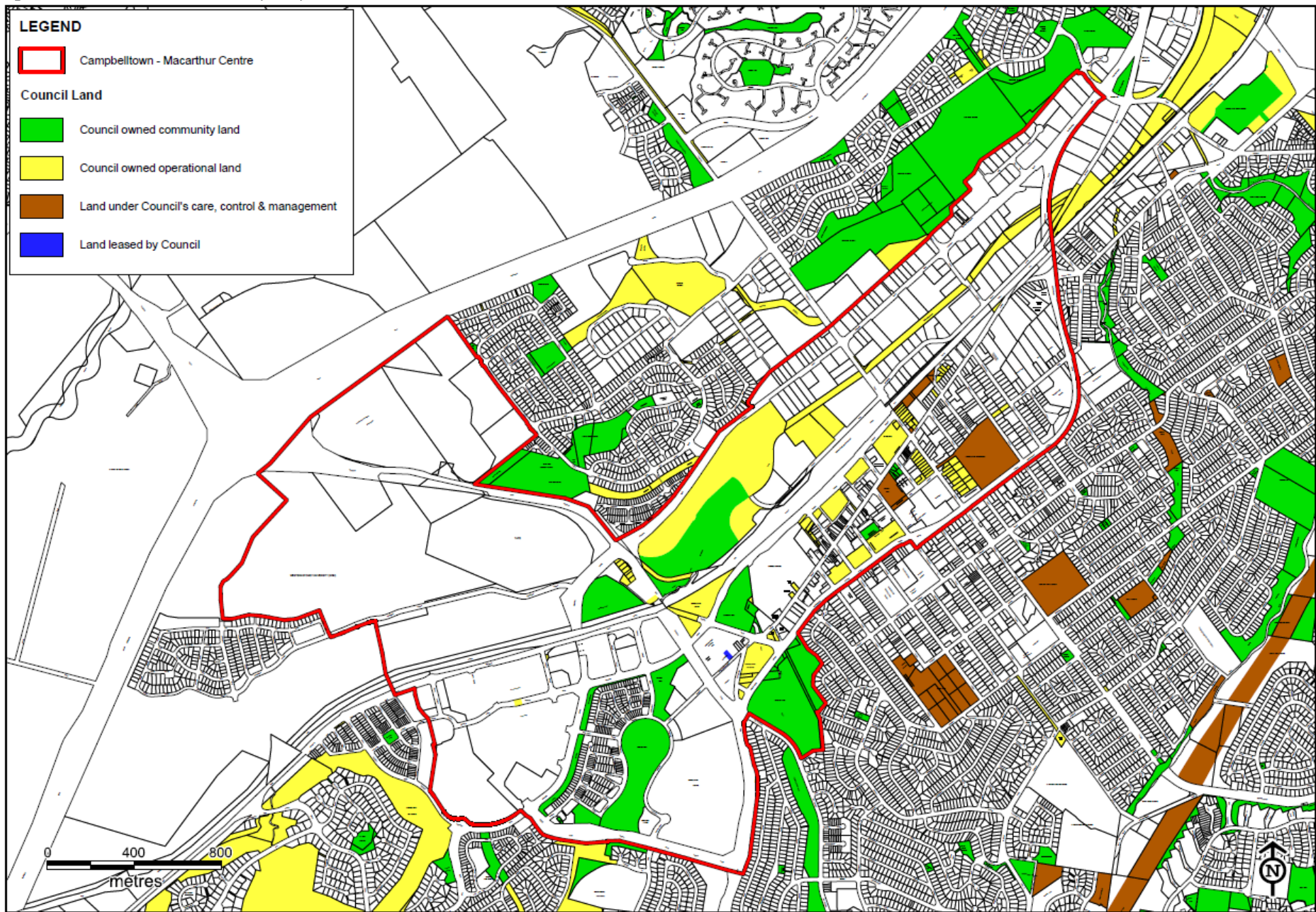
The draft plan identifies more than 520,000 square metres of potential additional gross floor area that could be delivered across eight Council owned sites, the largest being the Blaxland road site adjoining the railway line.

While concentrated on the existing Campbelltown CBD, this plan is a great start in assisting decision making in regards to land use planning and Council-related property development.

In support of the plan, strategies such as the Campbelltown Health and Education Precinct will provide direction on the economic opportunities required to transform Campbelltown CBD.



Figure 2.3: Council land ownership map

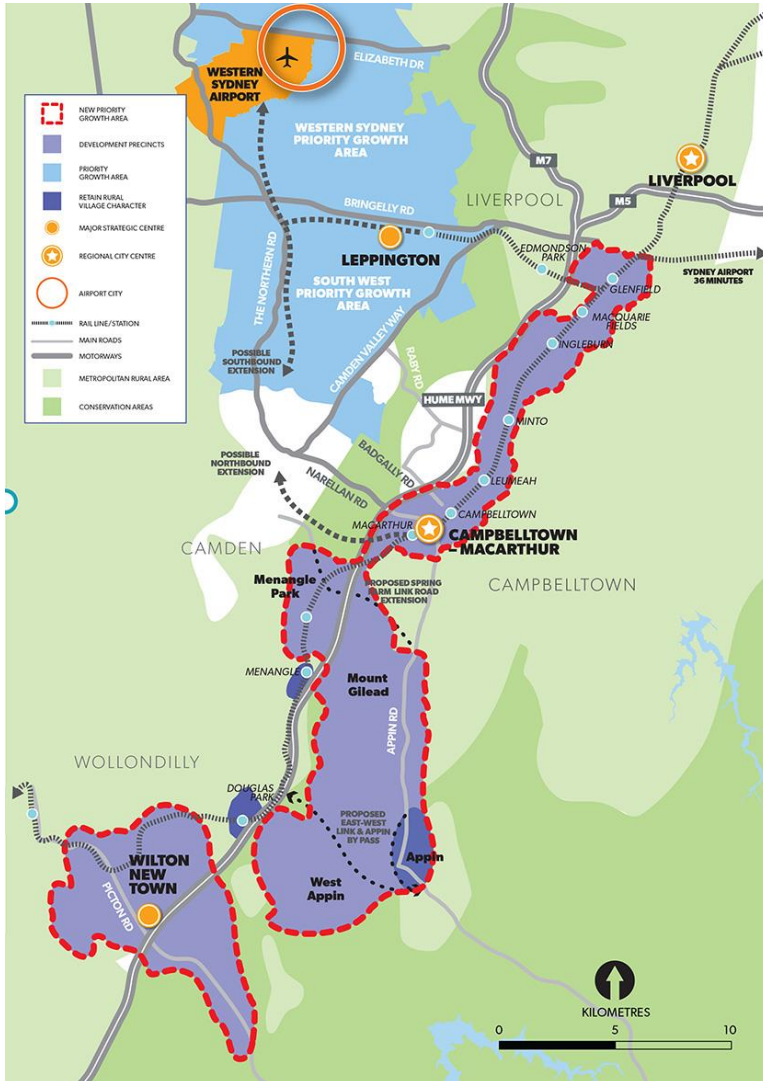


### 2.8.2 Greater Macarthur Priority Growth Area

Stretching from Glenfield to Douglas Park, the Greater Macarthur Priority Growth Area includes both the Glenfield to Macarthur Urban Renewal Corridor and the Greater Macarthur land Release Investigation Area.

The Priority Growth Area is expected to provide up to 33,000 new homes and 30,000 new local jobs within easy access to homes.

Figure 2.4: Boundary of the Greater Macarthur Priority Growth Area



Source: NSW Department of Planning & Environment, 2017.

### 2.8.3 Glenfield to Macarthur

The strategy focusses along the 15km existing Cumberland South Rail line, currently situated in the Campbelltown local government area, identifying seven key employment areas comprising an 800m – 1.5km radius from the relevant rail station. These identified employment areas include:

- Glenfield,
- Macquarie Fields,
- Ingleburn,
- Minto,
- Leumeah,



- Campbelltown,
- Macarthur.

These growth centres comprise 40,242 residents, and 39,778 jobs. The strategy proposed that these growth centres could accommodate another 15,000 dwellings and 20,700 jobs by 2036.

#### **2.8.4 The Greater Macarthur Investigation Area (GMLRIA)**

The GMLRIA comprises an area of approximately 17,600 hectares that is located approximately 70km south west of the Sydney CBD. The area spreads across the Campbelltown and Wollondilly Local Government Areas and extends from Menangle Park in the north, Appin in the east, Wilton in the south and Maldon to the south west.

Achievement of the employment targets set by the NSW Department of Environment and Planning will be supported by local, precinct-based strategies led in part by Campbelltown.

The Campbelltown-Macarthur Centre will be the regional hub of economic and social activity for the Greater Macarthur Priority Growth Area (including the GMLRIA).

In this context the Campbelltown Health and Education Precinct will play a vital role in contributing towards the ongoing sustainability of Campbelltown-Macarthur in this intended role.

# 3 Precinct analysis

The Campbelltown Health and Education Precinct has a range of economic and physical assets, all set within one of Australia's most significant economic growth contexts.

This chapter provides analysis on:

- Precinct study area,
- Local employment trends,
- Precinct catchments,
- Precinct ecosystem,
- Plans of precinct partners,
- Challenges and barriers to growth,
- Business case studies.

## 3.1 Precinct study area

As shown in Figure 3.1, six areas were selected to establish an initial study boundary for analysing a range of data and other observations about a Campbelltown Health and Education Precinct.

Figure 3.1: Campbelltown Health and Education Precinct vision study area



Source: Google Maps, Deloitte analysis

## 3.2 Local employment trends

### 3.2.1 Health and education employment

In 2016 Campbelltown City had a total of 49,857 jobs located within the local economy. As shown below, the top provider of jobs was health care and social assistance, closely followed by manufacturing and retail trade. These three industries accounted for 22,325 local jobs, or 44.8% of all jobs. Education and training, and accommodation and food services made up the remaining top five employing sectors.

Combined the health and education sector provided 14,132, or 28% of all jobs in Campbelltown, as of 2016.

This proportion is high compared to Penrith (24%), Parramatta (19%), and Blacktown (19%) LGAs. This proportion is also high in terms of Greater Sydney (19%) and the South West (22%).

An estimated 50% to 60% of Campbelltown's health and education related jobs are located within the precinct.

Figure 3.2: Top 5 job sectors, 2015-16 (Campbelltown City)

Industry	Jobs	%
1. Health Care and Social Assistance	8,023	16.1
2. Manufacturing	7,925	15.9
3. Retail Trade	6,397	12.8
4. Education and Training	6,109	12.3
5. Accommodation and Food Services	3,706	7.4

Source: <http://www.nieir.com.au/> ©2016. Compiled and presented in economy.id by .id, the population experts.

Further, according to location quotient analysis Campbelltown has local economic strength in the industries of manufacturing, health, social assistance and education and training. However, it has weaknesses in professional, scientific and technical services that will be required for developing science based precinct and sectoral strategies.

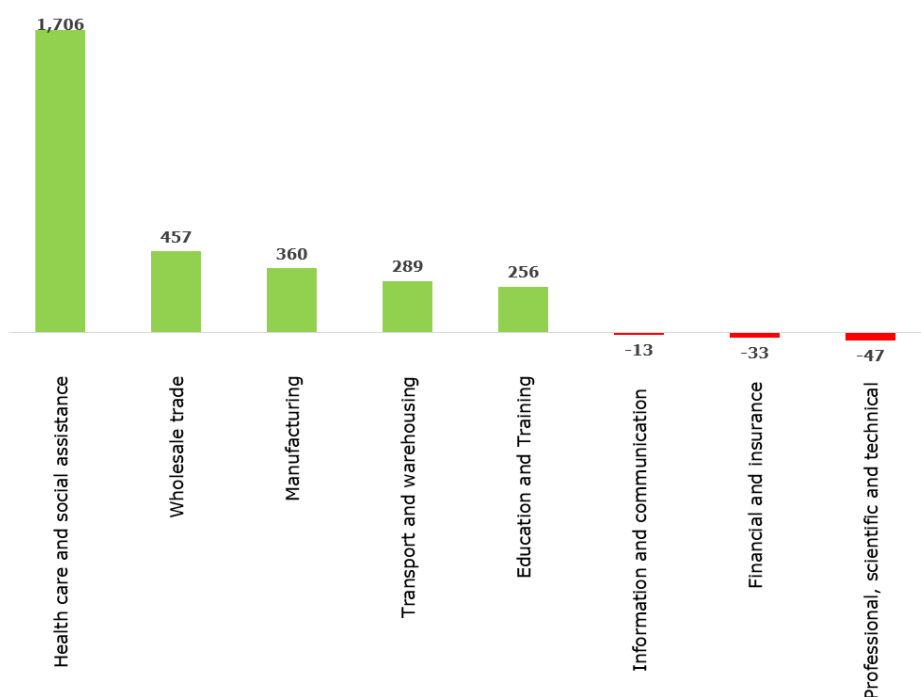
Figure 3.3: Location quotient analysis (Campbelltown compared to Australia)

Top 4 industries	Location quotient
Manufacturing	1.96
Health Care and Social Assistance	1.38
Education and Training	1.33
Wholesale Trade	1.27

Bottom 4 industries	Location quotient
Information Media and Telecommunications	0.41
Professional, Scientific and Technical Services	0.40
Financial and Insurance Services	0.36
Mining	0.23
Agriculture, Forestry and Fishing	0.06

Source: <http://www.nieir.com.au/> ©2016. Compiled and presented in economy.id by .id, the population experts

Figure 3.4: Net jobs growth by industry 2012 – 2016 (Campbelltown City)



Source: <http://www.nieir.com.au/> ©2016. Compiled and presented in economy.id by .id, the population experts<sup>9</sup>.

Over the four years to 2016, Campbelltown LGA had a net jobs increase of 3,797. This includes the net effect of all jobs created and lost in the economy during this period. The standout net jobs generator in the economy was health care and social assistance, which expanded employment by an additional 1,706 jobs between 2012 and 2016. Health care and social assistance also overtook manufacturing as the largest industry of employment in 2016.

The growth of education jobs was not as impressive over the same period, but recorded a net job gain of 256. However looking forward, the growth of

<sup>9</sup> Graph excludes industries of financial & insurance services, Administration & support, and Public administration and safety given the net jobs change between 2010 and 2015 was 8.

education jobs is anticipated to be higher than in the previous period. This outlook is supported by a range of recent education investments by both TAFE NSW and Western Sydney University, including a new paramedic education training facility recently completed at Campbelltown.

### 3.3 Precinct catchments

The Campbelltown Health and Education Precinct is strategically located to service a population catchment that will more than double over the coming decades.

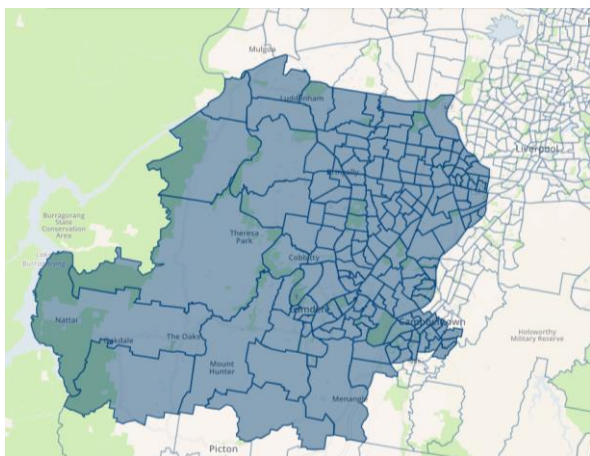
In addition to the concentrated economic corridors described in Chapter 1, the precinct will also draw on four major economic catchments. These have been defined as:

- Campbelltown to Liverpool,
- Campbelltown to Western Sydney Airport (WSA),
- Campbelltown to Southern-Highlands,
- Campbelltown to Wollongong.

The forecasted growth of these catchments over the coming decades is now discussed.

#### 3.3.1 Campbelltown to Western Sydney Airport catchment

Including all major centres to the north west of the precinct, including the Western Sydney Airport. This catchment has been identified as a priority growth area by both the Commonwealth and State Government and is supported by the current calls for an orbital rail link to connect the north west, through Penrith to the south west as far as Campbelltown.



Source: NSW Bureau of Transport Statistics, 2017.

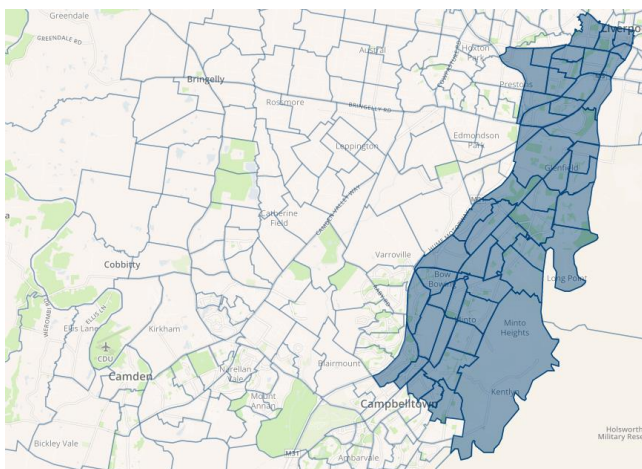
This catchment had a population of 236,198 and 117,528 workers in 2016. In 2016, the catchment also included 65,460 jobs. It is expected by 2036 the population will double, providing a key worker and demographic catchment for the precinct.

#### 3.3.2 Campbelltown to Liverpool catchment

This catchment includes the majority of the Glenfield to Macarthur Urban Renewal Corridor identified by the NSW Department of Planning and



Environment. In 2016, this catchment had a population<sup>10</sup> of 122,923, along with 55,179 workers<sup>11</sup> and 50,473 jobs<sup>12</sup>.

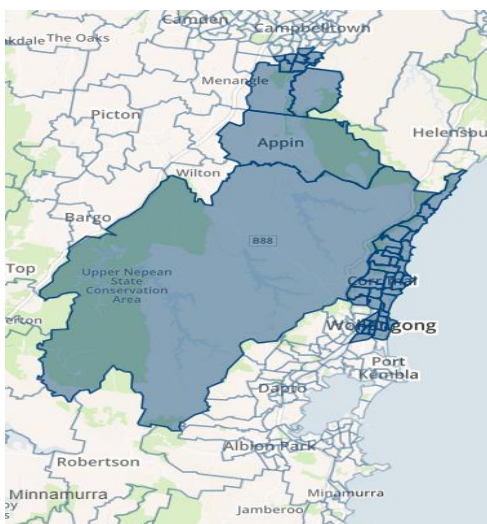


Source: NSW Bureau of Transport Statistics, 2017..

### 3.3.3 Campbelltown to Wollongong catchment

Including to the south east as far as Wollongong. This catchment is strongly supported by the strong work-life balance offered to residents in this area. Campbelltown is a commutable distance away from Wollongong and therefore offers workers in the region an opportunity to experience coastal living, while still working in a regional city.

This catchment had a population of 122,453 and 54,071 workers in 2016. This catchment is expected to continue to steadily increase, as more workers seek to live on the outskirts of Sydney metropolitan, and commute to regional cities such as Campbelltown.



Source: NSW Bureau of Transport Statistics, 2017

<sup>10</sup> The 'Population' is equivalent to Estimated Resident Population (ERP) using standard Australian Bureau of Statistics (ABS) 5-year age categories and is a forecast of the Bureau of Transport Statistics.

<sup>11</sup> Workforce or "workers" refer to usual residents aged 15 years and over who are employed and is a forecast of the Bureau of Transport Statistics.

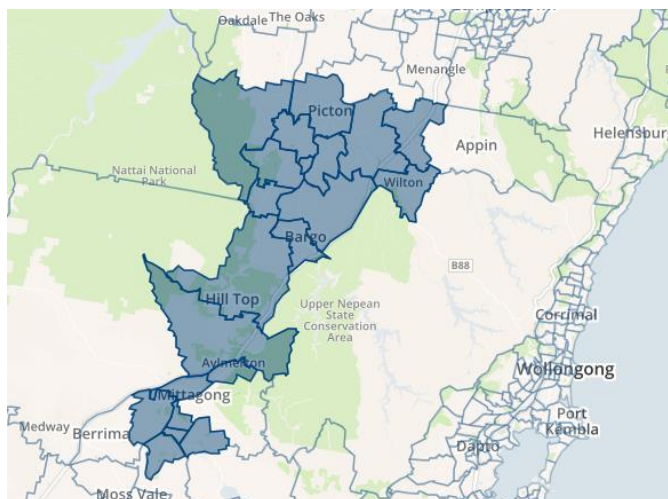
<sup>12</sup> Employment or "jobs" refer to persons aged 15 years and over working in the catchment regardless of their place of usual residence and is a forecast of the Bureau of transport Statistics.



### 3.3.4 Campbelltown to Southern-Highlands catchment

Including the south west, stretching as far as Bowral. As part of the Greater Macarthur Priority Growth Area, the Government announced new land releases at Menangle Park and Mount Gilead. Both of these areas will form key catchments for workers and investment in South West Sydney.

This catchment had a population of 51,156 and 25,446 workers in 2016. Given the new land release it is expected this catchment will experience double digit growth in population as well as resident workers.



Source: NSW Bureau of Transport Statistics, 2017.

Figure 3.5: Catchment data

#### Four population catchments that will grow by 90% by 2041

Campbelltown to:	2011	2016	2021	2026	2031	2036	2041
<b>Western Sydney Airport</b>	183,915	236,200	293,125	348,675	403,081	461,495	<b>521,921</b>
<b>Liverpool</b>	116,440	122,924	126,962	133,476	140,492	148,718	<b>157,374</b>
<b>Wollongong</b>	116,946	122,453	127,346	131,007	134,848	138,733	<b>142,483</b>
<b>Southern Highlands</b>	48,371	51,157	54,316	57,766	61,102	64,738	<b>67,466</b>
<b>Total</b>	<b>465,672</b>	<b>532,734</b>	<b>601,749</b>	<b>670,924</b>	<b>739,523</b>	<b>813,684</b>	<b>889,244</b>

Source: NSW Bureau of Transport Statistics, 2017.

Each one of these catchments provide growing skilled labour markets and trade areas, along with a wide range of high amenity lifestyle locations where the precinct's workers can choose to live and play.

### 3.4 2016 precinct business ecosystem

Campbelltown has an existing ecosystem of health, education and research businesses and institutions. The ecosystem is further supported by the local labour market catchment, demographics and supporting industries outlined in this report.

The aim of the 2016 precinct business ecosystem is to provide an overview of the existing business ecosystem currently established in the precinct. It is not yet a definitive list, rather a list that can be developed over time to map the growth of businesses in the precinct.

It can also be used by economic development practitioners to identify business service gaps in the eco-system, and promote existing firms that new entrants to the eco system can collaborate with in the precinct.

Figure 3.6: 2016 Campbelltown Health and Education Precinct business ecosystem map

## Health

### Hospitals

- Campbelltown Public Hospital
- Campbelltown Private Hospital

### Day Surgeries

- Bradbury Dental surgery
- After Hours Dental Emergency Campbelltown

### Medical/Dental centres & clinics

- A Plus Dental
- Airds medical Centre – Dr.S K Goyal
- Campbelltown General Practice
- Campbelltown Medical & Dental Centre
- Campbelltown Medical Practice
- Campbelltown Private Sports and Accident Clinic
- Centre Health Australia
- Complete Medical Centre
- Gentle Dental Care Campbelltown
- Haig Psychiatrist
- iFamily Medical Centre
- Leumeah Medical Centre
- Macarthur Dental
- Macarthur General Practice
- Northside Macarthur Clinic
- Options Dental Care Campbelltown
- Park Central Family Practice
- Primary Dental Campbelltown
- Queen Street Dental
- Queen Street General Practice
- Royale Medical Centre
- Southwest Wellness Centre
- Teeth@Leumeah
- Tharawal Aboriginal Corporation Medical Clinic

### Disability services & support organisations

- Ability Options
- Benevolent Society
- Break Thru Campbelltown
- Catholic Care Family Welfare Services

- Disability Trust Vacation Care – Campbelltown
- Headspace Campbelltown
- Just Better Care
- Lifeline Campbelltown
- Macarthur Mental Health Service
- Northcott
- Nova Employment Campbelltown
- OCTEC Employment Service
- Rainbows of the Soul
- Real Disability Care
- Ride Scooters & Aged Care
- Sunnyfield – Campbelltown
- SydneyWest Recruitment & Disability Services
- The Disability Trust
- The Sleep Management Group
- Uniting Disability
- Wesley Life Skills Campbelltown
- Youth Solutions

### Retirement & aged care

- Angus Bristow Village
- Baptist Care
- Baptist Community Services
- Durham Green Retirement Village
- Fraternity of the Holy Cross Russian Orthodox Home for the Aged
- IRT Macarthur Lifestyle Community
- Kilbride Nursing Home & Kilbride Village
- Macarthur Gardens Retirement Village
- Newmarch House
- Pembroke Lodge Rest
- The Whiddon Group Easton Park

### Specialist services

#### Audiologist

- Australian Hearing
- Connect Hearing Campbelltown
- Connect Hearing Elderslie
- Hearing Life Campbelltown
- Mac Hearing Audiology
- Macarthur Audiology & Hearing Services

- National Hearing Care Campbelltown

#### Cardiologist

- Dr Edward Chow
- Kachwalla Hashim Dr

#### Counsellor

- Benad & Associates
- Bernadette Sutherland
- Counsellors & Psychotherapists Association of NSW Ann-Marie Green
- Deanne Reyes Counselling and Psychotherapy
- Family Relationship Centres
- Leisa Macnamara – Individual & Relationship Counselling & Coaching
- Macarthur Practice
- Nagle Centre
- Salvation Army Counselling Service
- The Calm Clinic
- Uniting Burnside Bridges for Youth Campbelltown
- Uniting Counselling and Mediation Unifam & Family Relationships

#### Dermatologist

- Dr George M Calfas
- Dr Ian Younger

#### Dietitian

- Difference Dietetics

#### Endocrinologist

- Dr Mark Borkman

#### Fertility Physician

- Next Generation Fertility

#### Gastroenterologist

- Dr Ian B Turner
- Dr Teoh
- Dr Agus Crotodihardjo

#### Geriatrician

- Dr Kawaljit Singh

#### Gynaecologist

- Dr Bhaswati Ghosh
- Dr Bhisham Singh
- Dr Jayker Dave
- Dr Jonathan Herald
- Dr Menaka Reddy
- Dr Richard Walker

- Dr Timothy Chang
- Ireland John EDR
- Lambert Neera Dr
- Viglione Wayne

#### Hand Injury

- Hand Injury Trauma Service

#### Hypnotherapy

- Australian Hypnotherapy Association

#### Neurologist

- Dr Balsam Darwish
- Dr Griffith Neil
- Dr Kawaljit Singh

#### Nutritionist

- World of Nutrition

#### Otolaryngologist

- Dr Chin M
- Macarthur Ent Clinic

#### Optometrist

- Campbelltown Optical Shop
- Elegance Eyewear Boutique
- Eyecare Plus Optometrist Campbelltown
- I Contact
- I Wise Campbelltown
- Specsavers Optometrists

#### Paediatrician

- Dr B Currie
- Dr Michael Freeland

#### Plastic Surgeon

- About Face
- Fine Cosmetic Surgery
- Lyons Geoffrey

#### Podiatrist

- Campbelltown City Podiatry
- Macarthur First Podiatry Centre
- Mathews John W
- Park Central Podiatry
- Sports Focus Podiatry

#### Proctologist

- Gatenby Andrew Dr

#### Rheumatologist

- Dr Vivek Thakkar, Rheumatologist, Narellan

#### Skin Cancer Clinic

- Mawson Skin Cancer Clinic
- Sleep Disorder**
- Australian Sleep Diagnostics

### **Urology**

- Macarthur Urology

### **Women's Health Clinic**

- WILMA Womens Health Centre
- Allan Poulter

### **Occupational Health**

- IOH Injury & Occupational Health
- Konekt

### **Pathologist**

- Douglass Hanly Moir Pathology and Collection Centre
- Mayne Laverty Pathology Collection Centre

### **Physiotherapist**

- Active Solutions exercise clinic
- Bashir Ahmad
- Campbelltown Active Physiotherapy
- Campbelltown Physiotherapy
- JT Physio
- Macarthur Physiotherapy – Lindesay Street
- Macarthur Women's Health Physio
- Milazzo Gaetano
- Primary Physio Campbelltown
- REHAB HQ
- South West Physiotherapy
- Warby Street Physiotherapy Hydrotherapy & Spinal Injury Centre – Diana Ellem

### **Psychologist**

- Apex Psychology Pty Ltd
- Daniel Rowland, Consultant Psychologist
- Difference Psychology Narellan – Psychologist Narellan
- Directions Insight Educational & Developmental Psychology
- Dr Keira Noble
- Greenfield Counselling Centre
- Healthstream Providers
- Inner Space Psychological Services

- ISB Clinical Psychology
- Light Bulb Moments Psychology Services
- MacPsych
- Mark Benad
- Natasha Kavanagh
- New View Psychology Pty Ltd
- Rhonda Miller
- Toms Lynette

### **Radiologist**

- I-MED Radiology Network
- Insight Radiology
- Macarthur Nuclear Medicine
- Medical Imaging Campbelltown
- Narellan X-Ray Centre Pty Ltd
- South West Radiology

### **Other**

- Chen Terrence Acupuncture
- Five Elements Acupuncture
- Ying Kin Acupuncture & Chinese Medicine
- Lee Massage & Acupuncture Campbelltown
- Lee Massage & Acupuncture Macarthur Holistic Healthcare
- Magic Massage & Acupuncture
- Moving Qi Traditional Chinese Medicine
- Natasha Day Spa & Thai Massage
- Red Dragon Alternative Medicine
- King Street Natural Health Centre
- David Underwood Massage Therapist
- Evolution Health Services
- Take Care Massage
- The Meditation Space – Mindfulness Meditation, Yoga, Remedial Massage and Reiki
- Completely Aligned
- Macarthur Osteopathy

### **Education**

#### **Tertiary education**

- Campbelltown TAFE NSW SWSi – Campbelltown College

- School of Medicine, Western Sydney University
- TAFE NSW Aboriginal Learning Centre Campbelltown
- Western Sydney University, Campbelltown Campus

### **Primary & Secondary education**

- Airds High School
- Beverly Park Special School
- Bradbury Public School
- Campbelltown North Public School
- Campbelltown Performing Arts High School
- Campbelltown Public School
- Eagle Vale High School
- James an Coaching College Campbelltown
- Leumeah High School
- Lomandra School
- Magdalene Catholic High School
- Mount Annan Christian College
- Mount Annan High School
- Qibla College
- Ruse Public School
- St Gregory's College
- St John the Evangelist Catholic Parish Primary School
- St Patrick's College
- St Peter's Anglican Primary School
- St Thomas More Catholic Parish Primary School
- Thomas Reddall High School

### **Early learning and child care**

- ABC Preschool Academy
- Blairmount Kids Learning Academy
- Broughton Street Early Learning & Kinder
- Campbelltown Presbyterian Community Child Care
- Campbelltown Road Safety Centre
- CFK Childcare Centre Englorie Park
- Community Kids Leumeah Early Education Centre

- Cudgegong Pre-School & Child Care Centre
- Family Day Care – In Home Care
- Happy day early learning
- KU Macarthur Occasional Child Care
- Leumeah World of Learning
- Little Green Frogs Preschool
- Little Sunshine Long Day Care
- Namut Early Learning Centre
- Oorunga Wandarrah MACS Centre
- Partners In Care Early Learning Centre
- Pied Piper Kindergarten
- Rainbow Long Day Child Care Centre
- Ruse Child Care Centre & Kindergarten
- Time to Discover Early Learning Centre

### **Family support & education**

- Bullabulla Maternal & Child Health Team
- Dhiyaan (Meaning Family) Brighter Futures
- Family Support Program
- Mission Australia
- Tharawal Aboriginal Corporation services
- Waranwarin Child & Family Centre

### **Business**

#### **Accommodation**

- Campbelltown Colonial Motor Inn
- Maclin Lodge Motel
- Rydges Campbelltown
- Western Sydney University Village Campbelltown

#### **Transport**

- Great Community Transport

#### **Arts and cultural**

- Campbelltown Arts Centre
- Campbelltown Town Hall Theatre

#### **Disability/Aged Care Services**

- Just Better Care
- Ride Scooters & Aged Ca

### 3.5 Plans of precinct partners

Precinct partners already have a range of current, proposed and potential projects that can be supported by joint precinct strategies; these partners have also been engaged in the creation of the vision.

#### 3.5.1 Campbelltown Public Hospital

Campbelltown Hospital is part of the South Western Sydney Local Health District that serves more than 939,400 residents, or 12.5% of the NSW population. Campbelltown Hospital is a major metropolitan group B1 hospital and services one of the fastest growing regions in NSW, spanning seven local government areas from Fairfield and Canterbury-Bankstown to Wollondilly.

Campbelltown Hospital in 2011-12 had 441 inpatient beds, 274 acute beds, an expanded emergency department, 66 mental health beds, two state-of-the-art cardiac catheterisation laboratory/interventional suites, 30 maternity beds, and a paediatric outpatient unit<sup>13</sup>.

Campbelltown Hospital is also a tertiary referral hospital for the Macarthur – Campbelltown region, as well as the Camden, Wollondilly and Wingecarribee regions. It provides a full range of services including: cardiology, maternity, paediatric, gynaecology, gastroenterology, palliative care, respiratory and stroke medicine, surgery and emergency medicine, and aged-care services.

Table 3.1: SWS LHD statistics

	Births	ED attendances	Admissions	Non-admitted patient services	Theatre operations
<b>Camden</b>		13,130	3,881	36,708	na
<b>Fairfield</b>	1,693	34,586	31,852	111,647	7,713
<b>Liverpool</b>	3,655	82,058	85,200	446,172	14,543
<b>Campbelltown</b>	3,180	65,634	51,246	256,095	8,727
<b>Bankstown-Lidcombe</b>	2,261	53,549	51,445	147,887	10,081
<b>Bowral and District</b>	397	18,276	8,203	26,134	3,028

Source: SWSLHD A year in review 2015-16

<sup>13</sup> SWSLHD Strategic & Healthcare Services Plan – Strategic Priorities in Health Care Delivery to 2021.



### 3.5.2 Plans for expansion

The Campbelltown Hospital Stage 1 re-development was completed in 2015. This \$139 million expansion delivered a new acute services building housing inpatient wards, ambulatory, outpatient and allied health services, pathology and clinical information.



Campbelltown Hospital Stage 1 re-development

The upgrade also included an expanded emergency department, paediatric outpatients, birthing suite, maternity ward and onsite carpark. The re-development resulted in recognition of Campbelltown Public Hospital as a major metropolitan teaching hospital facility.

This major redevelopment was undertaken to provide for the immediate acute care needs of the Macarthur area and to establish some of the building blocks for Campbelltown Hospital to function as a Principal Referral Hospital, with tertiary teaching level services by 2020.

In March 2015, a kick-start to Stage 2 (Phase 1) of the Campbelltown Hospital re-development was announced as part of Rebuilding NSW. The re-development is set to provide \$390 million to support a major enhancement to the emergency department, additional operating theatres, an expansion of the intensive care unit, additional renal dialysis facilities, enhanced cancer care, and improved mental health facilities. It is possible the enhanced paediatric services, a maternal and children's acute service, could also be provided, however this forms part of Stage 2 (Phase 2).

Stage 2 (Phase 1 -3) will further support Campbelltown's objective to become a major referral and tertiary hospital in the region, supporting an overall capacity expansion particularly around the following services:

- Aged care and Rehabilitation
- Allied Health
- Cancer
- Cardiovascular
- Complex Care and Internal Medicine
- Critical Care
- Drug Health
- Emergency services (including paediatric)
- Gastroenterology and Liver (including gastro-motility clinic)
- Mental Health (including intensive care)
- Oral Health (Paediatric Dentistry)
- Private health



- Paediatrics and Neonatology (nursery, medical, surgical and oncology)
- Teaching and Research (translational and applied research)
- Women's Health (maternal and gynaecological)

In June 2017 Campbelltown Hospital was awarded \$632 million dollars for an upgrade that will focus on extra space for the Hospital's emergency department, improved mental health facilities and expanded paediatric services.

This funding was Western Sydney's largest single health expenditure item in the 2017-18 NSW Budget, demonstrating the government's commitment to the Campbelltown Health and Education Precinct.

### **3.5.3 Campbelltown Private Hospital**

Campbelltown Private Hospital has been providing medical, surgical and rehabilitation services to the Macarthur and surrounding communities since 2007. The hospital contains 92 beds and 8 day surgery wards providing the following services: general surgery, rehabilitation, ear, nose and throat (ENT), urology and plastic and reconstructive surgery.

The hospital also includes a 24/7 sports and accident clinic and a dedicated Macarthur Hand Trauma Clinic.

#### **Plans for expansion**

Interest exists from the current private hospital owner to expand towards the public hospital. This is consistent with clinicians needs, in general requiring an appointment to the public hospital (to serve the community), an appointment to a private hospital (to ensure a revenue stream), and private rooms to see patients. The best case scenario is proximity between these three spaces.

Given the space available in Campbelltown, including in the Campbelltown health, medical and education cores, there is an opportunity to support these requirements in this location.

### **3.5.4 Western Sydney University – Campbelltown campus**

The Western Sydney University Campbelltown Campus is primarily focussed on health and related technologies, primarily driven by the School of Medicine and Nursing and Midwifery programs. Total student enrolments on the campus in 2017 included:

- Total campus enrolments 7,040,
- WSU School of Medicine enrolments 632.



Western Sydney University Campbelltown Campus, 2017

Western Sydney University sees a role for the campus as a catalyst and supporter of a health and industry cluster in the region, emphasised by the Clinical School and the recently announced Campbelltown Sports and Health Centre of Excellence (CoE) on the Campbelltown Campus.

Additionally, Western Sydney University has been a long-term supporter of research and education in complementary medicine. The Centre for Complementary Medicine Research (CompleMED) was established in 2001 and is now recognised internationally for world-class research in traditional Chinese medicine.

### **Case Study: Centre of Excellence in Gastrointestinal Motility Disorders**

The Gastrointestinal Translational research laboratory at the School of Medicine was created recently and spans a number of domains including clinical research, laboratory research and the creation of new gastrointestinal medical devices.

The Campbelltown area is already well known as a major centre for the diagnosis and management of gastrointestinal motility disorders, with referrals from both within the local region and across NSW. More recently, the reputation of the region has reached across the Pacific Ocean, with a mother directly contacting local health professional, Dr Vincent Ho for help and support with her 19 year old daughter who was suffering from gastroparesis.

In recognition of this unique clinical and research specialisation provided at Campbelltown there have been calls for creation of a centre of excellence in gastrointestinal motility disorders, which has strong bipartisan support.

A centre of excellence in the specialised treatment of gastrointestinal motility disorders, such as irritable bowel syndrome or gastroparesis, would play a key role as a magnet drawcard for patients. The theme of 'gut' is expansive and can cover many types of gastrointestinal conditions and surgeries such as bariatric procedures.

The reputation of the region, and growing agglomeration around gastrointestinal motility disorders positions Campbelltown to become the South Pacific referral centre for gastrointestinal motility disorders.

The university's visionary leadership in complementary medicine research was highlighted when it decided to host the National Institute of Complementary Medicine (NICM), established in 2007 by the Federal and NSW state governments and now incorporating CompleMED. Western Sydney University will continue to be a key driver of complementary medicine research and education in Western Sydney.

### **Possible expansion**

Opportunity exists to investigate the attraction of industry uses on the university's Campbelltown Campus that complement the university's strong medical presence at Campbelltown.

The opportunity to encourage Western Sydney University to establish a presence in Campbelltown CBD should also be explored. In 2017 Western Sydney University issued the following holding statement:

Following the opening of the University's innovative and state-of-the-art Parramatta CBD campus, Western

Sydney University is exploring further opportunities to provide increased access to higher education in Western Sydney CBD locations.

Future plans of Western Sydney University also include the longer term consideration of a greater campus presence in the Campbelltown CBD.

Precinct partners should actively work with Western Sydney University to explore and encourage development of a University presence in the precinct, particularly the Campbelltown CBD.

### **3.5.5 Macarthur Clinical School (Western Sydney University)**

The Macarthur Clinical School, located at Campbelltown Hospital, is the inaugural Clinical School of the Western Sydney University School of Medicine. The school brings together expert medical teachers and newly renovated clinical training facilities to create outstanding opportunities for clinical education.

The Macarthur Clinical School provides excellent conditions for learning including learning facilities, skills labs and a library. The school brings together expert medical teachers and clinical training facilities to create advanced training opportunities for medical students and researchers.

The Clinical School has four tutorial rooms set up. One room is used to provide experience in communication and examination with the use of video and a one way mirror for observation and teaching.

The Clinical Skills laboratory provides a simulated environment where students can participate in a safe learning space before proceeding to the ward situation. Students are able to both learn and practice all clinical skills including resuscitation, venepuncture and cannulation. Simulation mannequins are used, reflecting international best practice.

### **Plans for expansion**

Opportunity exists to complement this new clinical presence at Campbelltown with additional research infrastructure to expand clinical research activity within the precinct.

### **3.5.6 TAFE NSW - Campbelltown College**

Campbelltown College is the major training provider in the Macarthur region. It provides vocational education and training to more than 7,500 students in 100+ courses each year. The student population is multicultural and varied, and includes high school students, apprentices and trainees and mature students who are advancing their chosen careers.

While the Campbelltown College provides a wide range of courses, its apparent training strengths are in human, community services, and basic education. The College also has significant strengths in traditional technical areas such as business administration/ services, IT, vehicle trades, engineering, retail and hospitality.



TAFE NSW – Campbelltown College, 2017

### Plans for expansion

TAFE Western Sydney (WS) and South West Sydney Institute (SWSI) have recently undergone a major amalgamation and transformation program to become TAFE NSW. To support TAFE NSW, different models of operation are being considered including identification of different locations/centres to specialise in different sectors.

The Campbelltown TAFE campus could support a specialisation in community related education, which could include opportunities from early childhood education through to aged care. This would be supported by and be driven by the demographics and economic needs of the region.

Additionally, TAFE NSW are looking at opportunities beyond traditional education services to facilitate better connections with schools, industry and tertiary education. These opportunities should be formally supported by precinct strategies.

TAFE NSW has also recently entered into a Memorandum of Understanding with Council to explore collaborative projects to advance education in the region.

#### **3.5.7 Primary, secondary and early childhood education**

There are nine primary schools in the Campbelltown area: four public, one Islamic, two Catholic, one Anglican and one special needs school.

There are eleven secondary schools in the Campbelltown area, five public, one performing arts, three Catholic, one Christian, and one special education.

There are 20 early childhood education centres in the Campbelltown region. In 2011, there were 10,892 children between the ages of 0-4 in the Campbelltown region (representing 7.5% of the population). The expected natural population growth in the region is expected to be the fastest growing in NSW, as such it is likely there will be an increase in demand for early childhood education.



### **3.5.8 National Institute of Complementary Medicine**

The National Institute of Complementary Medicine (NICM) was established to provide leadership and support for strategically directed research into complementary medicine and translation of evidence into clinical practice and relevant policy to benefit the health of all Australians. NICM is internationally recognised and has strong international collaborations (particularly with China) allowing for the strategically directed research into complementary medicine.

Established in 2007 at the Western Sydney University Campbelltown Campus provides leadership and support for strategically directed research into complementary medicine and helps translate evidence into clinical practice and relevant policy to benefit the health of all Australians.

During its first three years of operation NICM established three Collaborative Centres with additional industry funding. The Collaborative Centres have supported the professional development of 17 HDR (PhD and Masters) students and 21 postdoctoral fellows and research associates. NICM has made significant progress in advancing a collaborative approach to complementary medicine research aligned with national health priorities. It has also established a reputation as an independent, authoritative voice for the complementary medicine sector.

While NICM's headquarters will be at Westmead from mid-2017, certain research facilities will remain at Campbelltown. Opportunities to lever this ongoing connection to complementary medicine should be explored.

### **3.5.9 Ingham Institute for Applied Medical Research**

The Ingham Institute for Applied Medical Research located at Liverpool Hospital conducts world-class medical research.

The Institute's research team are focused on exploring new medical approaches across its five research streams. These include: Cancer, Clinical Science (comprising Cardiovascular Disease, Diabetes and Infectious and Inflammatory Diseases), Population and Health Services, Injury and Rehabilitation and Mental Health. They are at the forefront of the most advanced medical breakthroughs and clinical discoveries and are committed to saving and improving lives.

All of the Institute's medical research programs have a translational focus. This means that results from the laboratory are transformed into direct health benefits in the form of new treatments and standards of care for local, national and international communities.

The Ingham Institute operates as a unique partnership between the South Western Sydney Local Health District (SWSLHD), UNSW Australia and Western Sydney University. It was founded by one of Australia's most respected philanthropists Bob Ingham AO and is further supported by Mary Fairfax AC, OBE.

While the Institute is not currently in the precinct, the Ingham Institute is looking to establish a hub in Campbelltown in the future, likely within the Campbelltown health, medical and education city core. It is likely this plan will align with the Clinical Services Plan currently under development with the SWSLHD and could form part of later phases of the Stage 2 redevelopment.

In the meantime, the work undertaken around translational research and the already prevalent partnership with WSU offers a great opportunity for stronger linkages into the precinct.

#### **3.5.10 South West Sydney Research**

South West Sydney Research brings together healthcare, research and health education entities in South West Sydney as a co-ordinated hub.

South West Sydney Research is part of a network of eight health research hubs across the state, facilitating world-class research, by bringing together researchers across multiple professions and centres including: hospitals, health facilities, universities, research institutes and non-government organisations.

A stronger linkage with the Campbelltown precinct, offers a great opportunity for South West Sydney Research to further collaborate across multiple professions and research topics.

#### **3.5.11 Nexus Business Park Macarthur**

A proposal for a 60 hectare business park along Narellan Road has recently been on public exhibition. The Nexus Business Park proposal has been given high level support by Council.

The Nexus Business Park vision is for a health science park that would combine education, medical and health related industries, linking with TAFE, WSU and the public and private hospitals.

The park would take in the Maryfields site to the north of the Narellan Road and portions of land surrounding the University of Western Sydney and TAFE campuses to the south of the road. The park would not represent another industrial area, instead providing a much needed centre for businesses in the precinct.



Site of proposed Nexus Business Park, on right side of image

#### **3.5.12 UnitingCare**

UnitingCare currently provides a range of social and community services in Campbelltown, including:

- **Disability Services** – skills development, case management, intensive family support options, independent living skill projects,
- **Family Services** – links to learning, early intervention and family support, youth services, after care, family relationship support.

UnitingCare is interested in establishing additional services in order to cater for the growing populations of South West Sydney, which could include:

- Healthy living for seniors programs,
- Early learning centres,
- Seniors gymnasium facilities,
- Adult day care services.

### **3.5.13 The University of Sydney**

The University of Sydney is a major land owner and education provider in South West Sydney, and actively attended all precinct stakeholder workshops held in developing this document.

While the university has no known major development plans for Campbelltown, they should be invited to participate in precinct strategies.

### **3.5.14 Wollongong University**

Wollongong University also actively attended all precinct stakeholder workshops held in developing this document.

Several potential research partnerships were identified during workshop discussions, particularly in children's and maternal health. These should be further explored between Campbelltown and Wollongong University.

### **3.5.15 Tharawal Aboriginal Corporation**

Tharawal Aboriginal Corporation delivers a range of social, health, medical and other community and family based support services in the region, including the Tharawal Innovative Clinical Teaching and Training Centre.

Tharawal is an outstanding example of a service that delivers unique Aboriginal centric services. Tharawal is also considering expansion into other local business ventures to drive sustainability and provide additional services to help young people transition into employment. Tharawal is also uniquely positioned to support Aboriginal health outcomes through increased population research.

A National Aboriginal Health Research Institute should be considered for establishment as a part of precinct strategies.

### **3.5.16 Campbelltown Arts Centre**

Campbelltown Arts Centre is one of Western Sydney's most significant cultural arts institutions.

The Campbelltown Arts Centre (CAC) has identified the need to expand its facilities to continue to service the rapidly growing South West Sydney population. Council is currently undertaking investigative work associated with the future (and possibly expansion) of the Arts Centre that may lead to funding applications/bids being made later this year in order to support the re-development.

The proposed redevelopment may be centred on improving the overall sustainability and cultural offering of CAC and would seek to deliver:

- increased cultural arts capacity and participation ,
- improved community cultural facilities,

- improved operational and capacity constraints currently facing the facility.

If funded, an expanded CAC would offer more opportunities to link in with the Health and Education Precinct, offering a place for knowledge workers to converge. It is also likely programs focussing on science, technology, engineering, and mathematics (STEM) could be integrated with arts and culture to support further innovation.

Opportunity exists to attract medical and science related exhibitions to CAC in alignment with precinct themes.



Campbelltown Arts Centre (foreground of image)

### **3.5.17 Campbelltown Sports and Health Centre of Excellence**

The Campbelltown Sports and Health Centre of Excellence (CoE) was announced in September 2016 following confirmation of government funds to support the development. The Campbelltown CoE will be developed by Council. The CoE will co-locate facilities for sports science facilities, administration and operational spaces, as well as sports and recreational areas for the community, and special-use programs for young people, the elderly and people with disabilities. The CoE is intended to address the unmet need in South West Sydney for elite sporting facilities while also addressing the dearth of sports facilities for the community in the region.

It is expected the development will accommodate a range of sports training and sports science research activities, and include specialist equipment such as an altitude training centre and a hydrotherapy pool, which can be used for rehabilitative purposes. Additionally, the CoE will cater to community needs by including a public gymnasium, indoor courts, and training and playing fields.

### **3.5.18 UrbanGrowth NSW**

UrbanGrowth NSW has entered into a project delivery agreement with Western Sydney University (WSU) to deliver 950 new home sites, infrastructure and parklands at Macarthur Heights. The residential estate will benefit from the Campbelltown Sports and Health Centre of Excellence.



The estate is expected to be finished by 2018, with the final land sales for Stage 4 released in late 2016. It is expected the project will result in an additional 2,460 residents to the region.

Following the completion of Macarthur Heights, new roles for Urban GrowthNSW to maintain involvement in Campbelltown should be explored.



Macarthur Heights under development 2017



### 3.6 Challenges and barriers to growth

Stakeholders identified a range of barriers to delivering the precinct vision. Precinct stakeholders should work through and address these barriers.

The following challenges and barriers were identified in precinct workshops, and are listed in no particular order of priority.

#### **Precinct scale – is it too big?**

The Campbelltown Health and Education Precinct as defined by its major assets<sup>14</sup> spans approximately 400 hectares. This scale will pose a challenge to precinct leaders attempting to deliver strategies over such a large urban mass. By comparison, the Penrith Health and Education Precinct is approximately 300 hectares, Westmead 250 hectares and Liverpool 150.

#### **Competition from other health and education precincts**

It is conceivable that each of Western Sydney's five health and education precincts will seek to compete for investment, research funding, talented workers and related services.

However consultation with stakeholders from the region's five precincts (2015) identified an overwhelming desire to focus on areas on collaboration between precincts. Further, we address this potential issue by attempting to identify and promote the unique specialisations of each precinct to ensure, at a minimum, that each precinct develops its own regional niche and USP.

#### **Competing land uses**

Precinct stakeholders identified the challenge of competing land uses, particularly residential, having the potential to crowd out future opportunities to attract strategic investments that may enhance the precinct.

#### **Landowner constraints and desires**

Major landowners within the precinct have the ability to stifle progress through apathy and inaction. Other landowners may not have the appetite for and or desire to make major investment decisions.

#### **Traditional silos and attitudes**

A common issue identified at stakeholder workshops was the potential for 'old norms' of behaviour and attitudes to stifle collaboration and the creation of new ideas and partnerships. Rather ironically, participants at all stakeholder workshops displayed exactly the opposite, along with a willingness and passion for change and collaboration.

#### **Understanding Campbelltown's uniqueness**

To achieve credibility, a vision needs to be genuine and based on authentic values and attributes. To stand apart from other precincts, the precinct's vision also needs to be unique. Stakeholders clearly defined many unique attributes of Campbelltown which have been incorporated in the development of the vision articulated in this report.

#### **Need for a new vision**

Following the last point, a robust and evidence based vision – with a clear pathway to implementation – was identified as a requirement for the precinct.

---

<sup>14</sup> See reference elsewhere

Workshops participants emphasised the need to be bold and ambitious in developing the vision, and that the Campbelltown should be viewed as a clean slate – a green-field opportunity to create and invest.

### **Enticing corporate investment**

Corporate investment in Campbelltown was identified as a weakness. How to entice corporate investment, from sectors such as health technology, professional services and other advanced sectors was identified as a challenge for the growth of Campbelltown.

The need to develop a compelling case that attracts new sectors and firms that can diversify the local economy is required. The health precinct will require a mixed and diverse range of business services and other industries.

### **How to attract and retain talented and young people to Campbelltown**

A range of compelling reasons are required to ensure talented people are attracted and retained in the local area. Talented people, particularly entrepreneurs, will be critical in the local economy, and in driving start-ups.

### **Engaging the advanced manufacturing sector**

The local manufacturing sector provides a similar number of jobs to health care and social assistance. Manufacturing is also a key platform for innovation through the use of technical skills included in making products.

The industry also produces more economic value add than any other sector in Campbelltown, \$835 million p.a. – compared to \$497 million p.a. for health care and social assistance.

Campbelltown has a number of high profile advanced manufacturers in the area that provide great demonstrators for innovation, and opportunity to leverage innovation strategies of the precinct.

### **Stakeholder partnerships**

In some instances, relationships between precinct stakeholders are weak. Delivering strategies for the precinct will in many instances require deep collaboration and trust across multiple stakeholders.

In some examples, these relationships are yet to be established, however recent workshops have begun to strengthen these.

### **Student connection to CBD**

More than 7,000 students are currently enrolled at Western Sydney University's Campbelltown campus. However, poor connectivity between Campbelltown CBD and the medical core prevent activation by students.

### **Lack of virtual infrastructure**

Precinct stakeholders cited a lack of virtual infrastructure to enable precinct strategies in areas of health innovation, education and general promotion.

### **Competing private interests**

A range of private investments and landholders within the precinct will naturally compete for sites and markets. However, the competition for development of key sites that could be used to realise elements of the vision must be addressed.

### **Precinct accessibility and permeability**

A major challenge to growing the precinct is accessibility and permeability. Greater regional accessibility and internal permeability is required to drive activation and investment in the precinct. Current transport proposals such

as upgrades to Badgally Rd and the future north – south rail corridor will improve accessibility and permeability.

### 3.7 Local business success stories

The development of Campbelltown Health and Education Precinct will benefit from an existing local industry base of advanced global orientated health firms committed to growing through research partnerships with academic institutions.

As shown in section 3.4 Campbelltown has an emerging range of local health enterprises that will be critical in guiding new precinct strategies. A selected number of successful local health related firms include;

#### 3.7.1 BROENS



Broens is one of Australia's largest high-tech engineering companies. For over 50 years, the company has supported the Australian defence market. After Forgas acquired Broens in 2014, Broens is today globally recognized as a provider of design, manufacturing and engineering solutions, across key industries, including health, aerospace, defence, mining and automotive technology.

Broens is actively investing in new advanced manufacturing technologies across its industry sectors, particularly aerospace and health. Broens has partnered with the RAAF to minimise aircraft downtime for aircraft loaders, and manufacturing the Broens Truck Aircraft Loading Unit (TALU) and Truck Aircraft Side Loading Unit (TASLU) for over 20 defence forces around the world. In addition, Broens is working towards successfully engaging in the upcoming Australian LAND and SEA programs. Broens also produces quality CNC Machining for the health industry. This includes multi-axis turning, five axis milling, electrical discharge machining and grinding.

Broens has production capabilities at Ingleburn, strategically positioned between the nexus of the health and education precincts of Campbelltown and Liverpool and the site of the future Western Sydney Airport. This compliments both the medical and aerospace focus of Broens.

#### 3.7.2 BresMedical



BresMedical is a locally-grown corporation that begun as a traditional manufacturer and has developed deep insight in prosthetics, orthotics and medical research after investing in market-leading research and development.

Since obtaining their ISO 13405 certification for prosthetics and orthotics, Bresmedical has been creating titanium, 3D printed, custom implants. Over 10 patients are currently using these implants in Victoria, Australia.

To create this innovative product, Bresmedical found it difficult to partner with a suitable teaching hospital in Australia and so decided to work with Bologna Hospital and University in Italy. This specific partnership emerged

due to the strategic co-location of the hospital and university, particular expertise in the technology, and the ability to collaborate with like-minded and passionate researchers at both the Bologna Hospital and Bologna University.

Bresmedical seeks opportunities to include local partners in their research and development. Currently, Bresmedical are collaborating with UTS on a number of research and development projects.

Bresmedical has found the physical and professional distance between the hospitals and tertiary education institutions at Campbelltown an impediment to successfully collaborating locally.

The development of a dedicated commercialisation team or personnel has been identified as one pathway for bridging the commercialization gap between Campbelltown Hospital, Western Sydney University, and potential commercial partners like Bresmedical. Dedicated commercialisation personnel would have the time and impetus to pursue public and private collaboration opportunities for the benefit of Australia's medical research and innovation.

### **3.7.3 LIPA**



LIPA, part of CK Life Sciences International, began as a family run Australian pharmaceutical manufacturer in 1995. LIPA focuses upon producing dietary supplements and over-the-counter pharmaceutical products. This includes tablets, soft gelatine capsules, two piece hard gelatine capsules, powders, liquids and creams. LIPA is located in Minto, North East of the Campbelltown Health and Education Precinct.

LIPA manufactures products that are used in both traditional and complimentary medicine fields, both of which have a strong presence in the Campbelltown Health and Education Precinct. In 2015, LIPA won the Complementary Medicines Australia 'Quality Manufacturer of the Year Award'. LIPA is a contributor to the Campbelltown area's strength in quality complimentary medicine research, development and patient care.

LIPA research and development is focused around four primary areas:

- Developing new products to target specific consumer health needs and market segments,
- Improvements and enhancements to your existing products,
- Novel and/or exclusive ingredients and claim substantiation,
- Analytical method development and validation.



# 4 Towards a precinct vision

Through a series of workshops and consultations, precinct stakeholders developed and agreed the key elements of a new Vision for the Campbelltown Health and Education Precinct.

This chapter describes components of a new vision for the precinct through a series of lenses. These lenses include a new vision that;

- delivers many of the aspirations held for the precinct,
- based on growth as an Innovation District,
- focussed on viable economic specialisations and a new economic structure plan,
- grows and leverages unique precinct themes - and local social and economic characteristics,
- builds off precinct analysis presented in previous chapters.

## 4.1 Precinct vision statement

To provide world leading education and specialist community based care in areas of paediatrics, Aboriginal health and gastro motility through new science based research and discovery

## 4.2 Precinct aspirations

Aspirations held by precinct stakeholders as expressed at recent workshops:

"If the precinct's virtual infrastructure is properly conceived, global outreach will be achieved in the areas of education and medical research"

"We need a new education construct to be established between schools, TAFE, Universities and employers"

"We need a new 'fit for the region' education model where we develop deep technical and degree based pathways that fit the demographics and aspirations of Campbelltown – it also needs to meet future industry needs of the South West"

"A region that produces workers that are half knowledge workers, half technicians"

"The history of the region is full of innovation; the Tharawal people were innovators, then came Europeans who led innovation in agriculture and later in advanced manufacturing, examples of which are all still present in Campbelltown today"

"As a result, the appetite for innovation in Campbelltown is higher than often expected"

"A goal of the precinct is to vertically integrate child-care, community services, primary school, secondary school, TAFE and University with health care and medical research"

"The precinct's proximity to broad population demographics will support advances in epidemiology that drive the translation of research outcomes and clinical trials, as well as support the regions educational and community objectives"

"The precinct should be considered a special community development zone with a focus in life cycle education and health- a zone that facilitates corporate, government and NGO collaboration with the community"

"The vision needs to promote social, economic, financial and environmental sustainability to ensure intergenerational aspirations of Campbelltown are delivered"

"Leveraging the region's advanced and precision manufacturing base will be an enabler of precinct success – better integrating this sector into our precinct strategies is critical"

"The vision we have prepared is based on a robust and logical construct – one understood and supported by precinct stakeholders; we are now taking this vision out to those who want to be part of Campbelltown's future success"

"The precinct needs to emphasise physical and virtual permeability; walkability needs to be addressed"

"A focus of precinct strategies needs to be training the region's future health workforce"

"Improving connectivity between the precinct's major education and business campuses is critical"

"We need to design new collaborative spaces in the precinct – high amenity spaces where we can people can meet and we can showcase science and research in partnership with industry players and Universities"

"The precinct needs to work and promote its unique economic specialisations and use them as points of differentiation to other Sydney health precincts – in what part of the economy will Campbelltown specialise and earn a living?"

"The precinct's governance model must be thrown open to include community leaders, thought leaders and elders with a passion for driving change"

"The precinct must create and promote reasons for young people and talented workers to work in Campbelltown; similarly, locations such as Wollongong, the Southern Highlands and other high quality residential addresses must be used to attract workers to the region"

"Old territorial and administrative boundaries must be ignored; precinct stakeholders will need to collaborate seamlessly across such boundaries to get things done"

"The only location in Western Sydney where major University owned medical science education and research infrastructure is located adjoining large scale developable business park lands is within the Campbelltown Health and Education Precinct "

"The potential for a future urbanised science-based business park within the precinct will complement other Western Sydney science and technology proposals such as the Sydney Science Park at Luddenham, and the industry collaboration area proposed by WSU at Werrington; together these three proposal form the basis of one of Western Sydney's major sectoral and spatially economic strategies.

"A new University-connected Maternal and Child Development Centre at Campbelltown would ensure our region's future residents get the best start in life; we know many health and social development problems can be traced to events in the first 2 years of life."

"Paediatrics has enormous potential both for the type of clinical research carried out, but also the scale of industries and employment that could be generated from the field".

"In recognition of the unique clinical and research services provided at Campbelltown there has been calls for creation of a centre of excellence in gastrointestinal motility (gut) disorders.

"The link between gut health and food innovation is strong, with opportunity to expand programs business opportunities, food science and manufacturing in Campbelltown".

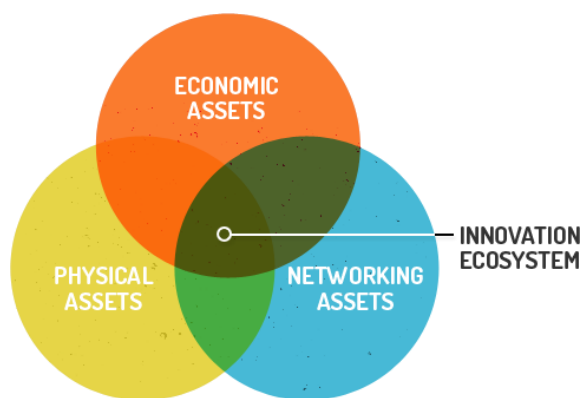
"Food health and education tourism, linked to food innovation and local agricultural assets becomes a real possibility for Campbelltown".

"We need leaders who will take risk - innovation implies risk taking".

### 4.3 Innovation district growth model

The Brookings Institute (2014) defines 'Innovation Districts' as geographically compact areas where leading-edge anchor institutions and companies cluster and connect with start-ups, business incubators and accelerators. They facilitate economic development through the creation of environments designed to strengthen the possibility of knowledge spill-overs, new product development and innovation.

Brookings argues that that Innovation Districts are defined by the close proximity of economic, network and physical assets in a given location. Combined, these assets drive local economic productivity by developing an 'innovation ecosystem' – critical to local economic performance and resilience.



Source: Brookings Institute (2014).

Brookings identify three variants of Innovation Districts, these include:

- **'Anchor plus'**: found in the downtowns and mid-towns of central cities, is where large scale mixed-use development is centered around major anchor institutions and a rich base of related firms, entrepreneurs and spin-off companies involved in the commercialization of innovation,
- **'Re-imagined urban area'**; found near or along historic features or waterfronts, is where industrial or warehouse districts are undergoing a physical and economic transformation to chart a new path of innovative growth. This change is powered, in part, by transit access, a historic building stock, and their proximity to downtowns in high rent cities,
- **'Urbanised Science Park'**; found in suburban and exurban areas, is where traditionally isolated, sprawling areas of innovation are urbanizing through increased density and an infusion of new activities.

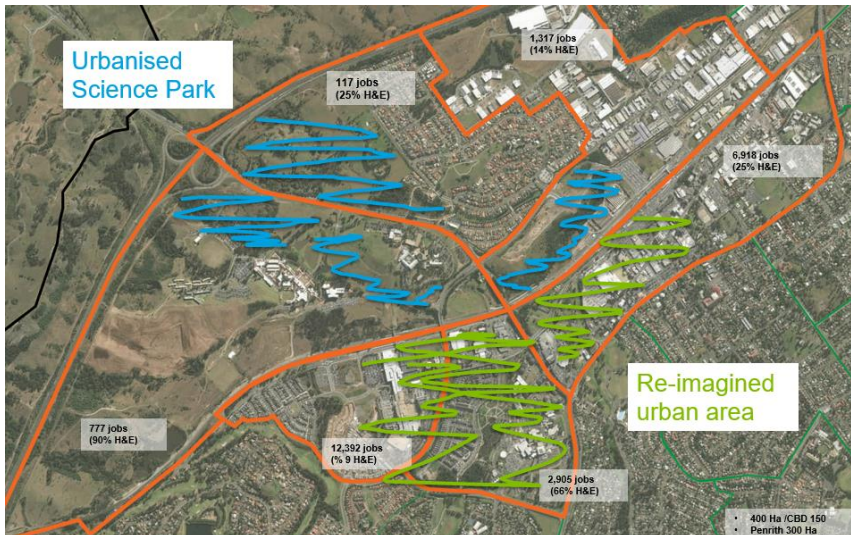
In contrast to other health and education precincts across Western Sydney, the Campbelltown precinct, as defined by its physical and economic assets is approximately 400 hectares in size (including Campbelltown CBD). This is in comparison to 300 hectares for the Penrith Health and Education Precinct, 250 hectares for the Westmead precinct, and 150 for Liverpool precinct.

The concept of Innovations Districts however emphasises geographic compactness, walkability and complementarity of economic activity. This represents a challenge for the Campbelltown precinct.

To address this issue, stakeholders examined two variants of Innovation Districts, being the Re-imagined urban area and the Urbanised Science Park models.

#### 4.3.1 Re-imagined urban area and urbanised Science Park

Figure 4.1: The Campbelltown re-imagined urban area and urbanised Science Park



Source: Deloitte presentation Workshop #2.

Campbelltown has potential to adopt elements of the re-imagined urban area and urbanised Science Park Innovation District model.

Adoption of these models by precinct partners will encourage future project, planning and investment decisions to be conceived in terms of either:

- Re-imagining the existing urban centre of Campbelltown as a dense place designed to drive innovation,
- Establishment of a new science park that leverages existing economic assets and development proposals with opportunity to attract new complementary science based industries to the precinct.

However delivery of the vision of a dual Innovation District model requires a rethink about how the urban area is re-imagined, and how the concept of a new urban science park is supported.

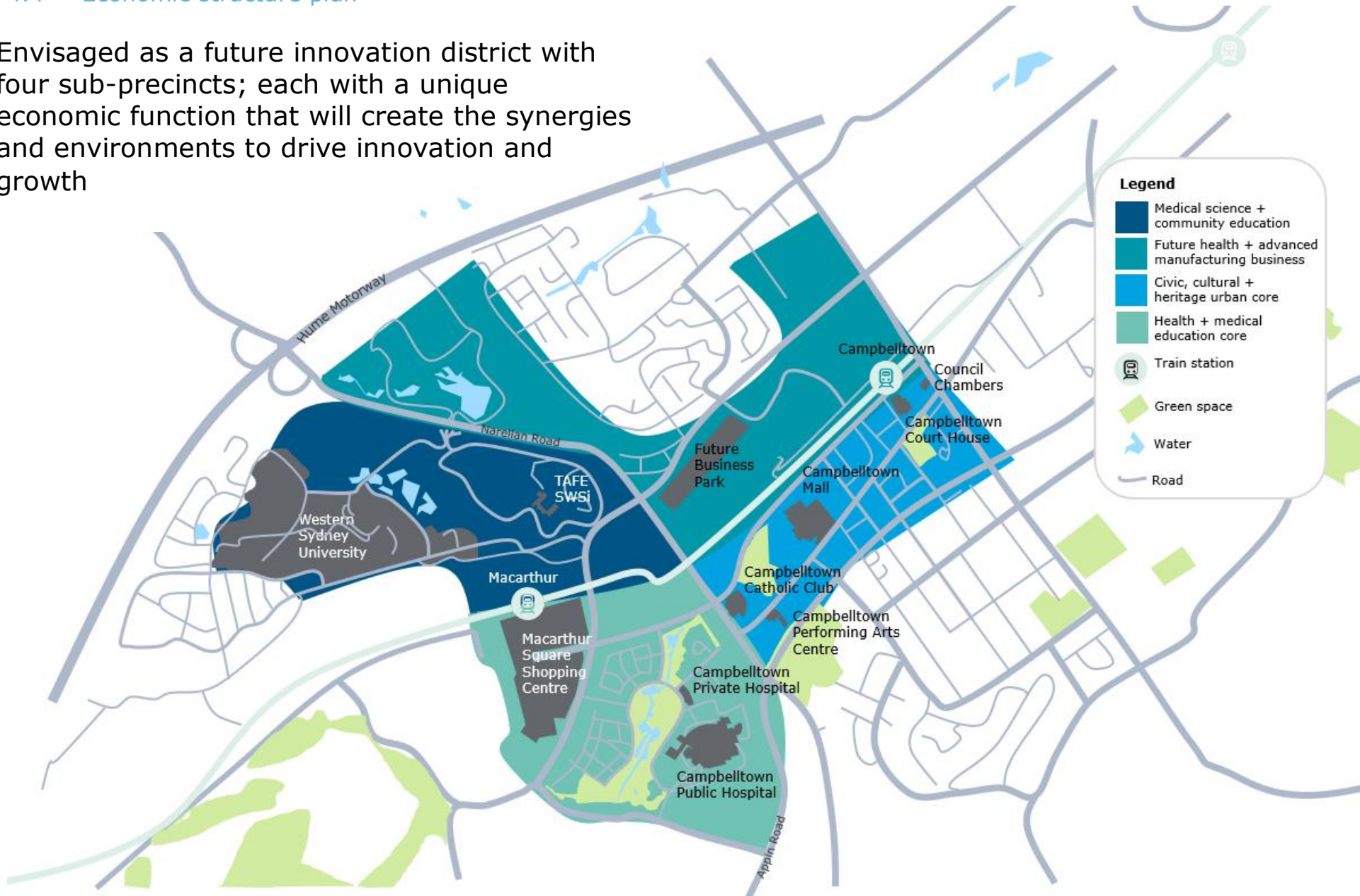
To do this requires that the economic functions of the precinct be thought through in a way that will enhance the economics the precinct over time.

To do this a new Economic Structure Plan is proposed that will guide the longer term strengthening of the economics of the precinct through four distinct sub-precincts, each with specialised economic roles that when combined will facilitate delivery of a larger vision of innovation-led growth.



#### 4.4 Economic structure plan

Envisaged as a future innovation district with four sub-precincts; each with a unique economic function that will create the synergies and environments to drive innovation and growth



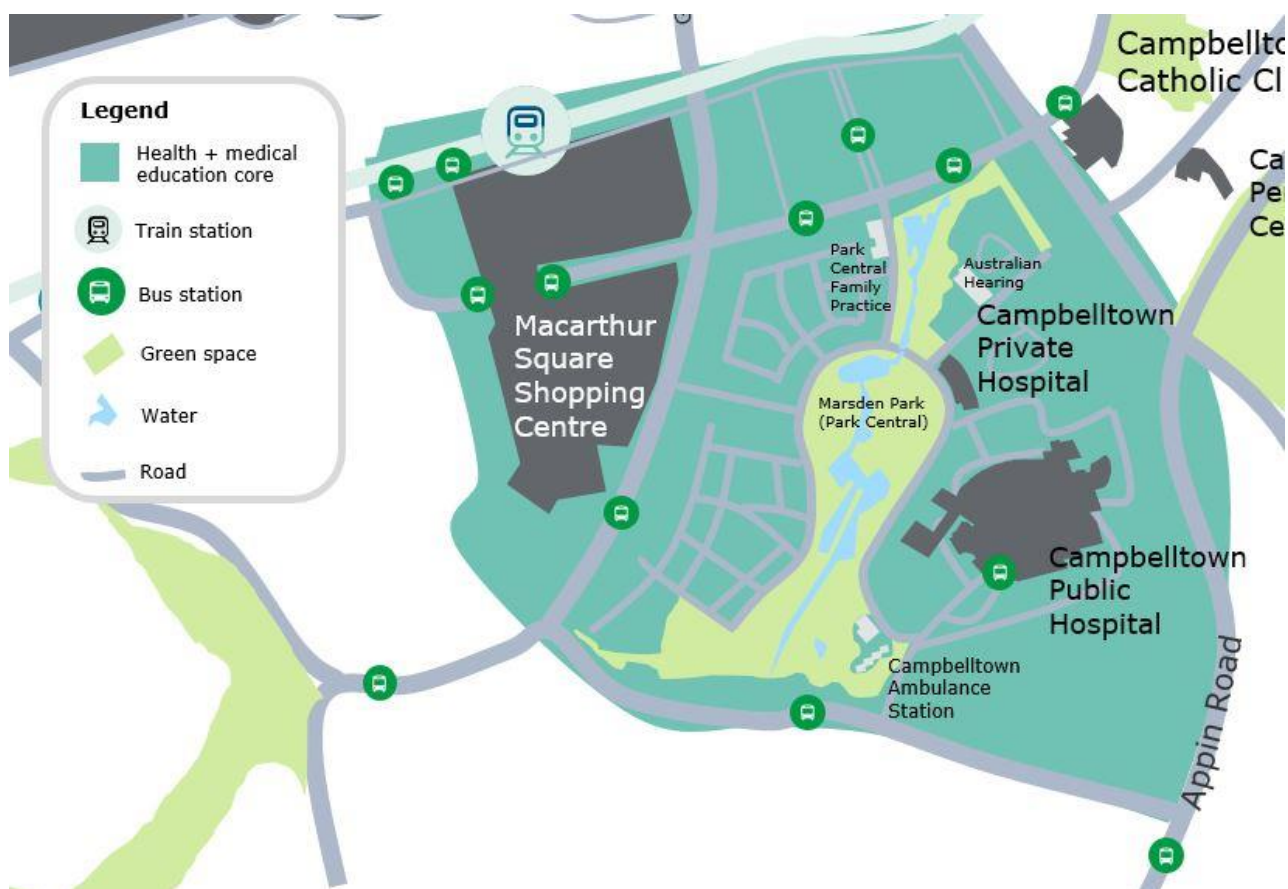
#### 4.4.1 Health, medical and education city core

Cities develop around cores of activity that drive productivity and jobs growth. Campbelltown's health, medical and education city core will create a focus for new investment and the attraction of skilled workers

##### Location

Centre around the Campbelltown public and private hospitals and bounded by the T2 rail line, Narellen Road, Appin Road, Therry Road and Gilchrist Drive.

Figure 4.2: Health, medical and education city core



##### Objectives

- Create a compact spatial focus for health, medical, education and research investment,
- Encourage private sector hospital investment,
- Reorientate the centre of Campbelltown towards the precinct's existing health, clinical and teaching infrastructure,
- To encourage densification of acute health, medical, education and research related uses,
- Create a focus for the design and delivery of a new civic heart for Campbelltown,
- To better integrate and connect with the 'education core'.





Campbelltown Hospital – Health, medical and education city core

### Economic function

To create a critical mass of colocated research, clinical services and teaching activity in settings conducive to developing innovation in health care and research.

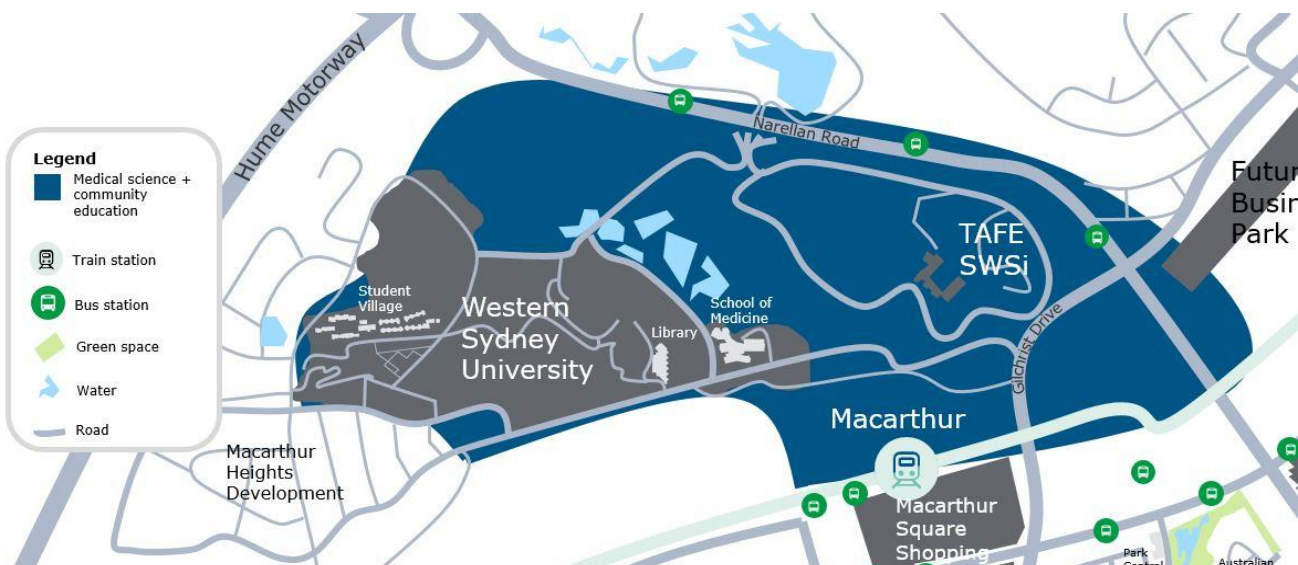
#### 4.4.2 Medical science and community related education core

Campbelltown's economy will be fuelled by strong education institutions that drive productivity through improving the region's skills base

### Location

Centred on Western Sydney University and TAFE NSW lands and bounded by T2 rail line and Narellan Road.

Figure 4.3: Medical science and community related education core



## Objectives

- To increase the role of tertiary education and research infrastructure in Campbelltown,
- To attract and integrate new industries in Campbelltown's economy through the promotion of the benefits of co-location with existing medical and research infrastructure,
- To provide opportunity for the delivery of major private sector health and ageing related investment within the precinct,
- To better integrate and connect with the 'medical core'.

## Economic function

To create a focus for new models of education delivery in the region that both support the social characteristics of Campbelltown, and drive new formal partnerships between education and industry.



TAFE NSW, Narellan Road, Campbelltown – Medical science and community related education core

### 4.4.3 Civic, cultural and heritage urban core

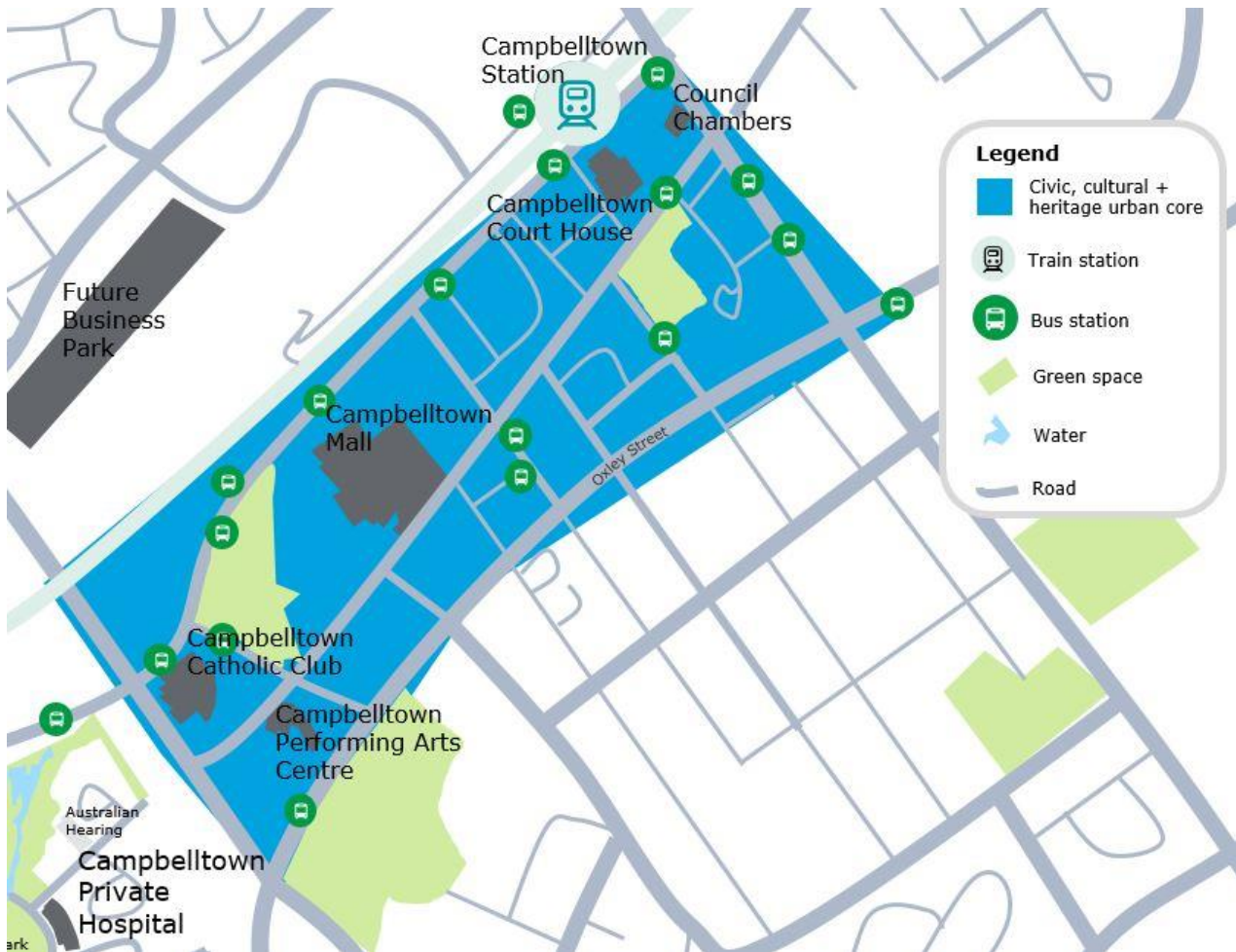
Developing high amenity urban appeal - infused with cultural arts, heritage and other community assets will create great places where precinct workers will seek to live

## Location

Centred on the existing Campbelltown CBD and major cultural, arts, civic and heritage facilities bounded by Narellan Road, T2 rail line, Oxley Street and Broughton Street.



Figure 4.4: Civic, cultural and heritage urban core



## Objectives

- To activate the existing CBD through dense mixed use living that leverages local civic, cultural arts and other community assets,
- To create the environment where skilled and talented precinct workers will want to live,
- To provide a diversity of city functions that supports other precinct functions in health, education, research and general industry,
- To utilise public land holdings in ways that catalyse the development of high quality living and accommodation options for precinct workers,
- To provide a focus for new models of housing and urban amenity that drive urban activation and appeal, and the creation of a greater night time economy in Campbelltown.





Campbelltown CBD and Campbelltown Arts Centre- Civic, cultural and heritage urban core

### Economic function

Provision of high quality – high amenity - living options for precinct workers, while also providing civic, cultural and business services for other precinct areas such as 'medical core', 'education core' and 'business cores'.

#### 4.4.4 Future advanced health and manufacturing business area

The proposed Nexus business park and existing industrial and business areas could be reimagined as future locations for health related enterprises critical to growing competitive high value employment

### Location

Centred around the proposed Nexus business park site and existing industrial lands bounded by Narellen Road, T2 rail line, the Hume Motorway, excluding existing low density residential areas at Blair Athol.

Figure 4.5: Future advanced health and manufacturing business area



## Objectives

- To provide a range of investment opportunities for industries aligned to precinct themes,
- To provide opportunities to explore new forms of business park style development, along with other major public infrastructure such as new major open space, or other critical public infrastructure,
- To provide a focus, clarity and certainty around the location of future health related employment growth,
- To provide opportunity for a continuous green spine that spans the precinct and promotes wellness through healthy outdoor activity – a central park to rival parks such as Hyde Park and Parramatta Park.



Proposed Nexus business park site bounded by Narellen Road, T2 rail line, the Hume Motorway -  
Future advanced health and manufacturing business area

### **Economic function**

Provide opportunity for private sector investment that can take advantage of the business and economic benefits of being associated with the new Campbelltown Health and Education Precinct.



## 4.5 Precinct themes

New precinct themes to develop the economic and social capacity of Campbelltown, reflecting unique strengths, or ability to address challenges that improve local economic advantage.

To provide world leading education and specialist community based care in areas of paediatrics, Aboriginal health and gastro motility through new science based research and discovery.

### 1. Medical science and community services education



To become a nationally recognised centre in medical sciences education; grow centres of excellence in community services and arts education.

#### Local assets

- School of Medicine
- Macarthur Clinical School
- Western Sydney University Schools of midwifery, allied health, nursing and law
- TAFE SWSI community services, arts and trades of the future centres of excellence
- Campbelltown Sports Centre of Excellence
- Campbelltown Arts Centre
- Student accommodation

### 2. Kids, Aboriginal and maternal health



To develop greater presences in kids, maternal and indigenous health services.

#### Local assets

- Rapidly growing population
- Western Sydney University specialisation in maternal services and research
- Sporting and recreational assets
- Western Sydney University Schools of Nursing and Midwifery
- Tharawal Aboriginal Corporation

### 3. Translational and applied research



To leverage the precinct's unique strengths in gastro motility and develop economic opportunities in applied research, paediatrics, Chinese and maternal medicine.

#### Local assets

- Existing research infrastructure such as NICM, THRI, Centre for Health Research, others
- Translational gastroenterology laboratories, other emerging medical research groups
- State referral centre in gut motility
- South West Sydney Research network
- Agribusiness and food production opportunities aligning with 'gut health' theme

### 4. Advanced medical product and services manufacturing



To grow Campbelltown's advanced manufacturing sector through engagement with the research and education strengths of Campbelltown.

#### Local assets

- Existing advanced manufacturers in medical and precision parts
- Local workforce with manufacturing skills
- Industrial lands capacity/affordability/ urban renewal underway
- Two enterprise corridors

Source: Deloitte Access Economics

## 4.6 Opportunity sectors

The following sectors represent unique strengths that will lead the transformation of the Campbelltown Health and Education Precinct

### 4.6.1 Medical science and community services education

#### Traditional Chinese medicine

The Campbelltown precinct has a current research and education strength in Traditional Chinese Medicine. This is supported by the National Institute of Complementary Medicine (NICM) and the concentration of complementary medicine education at the Western Sydney University Campbelltown campus.

The precinct also has a concentration of complementary medicine businesses, with 21 complimentary businesses identified across the region, specialising in everything from acupuncture to nutritionists and Chinese medicine practitioners. Given the population catchment of the precinct, there is an opportunity to support further growth in the sector, through links with adjacent industries such as organic grocers, naturopaths, yoga and meditation studios.

#### Medical and community services education

The School of Medicine at WSU was created because of the growth in Western Sydney's population and to address health inequity in the region. The placement of the School at the Campbelltown WSU Campus was strategic and along with the public and private hospitals as well as the new clinical school has resulted in a strong cluster of medical science education assets.

The cluster has resulted in almost 70% of graduates of the School of medicine and nursing and midwifery choosing to stay and work in Campbelltown after completion of their degrees.

This strength in medical science education is further supported by the recently announced Campbelltown Sports and Health Centre of Excellence adjacent to WSU's campus, as well as the interest from the Inghams Institute to establish a hub in Campbelltown in the future.

The adjacent TAFE campus, currently offers vocational training in a range of industries, some complimentary (e.g. chemical technology, child studies, animal studies, social and community services), and some supporting (e.g. business administration, accounting and finance, hospitality and ICT).

Given the expected population growth in the region, and the expected demand in social and community services, the TAFE could support growth in a social and community services education speciality for the precinct.

A unique education speciality such as a medical and community services works as a strong attractor for students in medical education, clinical researchers as well as industry. The speciality could be leveraged to further support a medical/health science park in the region, attracting day surgeries, medical technology as well as related industry services.



#### 4.6.2 Children's, maternal and indigenous health

##### Pre-eclampsia maternal health

Pre-eclampsia or hypertension in pregnancy research is a theme with unique strengths at Campbelltown. Professor Annemarie Hennessy who is the Dean of the School of Medicine at Western Sydney University is an internationally recognised pre-eclampsia expert. The research area is niche and the incidence of pre-eclampsia is high with an estimated 3-10% of all pregnancies suffering with the condition.

The population catchments are some of the fastest growing populations in Australia. Given the expected natural population growth it is expected there will be increasing pressures for more maternity services in the region. This combined with the higher levels of obesity in the region, and the increasing average age of pregnant women, pre-eclampsia will become an important specialisation for the region.

As a strength of the region, pre-eclampsia and maternal health could attract supporting industries, including wearable technology (to support monitoring of blood pressure and other vital signs), yoga and meditation studios, and maternity retail services.

##### **Case Study: Early childhood development intervention**

Many medical professionals and social scientists have long recognised that health, educational and social difficulties we face as adults can be traced back to events that have occurred prior to conception through to the first few years of life.

Lower socio-economic regions generally have lower levels of health during pre-conception, pregnancy and post-natal periods. Children in low socioeconomic regions often do not meet their full health and educational potential due to poor nutrition, toxins during pregnancy, infectious diseases, and environmental hazards, all of which are preventable.

Part of the problem is that provision of health and education services are usually provided at discrete stages of early childhood development, rather than through an integrated service offering.

The provision of greater health and education services from pre-conception for the mother through to post-natal nutrition, immunisations and social interactions will greatly improve outcomes, especially in lower socio-economic areas.

Campbelltown offers a great opportunity to trial a model in which health hubs are established including community health nurses, GPs, allied health providers and specialists to deliver an integrated service offering from pre-conception issues through to the first few years of a child's life.

## Paediatrics

Currently, there is not a strong research or health specialisation in paediatrics in the region. However, the population catchments are some of the fastest growing in Australia. The population is much younger with 44.8% under the age of 30. This is unique to the region with only 39.6% of Australia's population under the age of 30.

Given the much younger population, and an expected faster growth in the natural population, South West Sydney is likely to require increased paediatric services, with referrals to the two Children's Hospital's (Westmead and Randwick) expected to reach capacity over the coming decades.

There are currently plans for an enhanced paediatric facility at Campbelltown Public Hospital through Stage 2 of the hospital redevelopment.

Paediatric services have an enormous potential for clinical research, which would work well given the WSU School of Medicine, the close proximity to South West Sydney Research and the Sports and Health Centre of Excellence.

Paediatrics is also a strong attractor of industry, and complements a range of adjacent industries, including sport, education, playgroups and kids playlands. There is also alignment with the previously identified themes of pre-eclampsia and traditional Chinese medicine.

### 4.6.3 Gastrointestinal motility disorders

Campbelltown Hospital is recognised as a major centre in NSW for the diagnosis and management of gastrointestinal motility disorders. Both Campbelltown Hospital Gastroenterology Clinics and Camden Gastrointestinal Physiology clinics refer referrals from across Sydney from a range of specialists including gastroenterologists, upper GI surgeons, respiratory physicians, ENT specialists and immunologists.

Patients with complex chronic gastrointestinal motility disorders travel from outside the catchment regions (and in some cases interstate and international) to Campbelltown to seek specialised care.

This has resulted in a concentration of research into gastrointestinal motility disorders and gastrointestinal health in the Campbelltown precinct, and is further supported by the recently created Gastrointestinal Translational research laboratory at the School of Medicine which spans a number of domains including clinical research, laboratory research and the creation of new gastrointestinal medical devices.

In recognition of the unique clinical and research services provided at Campbelltown there have been calls for the creation of a centre of excellence in gastrointestinal motility disorders, which has strong bipartisan support.

The specialisation of gastrointestinal motility disorders such as the common irritable bowel syndrome or the rare condition "gastroparesis" would play a key role as a 'magnet drawcard' for patients as well as industry as the 'gut' is an expansive theme and can cover many other types of gastrointestinal conditions and surgeries such as bariatric procedures which could result in increased demand for specialised technology to support.

**Case Study: Research grant for development of endoscopic device for diabetic gastroparesis**

Dr Vincent Ho and his team of researchers from the Gastrointestinal Translational research laboratory at Western Sydney university School of Medicine, were recently awarded \$150,000 grant to investigate a new endoscopic device for diabetic gastroparesis patients.

Dr Ho, who is a specialist in gastrointestinal motility disorders, says the grant is an opportunity to take a clinical problem "from bench to bedside". The grant would allow the researchers to take a clinical issue into the laboratory to engineer a solution. The current treatment for sufferers of severe diabetic gastroparesis is very limited.

It is hoped the grant will construct a prototype that can provide a tangible outcome to aid patients suffering from gastroparesis while leveraging not only investment but also help foster collaborative opportunities with local manufacturing companies for medical device development.

Additionally, the specialisation could be complemented by other industries. For example there are a number of nurseries and agricultural lands in the Campbelltown region, as well as a growing hospitality industry. A specialisation in gut health could incorporate 'food innovation' given the close interdependency between the gastrointestinal system and food.

The capacity for specialised food science testing exists at the Campbelltown campus, Western Sydney University but is augmented by the capacity of the Ingham Institute and its gut microbiota DNA sequencers as well as the testing facilities at the Elizabeth Macarthur Agricultural Institute in Menangle. Restaurants, food suppliers and food manufacturers have a direct interest in delivering quality innovated food. This specialisation therefore offers many interconnected relationships between organisations and groups, not often thought of at first, like the nurseries, restaurants & cafes, and food manufacturers in the region.

**4.6.4 Advanced medical products and services manufacturing**

As shown in section 3.7 Campbelltown has a range of successful health and medical product companies operating in the region that should be further identified and involved in precinct strategies.

# References

1. APP, (2016). Campbelltown City Transformation Plan: Part B report.
2. APP, (2016). Campbelltown City Transformation Plan.
3. Brookings Institute, (2014). The Rise Innovation Districts: a new geography of innovation in America.
4. Campbelltown City Council, (n.d.). Submission on the Western Sydney Rail Needs Scoping Study Discussion Paper.
5. Culter, T, (2009). The role of precincts in innovation systems – a discussion paper.
6. Deloitte, (2015). Shaping Future Cities: Designing western Sydney.
7. Deloitte, (2015). Building the Lucky Country: Business imperative for a prosperous Australia.
8. Deloitte and ARUP, (2016). A Network of Opportunity: Western Sydney rail.
9. Deloitte, (2017) Campbelltown Health and Education Precinct: Stakeholder workshop 1.
10. Deloitte, (2017) Campbelltown Health and Education Precinct: Stakeholder workshop 2.
11. Greater Sydney Commission, (2016). Greater Parramatta and the Olympic Peninsula: Our true centre: the connected, unifying heart.
12. Greater Sydney Commission, (2016). Drafting South West District Plan: Co-creating a greater Sydney.
13. .id the population experts, (2016). Economy.id. < <http://www.nieir.com.au/>>.
14. .id the population experts and Western Sydney University, (2017). The Penrith Fulcrum Economy: an airport, a city, a spine.
15. .id the population experts (2017). Campbelltown City: population, housing and dwelling. <<http://forecast.id.com.au/campbelltown/population-households-dwellings>>.
16. Hanna, K, (2016). Spaces to Think: Innovation district and the changing geography of London's knowledge economy.
17. Meyer, B and Richardson, C, (2006). Macarthur to Marsden Park: Sydney's three growth centres, an answer to sprawl
18. Meyer, B and Richardson, C, (2015). Campbelltown/Macarthur Centre: A paper given to the future of Campbelltown CBD forum.
19. NSW Planning & Environment (2015), Population forecast.
20. South Western Sydney Local Health District (2013). Strategic & Healthcare Services Plan: strategic properties in health care delivery to 2021.
21. South Western Sydney Local Health District (2016). Strategic & Healthcare Services Plan: a year in review.
22. The United States Studies Centre, (2016). Growing the Australian Innovation Economy: An examination of innovation ecosystems in the United States.
23. Western Sydney University (2016). Taking Healthcare Home: Ideas lab issues paper.

# Appendix A: Stakeholder consultation list

## Precinct vision workshop participant organisations:

1. AusBiotech	13. NICM
2. Bob Myer	14. NSW Health Infrastructure
3. Brezmed	15. Stocklands
4. Campbelltown Public Hospital	16. SWSLHD
5. Capital Syndications Pty Ltd	17. SWSPHN
6. Cox Richardson	18. Sydney University
7. Federal Minister for Macarthur	19. TAFE NSW
8. HealthScope (Campbelltown Private)	20. Transport for NSW
9. Ingham Institute	21. UnitingCare
10. Lend Lease	22. University of Wollongong
11. Medical Technology Association of Australia	23. UrbanGrowth
12. Medtronic	24. Western Sydney University

A range of individual consultations were also conducted

## Individual consultations and market soundings:

Name	Organisation
1. Kevin Cullen	Bresmedical
2. Carlos Broens	BROENS
3. Dr Michael Freeland	Federal Member for Macarthur
4. Stephen Gameren & Christine Profitt	HealthScope
5. Greg Kaplan & Michael Barton	Ingham Institute



6. Dusko Pejnovic	LIPA Pharmaceuticals
7. Michael Kennedy	Medtronic
8. Miles Fuller	Nepean Engineering & innovation
9. Erik Maranik	NSW Health Infrastructure
10. Amanda Larkin	South West Sydney Local Health District
11. Rene Pennock & Keith McDonald	South West Sydney Primary Health Network
12. Tanya Ward	SWS Research
13. Peter Roberts/ Oriana Romano	TAFE NSW
14. Daryl Wright	Tharawal Aboriginal Corporation
15. Mark Harrison	Uniting Church
16. Dr Andy Marks	Western Sydney University
17. Dr Vincent Ho	Western Sydney University / Clinician at Campbelltown Public Hospital

# Limitation of our work

## General use restriction

This report is prepared solely for the internal use of Campbelltown City Council. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared for the purpose of advising Council on a vision and strategy for the Campbelltown Health and Education Precinct. You should not refer to or use our name or the advice for any other purpose

# Deloitte.

## Access Economics

### Contact us

#### Deloitte Access Economics

ACN: 149 633 116  
Level 19, 60 Station Street  
Parramatta NSW 2150  
Tel: +61 2 9840 7387  
Fax: +61 2 9840 7001

Deloitte Access Economics is Australia's pre-eminent economics advisory practice and a member of Deloitte's global economics group. For more information, please visit our website

[www.deloitte.com/au/deloitte-access-economics](http://www.deloitte.com/au/deloitte-access-economics)

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see [www.deloitte.com/au/about](http://www.deloitte.com/au/about) for a detailed description of the legal structure of Deloitte Touche Tohmatsu Limited and its member firms.

The entity named herein is a legally separate and independent entity. In providing this document, the author only acts in the named capacity and does not act in any other capacity. Nothing in this document, nor any related attachments or communications or services, have any capacity to bind any other entity under the 'Deloitte' network of member firms (including those operating in Australia).

#### About Deloitte

Deloitte provides audit, tax, consulting, and financial advisory services to public and private clients spanning multiple industries. With a globally connected network of member firms in more than 150 countries, Deloitte brings world-class capabilities and high-quality service to clients, delivering the insights they need to address their most complex business challenges. Deloitte's approximately 200,000 professionals are committed to becoming the standard of excellence.

#### About Deloitte Australia

In Australia, the member firm is the Australian partnership of Deloitte Touche Tohmatsu. As one of Australia's leading professional services firms, Deloitte Touche Tohmatsu and its affiliates provide audit, tax, consulting, and financial advisory services through approximately 6000 people across the country. Focused on the creation of value and growth, and known as an employer of choice for innovative human resources programs, we are dedicated to helping our clients and our people excel. For more information, please visit our web site at [www.deloitte.com.au](http://www.deloitte.com.au).

Liability limited by a scheme approved under Professional Standards Legislation.

Member of Deloitte Touche Tohmatsu Limited

© 2017 Deloitte Touche Tohmatsu