MENANGLE PARK MASTERPLAN

ECONOMIC IMPACT ASSESSMENT

PREPARED FOR DAHUA GROUP

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EXECUTIVE SUMMARY

BACKGROUND

This economic impact assessment has been prepared to support an amendment to Campbelltown Local Environmental 2015 (Campbelltown LEP 2015) in relation to 498ha of land within the Menangle Park Urban Release Area (URA) including 498ha of land owned or under the control of Dahua Group (Aust) Pty Ltd (Dahua) with the remaining area owned or under the control of other landowners.

The URA was rezoned from rural land to urban purposes on 18 November 2017 to accommodate approximately 3,400 residential lots, a retail/commercial centre, employment lands and community and recreational facilities.

The proposed amendment builds upon the previous rezoning and associated Structure Plan to create a new sustainable, healthy and high quality residential community comprising:

- 5,250 dwellings (an increase of 1,850 dwellings).
- a new local centre (also known as town centre) comprising 30,000sqm of retail / employment gross floor area.
- a new neighbourhood centre (approximately 3,500sqm of employment floor space).
- a revised road and street network to provide better permeability throughout the site.
- sporting fields and parks.
- integrated passive recreation area within a riparian corridor network.
- land for environmental conservation.
- community facilities to support the proposed increase to the population.
- primary school.

PURPOSE AND APPROACH

AEC Group (AEC) and Location IQ have been engaged by Dahua to prepare an Economic Impact Assessment (EIA) to firstly consider if the Masterplan is appropriate for the Site and secondly to analyse the economic impacts likely to result from the proposed planning control amendments and subsequent development of the Site.

- **Base Case**: The site is developed under current planning framework to deliver 3,400 dwellings.
- **Proposal Case**: If the site was developed to the Masterplan, to a higher intensity than the Base Case to include 5,250 dwellings (400 apartments, 550 terrace dwellings and 4,300 detached dwellings).

The purpose of the EIA is two-fold:

1 To carry out economic and market research to consider the need for, and appropriateness of the proposed Masterplan.

2 To carry out economic modelling to assess the economic impacts of the Proposal, if the Site was developed to the Masterplan.

For the purposes of the EIA an assessment of the proposal's impact on the Site and broader area has been undertaken as the potential impact of the proposal may extend beyond the boundaries of the AMsterplan and/or land to which the planning proposal relates.

STRATEGIC CONTEXT

Menangle Park forms part of the Menangle Park and Mount Gilead Priority Precinct in the Greater Macarthur Land Release Area. The Greater Macarthur Land Release Area Preliminary Strategy & Action Plan ('Preliminary Strategy) identified potential for 18,100 dwellings (50,000 persons) at Menangle Park and Mount Gilead precinct.

The Preliminary Strategy highlights that future land use within the precinct will be predominantly residential of varying densities, with commercial uses located within centres. Four future centres were envisaged in the precinct:

- **Mount Gilead** - a local centre with approximately 10,000sqm to 20,000sqm of employment GFA.
- **Menangle Park** - a local centre with approximately 20,000sqm to 30,000sqm of employment GFA.
- **Glenlea** - a village centre with approximately 5,000sqm of employment GFA.
- **Gilead** - a village centre with approximately 5,000sqm to 10,000sqm of employment GFA.

It is important to note the Preliminary Strategy designates the Major Centre immediately to the north of Menangle Road and to the east of the Menangle Park train station. Major regional road and other infrastructure investment has been committed and will support strong regional road access to Menangle Park.

THE PROPOSAL

The masterplan for the Site relocates these two centres so that the local centre is provided to the north and the neighbourhood centre to the south. This is for a variety of reasons, including:

- **Road Infrastructure**
  Larger centres typically require greater accessibility with major roads as they serve a larger population than smaller centres. By locating the town centre to the north, this creates greater amenity due to the closer proximity with the planned Spring Farm Parkway extension and Hume Highway as well as location adjacent open space.
- **Population**
  A larger population base is proposed to the north of Menangle Road and the early stages of development is planned to be orientated to the north of Menangle Road. By locating the local centre to the north, this provides residents to the site and residents in the broader area to access larger scale retail facilities.

The Masterplan envisages two centres - a local centre in the north (reoriented from the train station) and a neighbourhood centre in the south (rather than a single centre) with broadly a similar order of magnitude floorspace on build-out. This enables a more focused approach to serving the retail needs of the new community.

The employment lands (zoned IN1 General Industrial) are in the northern edge of the Site, directly accessible from Spring Farm Parkway.

Staged over a 10 year period, overall the Proposal contemplates:

- Approximately 5,250 residential dwellings (4,000 of which are on Dahua's land and 1,250 dwellings outside of Dahua's land) across a range of densities and dwelling types.
- A Local Centre that could accommodate up to 30,000sqm of employment GFA.
- A Neighbourhood Centre with up to 3,500sqm of employment GFA.
- Approximately 24 hectares of employment land to accommodate light industry and urban services floorspace of up to 180,000sqm.
- Roads, infrastructure, open space, sporting fields, schools and parks.

The proposed local centre layout is proposed to be in a 'main street' style format, with a range of retail stores possessing active frontage to the street. The local centre could potentially be anchored by a discount department store, full-line supermarket(s) and a range of specialty stores. The local centre site is also proposed to contain residential units above the retail floorspace creating greater density around the local centre site.

A smaller neighbourhood centre, possibly anchored by a small supermarket or a large fresh produce provider, is proposed at the southern portion of the Site. Tenants could include fresh produce stores, providores, delis, as well as retail services to create greater amenity for the local population. The neighbourhood centre is not planned to detract from the larger retail offering at the local centre.

ECONOMIC IMPACTS

The net economic impacts that result from the Proposal Case are compelling.

- An additional 1,850 dwellings of a diversity of format and size, thereby catering to different household and lifecycle needs.
- Additional economic activity generated on the Site supporting:
    - More than $800m in output (including nearly $400 million in direct activity).
    - More than $400m contribution to gross regional product (including nearly $180 million in direct activity).
    - Around $200m in incomes and salaries paid to households.
    - Circa 2,700 full-time equivalent jobs, including1,200 directly related to activity on the Site.
- By virtue of more intensive development of the Site, the economic activity generated during the construction period is accordingly greater than if developed under the Base Case.
- The additional households that the Proposal Case would accommodate would support economic activity not just on the Site but in the broader Campbelltown LGA. Key beneficiaries of this additional activity could include retail centres such as Campbelltown CBD/Macarthur and employment precincts such as Ingleburn.
- Economic modelling indicates the additional household expenditure would support:
    - $120 million in output ($60 million in direct activity).
    - $70 million in contribution to gross regional product ($37 million in direct activity).
    - $35 million in incomes and salaries paid to households.
    - 567 full-time equivalent jobs (including 350 direct employees).

SUSTAINABILITY OF THE CENTRES

The Preliminary Strategy (DPE, 2015) identified the potential for a centre at Menangle Park of 20,000sqm to 30,000sqm floorspace, along with three other centres in the Menangle Park and Mount Gilead priority precinct. Further, it envisaged for the centre at Menangle Park to be just east of the Menangle Park train station.

The Masterplan proposes approximately 33,500sqm of floorspace within the centres, being 30,000sqm floorspace at the local centre and 3,500sqm floorspace in the neighbourhood centre. This is marginally greater than the upper end of the range envisaged in the Preliminary Strategy and is commensurate with the larger population now envisaged.

Other than in inner city areas, the majority of patronage to centres is generally car-based. Locating the local centre close to Spring Farm Parkway would ensure the first full-line supermarket and other early retailers are accorded the greatest opportunity to achieve their highest sustainable level and be able to open at the earliest date. Over time, as additional facilities consolidate within the local centre they will collectively create the greatest strength of destination and retailing.

Overall, viability and strength of a local centre is underpinned by the building of a critical mass of retailers, directly influencing the level of resultant economic activity when operational, consequently leading to greater employment outcomes.

The proposed location and integration of the neighbourhood centre with a future primary school provides additional retail choice to future residents in the south portion of Menangle Park. Additionally, the attraction of Club Menangle and associated facilities will leverage this new neighbourhood centre which will contribute to drawing greater visitation to the area by providing visitors the opportunity to linger and patronise the shops therein. These are all positive economic impacts for the local government area.

DIVERSIFICATION OF HOUSING OFFER AND SUPPORT FOR CENTRES

A diversified housing product offer at Menangle Park would result in wider market appeal, addressing need at a broader level than envisaged by the original masterplan. A more diverse future community at Menangle Park has positive impacts on supporting the viability not only of the centres proposed within Menangle Park but also of higher order centres such as Campbelltown CBD, Macarthur and Narellan.

In this regard, the range of housing opportunities is vast in providing potential for apartments, terraces/townhouses, small lot housing, regular detached dwellings and larger rural/residential allotments.

While the new centres at Menangle Park will cater to most of residents' daily convenience needs and some weekly shopping needs, they will be required to travel to centres such as Campbelltown and Narellan for comparison shopping and thereby strengthening the viability of these centres.

An increased population catchment for Campbelltown would result in increased economic activity (output, wages and incomes) and would support creation of a greater number of direct and indirect jobs for the Campbelltown LGA, as demonstrated by the economic modelling.

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1. INTRODUCTION

1.1 BACKGROUND AND OBJECTIVES

This economic impact assessment has been prepared to support an amendment to Campbelltown Local Environmental 2015 (Campbelltown LEP 2015) in relation to 498ha of land within the Menangle Park Urban Release Area (URA) including 498ha of land owned or under the control of Dahua Group (Aust) Pty Ltd (Dahua) with the remaining area owned or under the control of other landowners.

The URA was rezoned from rural land to urban purposes on 18 November 2017 to accommodate approximately 3,400 residential lots, a retail/commercial centre, employment lands and community and recreational facilities.

The proposed amendment builds upon the previous rezoning and associated Structure Plan to create a new sustainable, healthy and high quality residential community comprising:

- 5,250 dwellings (an increase of 1,850 dwellings).
- a new local centre (also known as town centre) comprising 30,000sqm of retail / employment gross floor area.
- a new neighbourhood centre (approximately 3,500sqm of employment floor space).
- a revised road and street network to provide better permeability throughout the site.
- sporting fields and parks.
- integrated passive recreation area within a riparian corridor network.
- land for environmental conservation.
- community facilities to support the proposed increase to the population.
- primary school.

1.2 SCOPE AND PURPOSE

AEC Group (AEC) and Location IQ have been engaged Dahua to prepare an Economic Impact Assessment (EIA) to firstly consider if the Masterplan is appropriate for the Site and secondly to analyse the economic impacts likely to result from the proposed planning control amendments and subsequent development of the Site.

In order to assess the economic impact should the Site be developed to the Masterplan, the existing permitted use is compared against the Proposal Case.

- **Base Case**: The Site is developed under current planning framework to deliver 3,400 dwellings (ranging from 300sqm to 950sqm). This would support around 20,000sqm of retail/commercial floorspace in the local centre. 120,000sqm of light industrial and urban services floorspace could be developed in the employment lands in the north of the Site.
- **Proposal Case**: If the Site was developed to the proposed Masterplan, to a higher intensity than the Base Case to include 5,250 dwellings (indicatively 400 apartments, 550 terrace dwellings and 4,300 detached dwellings). This would support a larger quantum of retail/commercial floorspace, distributed across a local centre (30,000sqm) and a neighbourhood centre (3,500sqm). There is potential for 180,000sqm of light industrial and urban services floorspace to be accommodated in the employment lands.

The purpose of the EIA is two-fold:

1 To carry out economic and property market research to consider the need for, and appropriateness of the Masterplan.

2 To carry out economic modelling to assess the economic impacts of the proposal, if the Site was developed to the Masterplan.

For the purposes of the EIA an assessment of the proposal's impact on the Site and broader area has been undertaken as the potential impact of the proposal may extend beyond the boundaries of the AMsterplan and/or land to which the planning proposal relates.

1.3 STRUCTURE OF THE STUDY

The Report has been structured in the following manner:

- **Chapter 1: Introduction**
  This Chapter provides an overview and background of the Study, the scope, purpose and overall structure of the report.
- **Chapter 2: The Site and Proposal**
  This Chapter reviews the Site, its current context within the Campbelltown LGA and describes the Proposal as envisaged for future development of the Site.
- **Chapter 0: Demand for Employment Uses**
  This Chapter investigates the nature of market activity for various land uses and examines the demand for employment uses on the Site.
- **Chapter 4: Economic Impact Assessment**
  This Chapter assesses the economic impacts of future development on the Site by investigating two scenarios:
  - Base Case: the economic impacts of the Site if developed under current planning framework.
  - Proposal Case: the economic impacts if the Site was rezoned to facilitate development to greater intensity as proposed by the Masterplan.

2. STRATEGIC CONTEXT

2.1 LOCATION

Menangle Park is currently a rural residential suburb immediately to the west of the Hume Highway in the Campbelltown Local Government Area (LGA). Menangle Park is situated approximately 10 km to the south-west of the Campbelltown Central Business Area (CBA) and 50 km to the south-west of the Sydney Central Business District (CBD).

Figure 2.1 illustrates the context of Menangle Park's location within the broader south west region.

Figure 2.1: Menangle Park Regional Context

Source: Location IQ

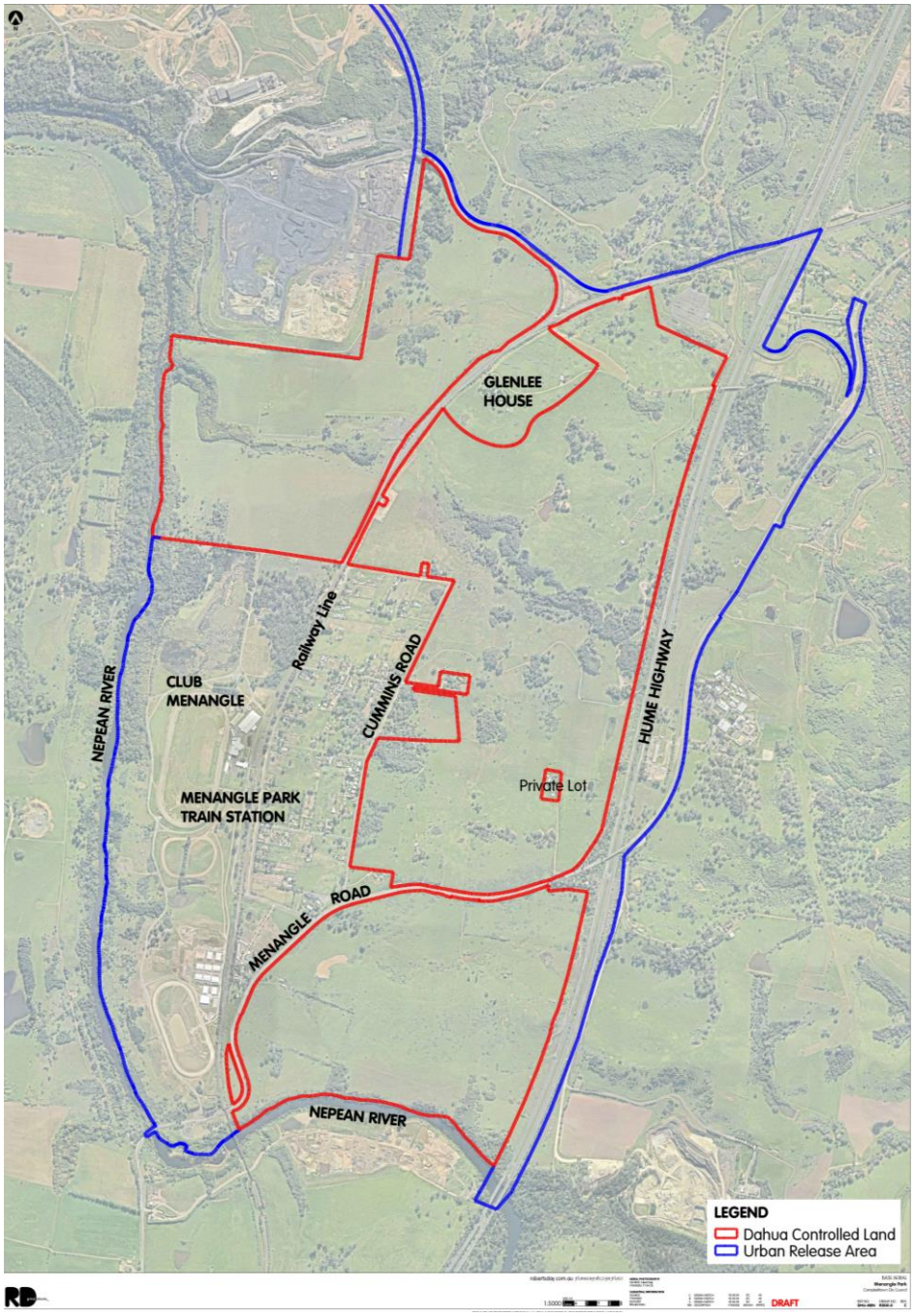
The major road past the Menangle Park site is the Hume Highway, which connects the Sydney CBD to south-western Sydney. According to the latest traffic data by NSW Roads and Maritime (2017), the Average Annual Daily Traffic (AADT) volume past the site on the Hume Highway is 52,107, which equates to in-excess of 19 million vehicles travelling past the site per annum.

One of the largest and most prestigious schools in the Macarthur region, Broughton Anglican College, is located directly off Menangle Road, to the east of the Hume Highway. Broughton Anglican College provides education for students from Kindergarten to Year 12 and as of 2016 has 988 students enrolled.

The Site

Menangle Park Urban Release Area (URA) comprises 958 hectares of land at Menangle Park, 498ha of which is owned or under the control of Dahua and the remaining area owned or under the control of other landowners. Figure 2.2 illustrates the URA.

Figure 2.2: Menangle Park Urban Release Area



Source: Dahua

The major landmark in Menangle Park is Club Menangle, which was originally built in 1914 and received a major upgrade that was completed in 2007. Harness racing is the main attraction at Club Menangle and there are over 130 meetings per year, with Club Menangle also providing dining options as well as corporate function facilities.

The other major historic facility at Menangle Park is Glenlee House, a gateway to early European settlers as well as an item of Aboriginal heritage significance. The homestead dates from 1823 and is heritage listed by the NSW Government. Glenlee House is situated to the western side of the Menangle Park site and to the east of the existing railway line.

Menangle Park forms part of the Menangle Park and Mount Gilead Priority Precinct Area in the Greater Macarthur Land Release Investigation (2015). The Priority Precinct Area encompasses 3,601 hectares with the development potential to accommodate 18,100 dwellings, or approximately 50,000 persons.

The Greater Macarthur Land Release Area Preliminary Strategy & Action Plan (referred to as the 'Preliminary Strategy) (DPE, 2015) identified potential for circa 18,100 dwellings at the Menangle Park and Mount Gilead precinct. It also noted the encumbered nature of some of the land in the area, however noting that these precincts have relatively direct access to jobs, health care and education opportunities in Campbelltown-Macarthur as well as other opportunities in Western Sydney.

The Preliminary Strategy highlights that future land use within the precinct will be predominantly residential of varying densities, with commercial uses located within centres. Four future centres were envisaged in the precinct:

- **Mount Gilead** - a local centre with approximately 10,000sqm to 20,000sqm of employment GFA.
- **Menangle Park** - a local centre with approximately 20,000sqm to 30,000sqm of employment GFA.
- **Glenlea** - a village centre with approximately 5,000sqm of employment GFA.
- **Gilead** - a village centre with approximately 5,000sqm to 10,000sqm of employment GFA.

It is important to note the Preliminary Strategy designates the Major Centre immediately to the north of Menangle Road and to the east of the Menangle Park train station.

2.2 INFRASTRUCTURE PROGRAMME

Regional Road Network

To alleviate traffic congestion on some of the major roads in south-west Sydney, which would get more trafficked as part of the Menangle Park development, several major road infrastructure projects are proposed. These include:

- **Hume Highway Ramp Upgrades**
  The Hume Highway is a four lane arterial road that bisects the south-west Sydney region and bypasses the Menangle Park site. Currently, the nearest entry and exit ramps to the Menangle Park site are located at the Narellan Road interchange, 4.5 km to the north. As part of the Menangle Park development, northern entry and exit ramps to the site are proposed to be completed by 2022/23.
- **Spring Farm Parkway**
  Spring Farm Parkway/Liz Kernohan Drive is a major planned arterial road throughout the newly developed Spring Farm growth area, approximately 2 km to the north-west of Menangle Park. Development of the road is partially completed, with the road proposed to be extended to Menangle Road in the east. Currently, residents in Spring Farm do not have direct access to Menangle Road or to the Hume Highway and would currently utilise the Camden Bypass and the heavily congested Narellan Road. The extension of the Spring Farm Parkway is pivotal in creating stronger regional access to the Menangle Park site.

Broader Western Sydney Employment Area

The Broader Western Sydney Employment Area was established by the NSW government to provide businesses in the region with land for industry and employment, including transport and logistics, warehousing and commercial office space.

Over the next 30 years, in excess of 57,000 jobs are projected within the region, with a stronger emphasis on 'blue collar' employment (36,000 jobs) compared with 'white collar' employment (21,000 jobs). The planned Western Sydney Airport will be a major generator of employment throughout the broader Western Sydney region.

To complement the growth of jobs in the region, infrastructure and transport improvements are currently in the planning process, including extending the South West Rail Link to Bringelly as well as $3.6 billion towards road improvements in the region.

Western Sydney Airport

Planning is currently underway for Sydney's second airport, the Western Sydney Airport at Badgerys by the Federal and NSW State Government.

Western Sydney Airport will be a major employment generator for Western Sydney, providing long term employment opportunities for the burgeoning residential population and strengthening the Western Sydney economy. According to the Western Sydney Airport 'Environmental Impact Assessment', Stage One will create approximately 8,730 direct full time equivalent jobs, with the potential for a further 4,440 jobs within business parks on the airport site. The long-term potential of the Western Sydney Airport could grow to accommodate 61,500 direct jobs and 29,200 indirect jobs by 2063.

Western Sydney Infrastructure Plan

The Australian and New South Wales (NSW) Governments are jointly funding a 10-year, $3.6 billion road investment program throughout western Sydney that supports greater integration of transport in the region as well as capitalising on the economic benefits of the planned Western Sydney Airport. Some of the major road upgrades include The Northern Road, the building of a new six lane M12 Motorway, upgrading Bringelly Road to four lanes, construction of the Werrington Arterial Road upgrade, as well as several local road upgrades.

The proposed M12 Motorway upgrade and Elizabeth Drive redevelopment will support growth generated from the broader Western Sydney Employment Area, South West Priority Growth Area and the Western Sydney Airport, and will create a crucial east-west transport spine connecting transport between the M7 Motorway to the east and the Northern Road to the west. The proposed development will include a $1.2 billion upgrade stretching 14 km that includes six lanes and a dual carriageway motorway.

The Western Sydney City Deal is a key strategic planning and investment agreement for the region which will drive economic and employment growth within South West Sydney. The formal agreement between Commonwealth, State and eight Western Sydney local governments (including Fairfield) seeks to catalyse development around the Western Sydney Airport and coordinate a program of infrastructure investment. The Deal was formally signed in March 2018 with the key commitment arising from the agreement being a North-South Rail Link from St Marys to the Western Sydney Airport.

The North-South Rail Link (NSRL) and South-West Rail Extension (SWRE) was one of six options considered in the joint Commonwealth and NSW Government *Western Sydney Rail Needs Scoping Study* which investigated potential routes to support the Western Sydney Airport.

The NSRL would extend from the T1 Western Line at Schofields in the north to the T2 South Line at Macarthur via a new station at the WSA. An additional spur from a new station at Bringelly would link to the existing South West Rail Link terminus in Leppington.

An *Outcomes Report* (March 2018) identified the NSRL as the preferred rail option to service the WSA. Commitment to Stage 1 of the NSRL was provided by the Commonwealth and NSW Governments in conjunction with the Western Sydney City Deal in March 2018. Stage 1 includes a link from the T1 Western Line at St Marys to the future station at the WSA, with completion scheduled to align with the WSA in 2026.

Future train stations that are planned as part of the corridor include Rossmore, Bringelly, North Bringelly, Oran Park and Narellan, as well as a proposed train station at Badgerys Creek to serve the Western Sydney Airport.

The Northern Road is currently undergoing a $1.6 billion upgrade that spans 35 km between Penrith and Narellan, which generally involves an expansion of the current two to four lane road to a six to eight lane divided road. The Northern Road upgrade would improve safety, increase road capacity and reduce congestion and travel times.

Overall, the Menangle Park site would be within close proximity to a rapidly developing region over the next 50 years with substantial further employment, infrastructure and residential development to occur to the north of the Site.

2.3 THE PROPOSAL

Menangle Park is a planned major mixed-use development in southwestern Sydney that will provide a range of residential, retail, commercial, community and employment uses. Figure 2.3 illustrates the Masterplan Area.

Figure 2.3: Menangle Park Masterplan Area

Source: Dahua

As part of the current planning scheme in the Greater Macarthur Land Release Investigation, the Major Centre site is situated at the southern portion of Menangle Park, adjacent to the existing train station, with the neighbourhood centre situated at the northern extent of Menangle Park, to the north of the Spring Farm Parkway.

The masterplan for the Site relocates these two centres so that a local centre is provided to the north and the neighbourhood centre to the south. This is for a variety of reasons, including:

- **Road Infrastructure**
  Larger centres typically require greater accessibility with major roads as they serve a larger population than smaller centres. By providing the Local Centre to the north, this creates greater amenity due to the closer proximity with the planned Spring Farm Parkway extension and the Hume Highway connection.
- **Population**
  A larger population base is proposed to be provided to the north of Menangle Road and the early stages of development is planned to be orientated to the north of Menangle Road. By providing the Local Centre to the north, this provides both first residents to the site and a larger proportion of residents over time to access larger scale retail facilities.

The Masterplan envisages two centres - a local centre in the north (reoriented from the train station) and a neighbourhood centre in the south (rather than a single centre) with broadly a similar order of magnitude floorspace on build-out. This enables a more focused approach to serving the retail needs of the new community.

The employment lands (zoned IN1 General Industrial) are in the northern edge of the Site, directly accessible from Spring Farm Parkway.

Staged over a 10 year period, overall the development is proposed to comprise:

- Approximately 5,250 residential dwellings (indicatively 4,000 of which on the Site and 1,250 dwellings outside of the Site) across a range of densities and dwelling types.
- A Local Centre/Town Centre that could accommodate up to 30,000sqm of employment GFA.
- A Neighbourhood Centre with up to 3,500sqm of employment GFA.
- Approximately 24 hectares of employment land to accommodate light industry and urban services floorspace of up to 180,000sqm.
- Roads, infrastructure, open space, sporting fields, schools and parks.

The proposed Local Centre layout is proposed to be in a ‘main street’ style format, with a range of retail stores possessing active frontage to the street. The Local Centre could potentially be anchored by a discount department store, full-line supermarket(s) and a range of specialty stores. The Local Centre site is also proposed to contain residential units above the retail floorspace creating greater density around the Local Centre site.

A smaller neighbourhood centre, possibly anchored by a small supermarket or a large fresh produce provider, is proposed at the southern portion of the Menangle Park site. Tenants could include fresh produce stores, providores, delis, as well as retail services to create greater amenity for the local population. The neighbourhood centre is not planned to detract from the larger retail offering at the Local Centre.

The next chapter investigates the market and competitive context for various types of employment uses on the Site, particularly in respect of the centre/s and employment lands.

3. DEMAND FOR EMPLOYMENT USES

This chapter assesses the optimal size, composition and timing for retail and non-retail facilities on the Site.

3.1 AUSTRALIAN RETAIL FLOORSPACE PROVISION

In Australia there is around 2.2sqm of retail floorspace provided for every resident. This is generally the accepted standard provision used throughout the Australian retail industry, with the last Retail Census undertaken by the ABS in 1991/92.

The growth in retail floorspace per capita has largely been driven by real growth in income levels in Australia and consequently increases in retail spending capacity. In addition, new retail formats have been introduced as the retail industry has evolved. Consequently, during this period, Australia has witnessed the extensive development of super-regional and regional shopping centres, many more village centres anchored by supermarkets, homemaker centres and outlet centres.

Assuming the provision of retail floorspace per person was to continue to increase in-line with historical trends at an average of 1.7% annually, the provision would be 3.1sqm per person by 2031. Even if the rate slowed to 0.85% annual, half the rate of the past 20 years, the provision would be 2.6sqm per capita by 2031.

In order to assess the potential for increased retail floorspace provision throughout the Menangle Park main trade area, a conservative approach is taken which allows for the provision of retail floorspace to remain at 2.2sqm over the forecast period, in line with the Australian average. This presents a conservative scenario given the absence of different types of retail formats not being supportable in the main trade area, such as regional and super-regional shopping centres and factory outlet/discount centres.

The retail floorspace provision of 2.2sqm per capital also incorporates allowance for large format retailers such as Bunnings, Harvey Norman and the like, which accounts for approximately 0.6sqm per person of the total of 2.2sqm per person. As these uses will not be developed at the local centre or neighbouhood centre, the retail floorspace provision per capita is reduced to 1.6sqm per person.

Reflecting the internalised location of the local centre site, it is unlikely that *all* the retail needs of local residents will be catered for locally at Menangle Park. This specifically applies to higher order shopping needs such as discount department stores and large format retail.

3.2 ON-SITE RETAIL FLOORSPACE DEMAND

In consideration of the foregoing, Table 3.1 presents an analysis of retail floorspace demanded for the Menangle Park local centre and neighbourhood centre sites in combination. The steps included in the process are as follows:

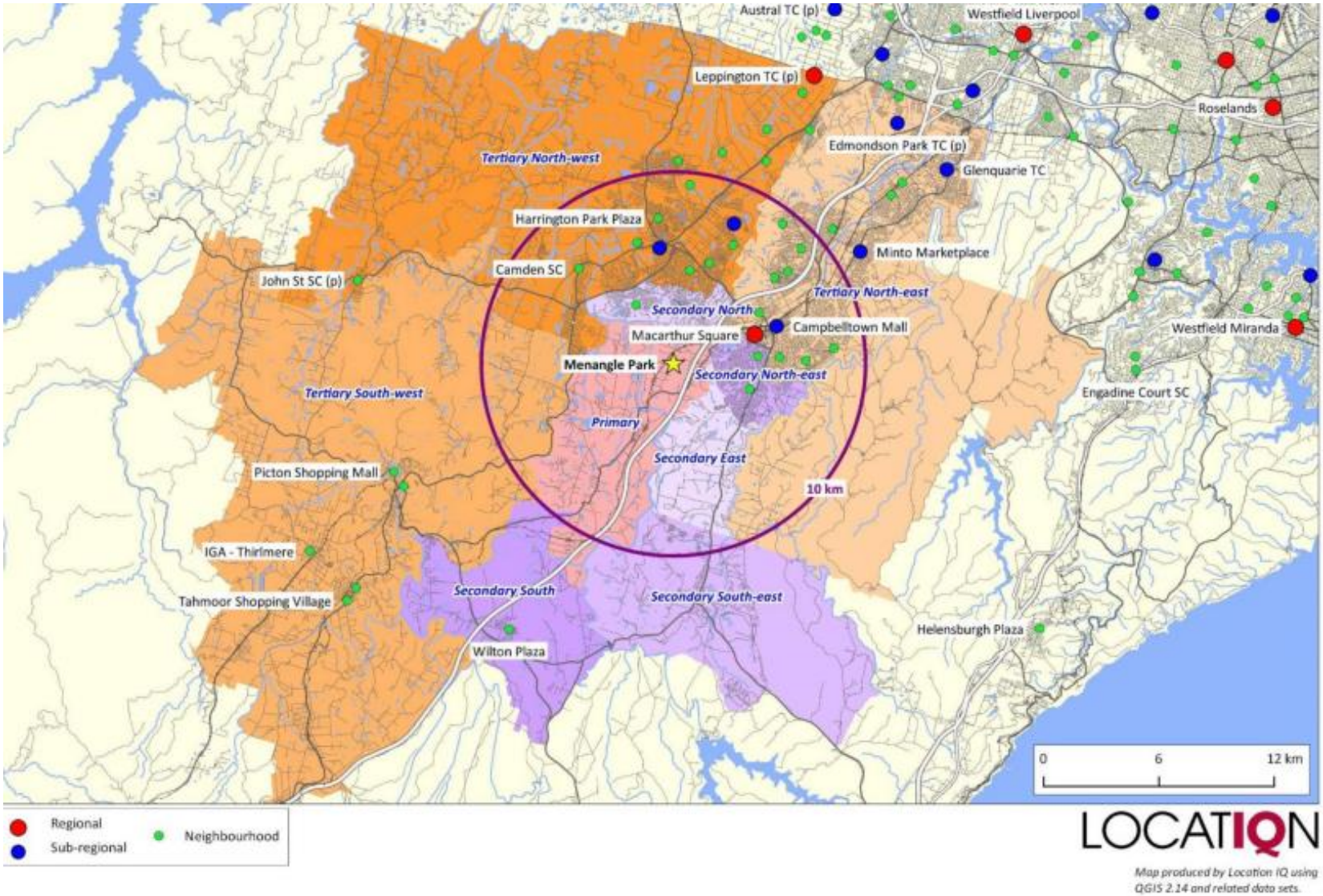
- A resident trade area is defined, comprised of primary and secondary sectors. These various sectors are depicted in Figure 3.1.
- The projected population throughout the main trade area is detailed, increasing from 38,000 in 2017 to 107,555 by 2041.
- Relevantly, in relation to the secondary sectors, the secondary north sector is excluded until 2031 given the Spring Farm extension will not take place most likely until post 2026.

Residents would generate the largest demand of retail floorspace per person given they would undertake both full-line and further retail shopping within close proximity to their homes. As such, the current benchmark of 1.6sqm of retail floorspace per person is assumed over the forecast period.

The next step in the analysis is to estimate how much of the total retail floorspace demanded by residents will be required at Menangle Park centres. Market shares for each customer segment are applied:

- Primary sector at 40%.
- Secondary sector residents at 10% increasing to 15% by 2031 when Spring Farm extension is completed.

Figure 3.1: Menangle Park Retail Trade Area



Source: Location IQ

Demand for retail floorspace from persons not accounted for in the primary and secondary sectors must also be taken into consideration. Retail floorspace demanded from these persons is projected at 10% of that demanded from the considered customer segments over the period to 2026.

Demand for retail floorspace from beyond is then projected to increase to 15% of total floorspace demanded from 2031-2041, reflecting the larger scale and scope of uses developed at the Menangle Park sites, which would in turn create a wider, regional draw.

Table 3.1: Retail Floorspace Demand, 2017-2041

Customer Segments	Year					
	2017	2021	2026	2031	2036	2041
Population						
Primary Sector	3,060	4,960	10,460	15,460	20,460	20,460
Secondary Sectors*	35,570	33,910	37,410	61,095	73,470	87,095
Total	**38,630**	**38,870**	**47,870**	**76,555**	**93,930**	**107,555**
Retail GLA (sqm) per person (1.6sqm)						
Primary Sector	48,896	7,936	16,736	24,736	32,736	32,736
Secondary Sectors	56,912	54,256	59,856	97,752	117,552	139,352
Total	**61,808**	**62,192**	**76,592**	**122,488**	**150,288**	**172,088**
Market Share GLA Retention at Menangle Park						
Primary Sector (40%)	1,958	3,174	6,694	9,894	13,094	130,904
Secondary Sectors (@5% inc. to 110% by 2031)	2,846	2,713	2,993	9,775	11,755	13,935
Total	**4,804**	**5,887**	**9,687**	**19,670**	**24,850**	**27,030**
Demand from Beyond**	480	589	969	2,950	3,727	4,054
Total Floorspace	**5,284**	**6,476**	**10,656**	**22,620**	**28,577**	**31,084**

*excludes Secondary North sector until 2031 due to Spring Farm extension not in place
**increases to 15% from 10% of total floorspace in 2031
Source: Location IQ

Overall, an indicative amount of 5,284sqm of retail floorspace is projected to be demanded at Menangle Park by 2021, increasing to 31,084sqm by 2041. The provision of retail floorspace (not including other non-retail elements) would most likely include:

- Around 25,000sqm to 27,000sqm at the local centre.
- 3,000sqm to 5,000sqm at the neighbourhood centre.

The next sections assess the demand for individual components as part of the local centre and neighbourhood centre at Menangle Park.

3.2.1 Discount Department Store Potential

In metropolitan areas throughout Australia, one discount department store (i.e. Kmart, Big W or Target) is supportable for every 35,000-40,000 persons. Typically a primary sector population of 25,000-30,000 is also required.

In the case of Menangle Park, the main trade area would be of most relevance for a discount department store with a range of discount department store facilities in the tertiary sectors. Also, residents in the secondary northwest sector are very closely located to Macarthur Square. Excluding this sector, a population of 40,000-50,000 persons throughout the remainder the trade area will not occur until post 2031.

3.2.2 Supermarket Potential

Supermarkets are typically defined in planning documents and courts as “grocery and dry goods stores of at least 500sqm, with smaller stores classified as foodstores.” Further, a full-line supermarket is considered to be at least 2,000sqm in size and a major full-line supermarket over 3,000sqm.

Typically in Australia, one major full-line supermarket (3,000sqm or larger) is provided for every 8,000-9,000 persons. The primary sector would be of most relevance to supporting supermarkets at Menangle Park given there will be supermarkets located through other parts of the trade area sectors over time.

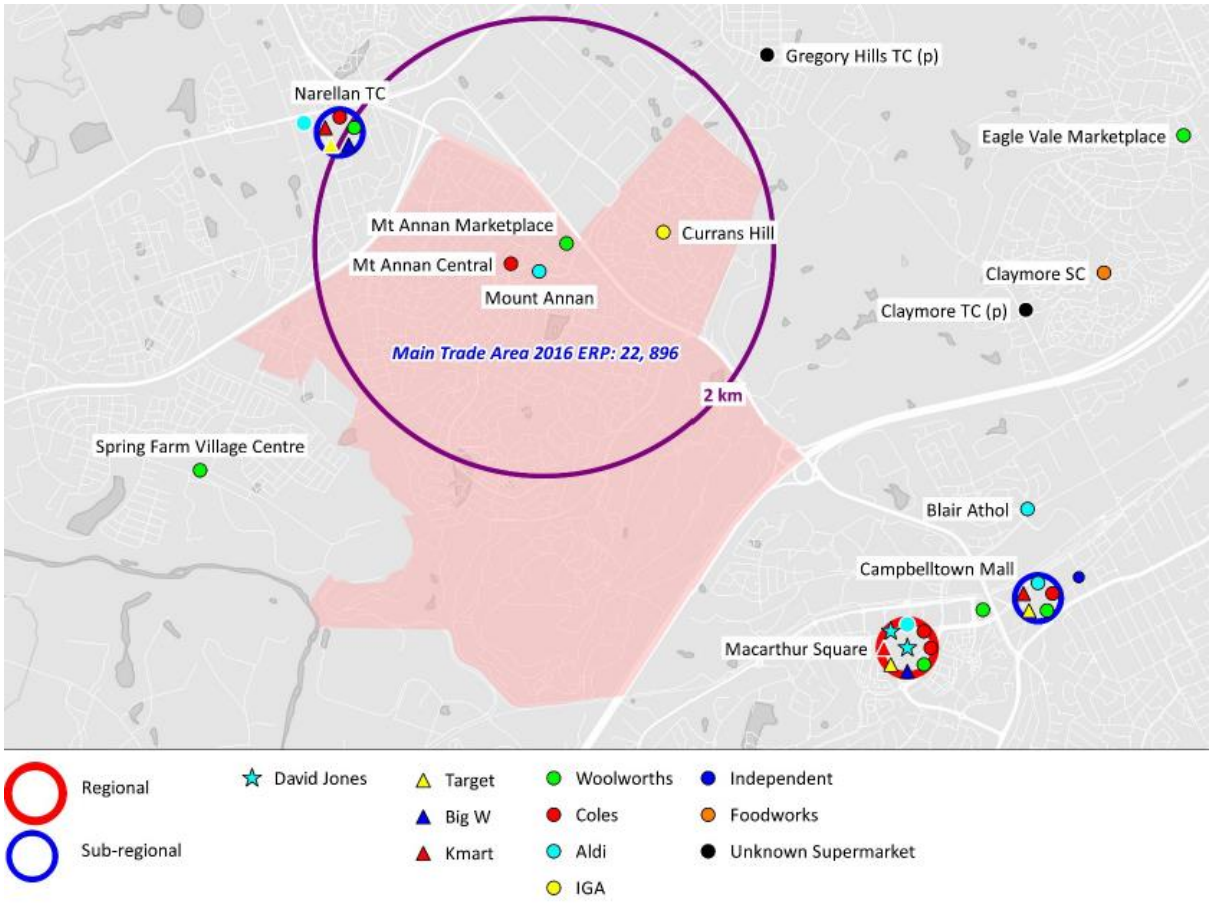
With a longer term population in excess of 25,000 persons, the primary sector would be able to support two full-line supermarkets, in addition to a discount supermarket such as Aldi. Aldi typically require 15,000-20,000 persons to be supportable.

In terms of the timing for a first supermarket at Menangle Park, at least 6,000-7,000 persons would be required, which indicatively would be around 2023, the likely opening date for the ramps from the Hume Highway.

Any first full-line supermarket should be located as part of a centre just off Spring Farm Parkway. Over time, additional facilities should be consolidated within the centre to create the greatest strength of destination and retailing.

As a guide to the indicative supportability of supermarkets, Figure 3.2 illustrates the trade area which would be served by facilities at Mount Annan, with Figure 3.2 indicating the provision of facilities at Mount Annan. As shown, for a primary sector population similar to Menangle Park of over 20,000 persons, there are two full-line supermarkets (Coles and Woolworths) as well as an Aldi supermarket. This is despite the close proximity to a range of facilities at Macarthur Square and Narellan Town Centre.

Figure 3.2: Mount Annan Trade Area



Source: Location IQ

Relevantly, appropriate planning did not take place for facilities at Mount Annan in an integrated town centre, meaning a piecemeal development across a range of centres has occurred.

Importantly for Menangle Park, a town centre should be planned incorporating all of these elements together with a discount department store over time.

3.2.3 Mini-major Tenants

A mini-major tenant is a store typically over 400sqm in size which supports the major tenant and acts as a key customer generator. In supermarket-based centres, typical mini-major tenants include:

- Large fresh produce operator.
- Large format liquor store.
- Pharmacy.
- Discount variety store.

The average provision of mini-major tenants in discount department store based centres in Australia is around 2,200sqm. This provision should be proposed longer term in the Menangle Park town centre.

Relevantly, if a boutique fresh food operator could be secured, the ideal location would be in the neighbourhood centre that would support the school. This would provide a key anchor tenant for the proposed centre in the future.

3.2.4 Supporting Retail Specialty Floorspace

The provision of retail specialty floorspace that is supportable at any retail centre is typically determined by the amount of floorspace and total sales of major tenant floorspace (i.e. a supermarket). These major tenants act as the key customer generators to a centre, with the specialty floorspace drawing business from the customer flows.

With strong anchor tenant sales projected at the town centre over time, together with a centre format which would be attractive to a broader audience, a provision of supportable specialty space would likely include:

- 2,000sqm-2,200sqm as part of a first stage of development with a supermarket.
- A longer term provision of 7,000sqm-9,500sqm as part of a broader town centre development.

For the neighbourhood centre, with an anchor tenant of around 1,500sqm, up to 1,500sqm of specialty shop space will be supportable over time.

3.2.5 Other Uses

Other uses that are typically incorporated as part of town centres include:

- Non-retail specialty tenants such as real estate agents, banks, travel agents and the like.
- Medical centres with one general practitioner typically provided for every 900 residents in Australia. The primary sector population alone over time would support in excess of 20 general practitioners. Other complementary facilities such as dentist, physiotherapist, chiropractors and the like would also be supportable.
- Local gyms which are typically around 200sqm in size and serve a catchment of around 7,000-8,000 persons. The primary sector, therefore, could incorporate 2-3 facilities over time.
- Given the significant increase in children proposed throughout the trade area, a range of childcare facilities would be sustainable. On this basis, a childcare facility would likely be feasible as part of the town centre and also part of the neighbourhood centre. Childcare centres can vary in size from 250sqm up to 1,000sqm in size.
- Community uses such as library and potential for shared/smart work space.
- Throughout Australia, there is typically one petrol station for every 4,000-5,000 persons. On this basis in the primary sector alone at least four petrol stations would be required and potentially more along Spring Farm Parkway Extension. These facilities do not have to be incorporated as part of a centre, but could be included as part of major employment lands in the region.
- Fast food traders such as McDonald's, KFC and the like typically serve populations of 20,000-30,000 persons. These facilities would be supportable within the primary sector and could be considered in the Menangle Park Town Centre.

3.2.6 Ultimate Potential

Having considered all of the above, Table 3.2 presents a summary of key recommendations in relation to proposed timing and composition of facilities at Menangle Park local centre together with the neighbourhood centre.

In relation to the local centre, a facility of up to 30,000sqm would be supportable after 2031, including a retail component of 25,000sqm. The first stage of development of close to 8,000sqm is likely to be supportable by around 2022/23, anchored by a full-line supermarket.

In terms of the neighbourhood centre, a smaller facility of up to 3,000sqm would be supportable, including:

- An anchor supermarket/boutique fresh food operator.
- Up to 1,000sqm of specialty shops.
- Supporting non-retail uses such as childcare centre and medical to drive customer flows to this site.

Table 3.2: Menangle Park Local Centre and Neighbourhood Centre, Ultimate Supportable Floorspace

Customer Segments	Local Centre		Neighbourhood Centre
	Stage 1 (2022/2023)	2021 (Post 2031)	Stage 1 (2025/2026)
Majors			
Discount Department Store/s	0	6,000	0
Supermarket/s	4,000	9,500	0
Total Majors	4,000	15,500	0
Mini-majors (>400sqm)	0	2,000-2,500	1,500
Retail Specialties			
Food and Liquor	150-200	600-800	200
Food and Clothing	600-800	2,000-2,500	400
Apparel	100-150	1,000-1,500	0
Household Goods	100-200	200-300	0
Leisure	100-200	1,000-1,500	0
General Retail	200-300	1,000-1,500	200
Retail Services	500	1,000-1,500	200
Total Retail Specialties	1,950-2,550	7,000-9,500	1,000
Total Traditional Retail	**7,000-7,500**	**23,500-26,500**	**2,500**
Non-retail			
Non-retail (travel agency, banks, commercial office, etc.)	500	2,000	200
Medical	500	1,500	250
Tavern	1,000	1,000	0
Gym	200	1,000	200
Childcare*	400	400	400
Total Non-retail	**2,600**	**5,900**	**1,050**
Total Centre	**8,500-9,500**	**30,000-32,500**	**3,550**

*does not include all outside play area
Source: Location IQ

3.3 LARGE FORMAT RETAIL

This section provides an overview of the potential for large format retail to form part of the employment lands at Menangle Park. Figure 3.3 illustrates the location of large format retail facilities provided across the trade area.

- Various sites located in and around the Campbelltown CBD.
- A developing precinct in and around Narellan/Gregory Hills.
- An existing precinct at Crossroads (Liverpool) at the northern extent of the trade area.

Large format retail stores are generally situated along major roads and highways with maximum exposure for passing traffic. Existing facilities, therefore, are located along Campbelltown Road, Camden Valley Way and the like. This major road expansion is essential if large format retail uses are to succeed.

On this basis, it is likely to be difficult to establish a large format retail precinct at Menangle Park given:

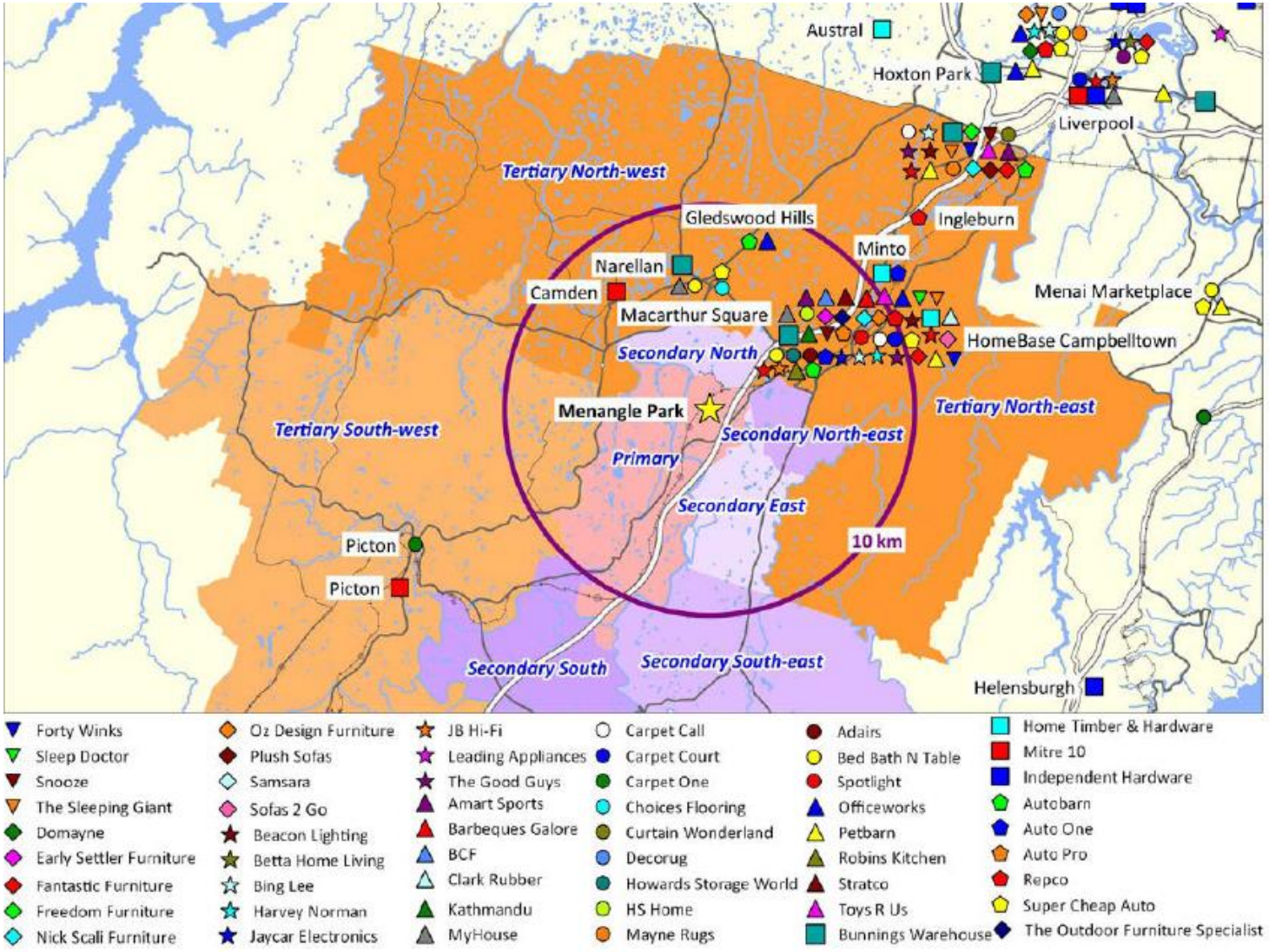
- Sites would not have direct exposure to the Hume Highway.
- Spring Farm Parkway is not intended to be extended through to Spring Farm until post 2023.

In the short term, only a destinational tenant such as IKEA would be able to establish a significant precinct at the Site. IKEA however, are highly unlikely to be attracted given the lack of population to the immediate south.

Longer term, a range of large format retail facilities could be established at the Site including:

- Large format hardware store such as Bunnings which typically require at least 40,000-50,000 persons to be established. This would be similar to the time a discount department store could be established at the Site.
- A complementary range of small scale facilities of 10,000sqm-15,000sqm, to a total of 30,000sqm.

Figure 3.3: Menangle Park Large Format Trade Area



Source: Location IQ

3.4 EMPLOYMENT LANDS

The Greater Sydney Region Plan distinguishes the nature of industrial activities and their locational requirements.

- Manufacturing and freight and logistics activities are more flexible with location, influenced by availability of larger and suitably priced sites with good access to transport networks. These are observed to be found on the fringes of cities.
- In contrast, urban services often serve local communities and businesses and therefore locate close to their markets, including residential areas and commercial centres.

The draft Metropolitan Plan proposes to protect, increase and enhance industrial and urban services areas to ensure a wide range of businesses that support the city's productivity are able to be accommodated.

3.4.1 Industrial Uses

Two broad categories of new industrial development can be observed across metropolitan Sydney.

- Large and flexible floorplates and large land parcels which are able to facilitate a wide range of logistics and warehousing organisations. This type of new development is typically confined to Greenfield locations.
- Increasingly in inner suburb locations, a hybrid of industrial/commercial/retail uses are incorporated in a single development to respond to strong market demand and help overcome the issue of high land values.

New industrial development requires large land parcels (e.g. minimum 20ha) in order to facilitate large scale nature of warehouses and distribution centres, as well as sufficient hardstand and yard space for truck and container movements.

The nature of the surrounding road network is of critical importance to the viability and attractiveness of new industrial precincts. Direct access to major arterial roads and highways is critical for logistics-type operations, particularly for those operators with time-critical business models, e.g. cold storage delivery. Ease of access and egress into industrial precincts from major arterial roads and highways is crucial.

Of equal importance to the viability of industrial precincts are surrounding land uses. Thriving industrial precincts are typically well-buffered from surrounding land uses by roadways, waterways and other natural buffers which mitigates land use conflicts, particularly from residential uses. Where land use conflicts arise from the operations of industrial lands due to noise and smell, restrictions on hours of operation can often result which ultimately detracts from the utility of the industrial precinct.

The employment lands in Menangle Park are of sufficient size (24ha) and will have direct access to major highways to be appealing to accommodating both large format and small format industrial buildings. Additionally, the employment lands are relatively well-buffered from surrounding land uses by proposed roadways and natural buffers.

3.4.2 A Hybrid of Industrial and Mixed Enterprise

The employment lands in Menangle Park will play an important role to service the emerging residential population not just on the Site but in the surrounding region.

General Industry and Light Industry

The Site has the opportunity to be positioned to capture market demand for a range of industries and businesses who will service the growing South West, in particular Menangle Park and Mount Gilead. Completion of the Spring Farm Parkway Extension is critical for occupiers to have direct access to the rest of the South West region.

The success observed at Gregory Hills and Central Hills business parks is evidence of demand that accompanies residential and population growth. There is expected to be good demand for serviced blocks of different sizes (1ha-5ha) as well as already-constructed smaller warehouse and industrial units. Direct access to Spring Farm Parkway Extension would enable the employment land to have wider appeal, i.e. to businesses who service a broader area beyond Menangle Park and Mount Gilead.

Over the longer term when a critical mass of local businesses and population are established, there is opportunity for hybrid development typologies to be considered. These hybrids are observed in South Sydney (Alexandria) and other inner ring suburbs where businesses that have industrial floorspace needs are accommodated in the same development alongside businesses who require commercial-type floorspace. Examples include:

- Collins on Bourke at 90-96 Bourke Road.
- Enterprise Industrial Estate at 51-53 Bourke Road.
- The Mill at 41-43 Bourke Road.
- The Woolstores at 6A Huntley Street.

These hybrid development types assist in overcoming the high cost of land in inner ring suburbs by achieving a high intensity of use on a per square metre basis. This is achieved by combining various uses retail showroom on the ground floor, industrial strata units to the rear on an upper level and self-storage units in areas of poor exposure. This development type additionally suits locations with a gradient slope.

Limited Large Format and Highway Retail

Section 3.2 and 3.3 find there to be limited potential for a large format retail precinct given its lack of direct exposure to the Hume Highway.

4. ECONOMIC IMPACT ASSESSMENT

4.1 BASE CASE V PROPOSAL CASE

In order to understand the economic impact of the Proposal, i.e. if the Site were developed pursuant to the Masterplan, this chapter examines the economic activity that could be captured by the Campbelltown LGA. The economic impacts of two variations of the Proposal are examined.

The following sections examined the economic activity supported by:

- **Base Case**: Developing the Site in accordance with the existing planning framework to include 3,400 dwellings. This would support around 20,000sqm of retail/commercial floorspace in the local centre and 120,000sqm of light industrial and urban services floorspace in the employment lands.
- **Proposal Case 1**: Developing the Site to a higher intensity than the Base Case to include:
    - 5,250 dwellings (consisting of 400 apartments, 550 terrace dwellings and 4,300 detached dwellings).
    - 33,500sqm of retail/commercial floorspace distributed across:
        - A local centre (30,000sqm) comprised of 25,000sqm retail floorspace and 5,000sqm commercial floorspace.
        - A neighbourhood centre (3,500sqm) comprised of 2,750sqm retail floorspace and 750sqm commercial floorspace.
    - 120,000sqm of light industrial and urban services floorspace in the employment lands.
- **Proposal Case 2**: Developing the Site to a higher intensity like Proposal Case 1, however to a slightly different retail/commercial mix in the local centre and neighbourhood centre.
    - 5,250 dwellings (consisting indicatively of 400 apartments, 550 terrace dwellings and 4,300 detached dwellings).
    - 33,500sqm of retail/commercial floorspace distributed across:
        - A local centre (30,000sqm) comprised of 23,500sqm retail floorspace and 6,500sqm commercial floorspace.
        - A neighbourhood centre (3,500sqm) comprised of 2,500 retail floorspace and 1,000sqm commercial floorspace.
    - 180,000sqm of light industrial and urban services floorspace in the employment lands.

In both proposal cases the larger quantum of non-residential floorspace (compared to the Base Case) is supported by the larger population proposed to be accommodated within the 5,250 dwellings.

4.2 DRIVERS OF ECONOMIC ACTIVITY

In order to understand the economic impacts likely to result from the proposed development of the Site, it is necessary to distinguish economic impacts during the construction phase and those economic impacts that will be more permanent in nature following construction completion and operations commencement.

- **Operational Phase**
  On completion of development, the Site is expected to generate ongoing economic/operational activity through direct turnover generated by the retail, commercial and industrial operational activities.

  The future residents of dwellings will support household expenditure activity. Some of this household expenditure will result in increased economic activity outside of Menangle Park and in the Campbelltown LGA.

  The Base Case envisages the Site developed to a lower intensity and accordingly generates economic activity commensurate with the associated level of population. The Proposal Case (both variations) envisage a larger

population base which would in turn support greater levels of economic activity both on the Site and in the Campbelltown LGA.

- **Construction Phase**
  Construction activity will draw resources from and thereby generate economic activity in Campbelltown LGA as well as outside the LGA. Assumptions are made on the proportion sourced from within and outside the LGA.

The economic impacts have been assessed at the Campbelltown Local Government Area (LGA) level. An Input-Output model, including the development of a series of specific regional Input-Output transaction tables, was developed to reflect the economic structure of the Campbelltown LGA (refer to **Appendix A**).

Input-Output modelling describes economic activity through the examination of four types of impacts which are defined and described in the table below.

Table 4.1 Economic Indicators

Indicator	Description
Output	Refers to the gross value of goods and services transacted, including the costs of goods and services used in the development and provision of the final product. **Output typically overstates the economic impacts as it counts all goods and services used in one stage of production as an input to later stages of production, hence counting their contribution more than once.**
Gross Product	Refers to the value of output after deducting the cost of goods and services inputs in the production process. **Gross product (e.g., Gross Regional Product) defines a true net economic contribution and is subsequently the preferred measure for assessing economic impacts.**
Income	Measures the level of wages and salaries paid to employees of the industry under consideration and to other industries benefiting from the Project.
Employment	Refers to the part-time and full-time employment positions generated by the economic shock, both directly and indirectly through flow on activity, and is expressed in terms of Full-Time Equivalent (FTE) positions. One FTE job is defined as one person working full time for a period of one year.

Source: AEC.

Input-Output multipliers can be derived from open (Type I) Input-Output models or closed (Type II) models. Open models show the direct effects of spending in a particular industry as well as the indirect or flow on (industrial support) effects of additional activities undertaken by industries increasing their activity in response to the direct spending. Closed models re-circulate the labour income earned as a result of the initial spending through other industry and commodity groups to estimate consumption induced effects (or impacts from increased household consumption).

The next section estimates consider both Type I and Type II flow on impacts though it should be noted that Type II impacts are commonly considered to overstate economic activity.

4.3 ECONOMIC ACTIVITY AND IMPACTS

The economic impacts/ contribution can be traced through the economic system via:

- **Direct impacts**, which are the first round of effects from direct operational expenditure on goods and services.
- **Indirect Impacts (Flow-on impacts)**, which comprise the second and subsequent round effects of increased purchases by suppliers in response to increased sales. Flow-on impacts can be disaggregated to:
  - **Indirect Impact (Type I)** represents the production induced support activity as a result of additional expenditure by the industry experiencing the stimulus on goods and services in the intermediate usage quadrant, and subsequent round effects of increased purchases by suppliers in response to increased sales.
  - **Indirect Impact (Type II)** represents the consumption induced activity from additional household expenditure on goods and services resulting from additional wages and salaries being paid within the economic system.

The premise behind Type I and Type II indirect impacts applies across both the construction and operational phase, except the impacts on industry will be different. For example, Type I impacts during the construction phase may include professional services (e.g. architects, engineers) and manufacturing (steel, construction materials) while

examples of Type I impacts during the operational phase may include manufacturing (food and beverage, food related) and administrative and support services (e.g. building cleaning, employment services, travel agencies, etc.).

4.3.1 Operational Phase

This section describes the economic activity and impacts associated with the Base Case and Proposal Case post-completion.

Base Case

The activity associated with the Base Case is estimated to support the following economic activity through direct and flow-on impacts (per annum), once fully developed and operational:

- $1.6 billion in output (including $748.5 million in direct activity).
- $789.5 million contribution to Gross Regional Product (GRP, including $333.6 million in direct activity).
- $386.1 million in incomes and salaries paid to households.
- 5,248 full-time equivalent (FTE) jobs (including 2,200 direct employees on the Site).

Table 4.2. Operational Impacts - The Base Case

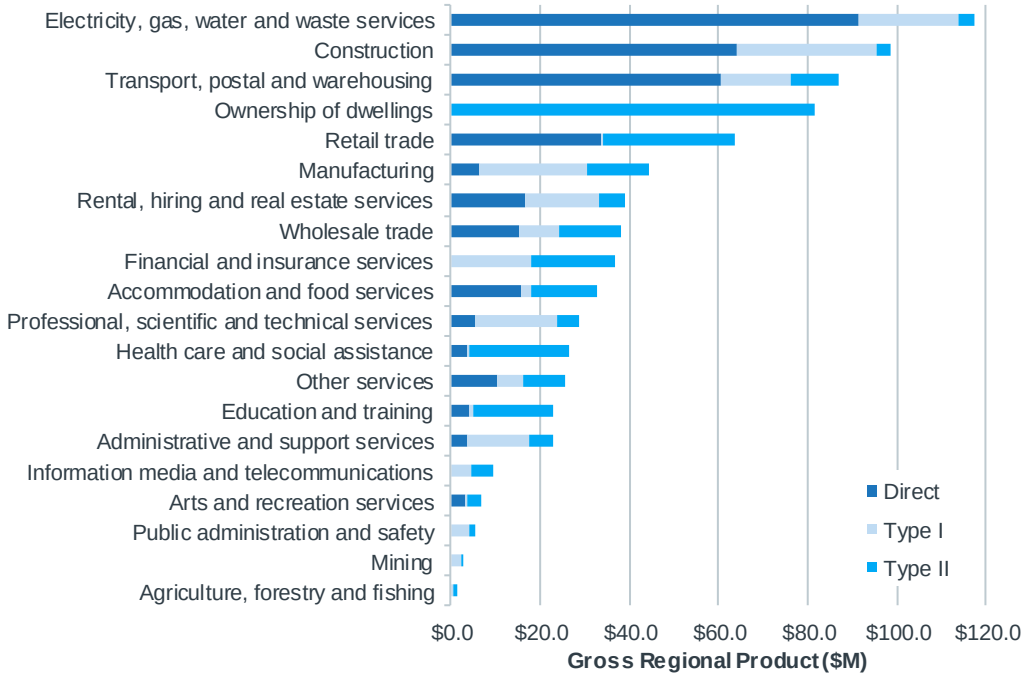
Impact	Output ($M)	Gross Regional Product ($M)	Incomes ($M)	Employment (FTEs)
Direct	$748.5	$333.6	$166.7	2,200
Type I Flow-On	$436.3	$190.5	$102.7	1,321
Type II Flow-On	$454.8	$265.4	$116.7	1,728
Total	**$1,639.6**	**$789.5**	**$386.1**	**5,248**

Source: AEC.

Major industry beneficiaries of the use of the Site under the Base Case include:

- Electricity, gas, water and waste services (GRP of $117.3 million per annum)
- Construction ($98.5 million)
- Transport, postal and warehousing ($86.9 million).

Figure 4.1. Gross Regional Impacts (GRP) by Industry - The Base Case



Source: AEC.

Proposal Case 1

Proposal Case 1 is estimated to support the following annual economic activity through the direct and flow-on impacts associated (per annum), once fully developed and operational:

- $2.5 billion in output (including $1.1 billion in direct activity).
- $1.2 billion contribution to GRP (including $505.4 million in direct activity).
- $584.0 million in incomes and salaries paid to households.
- 8,006 FTE jobs (including 3,405 directly related to activity on the Site).

Table 4.3. Operational Impacts - Proposal Case 1

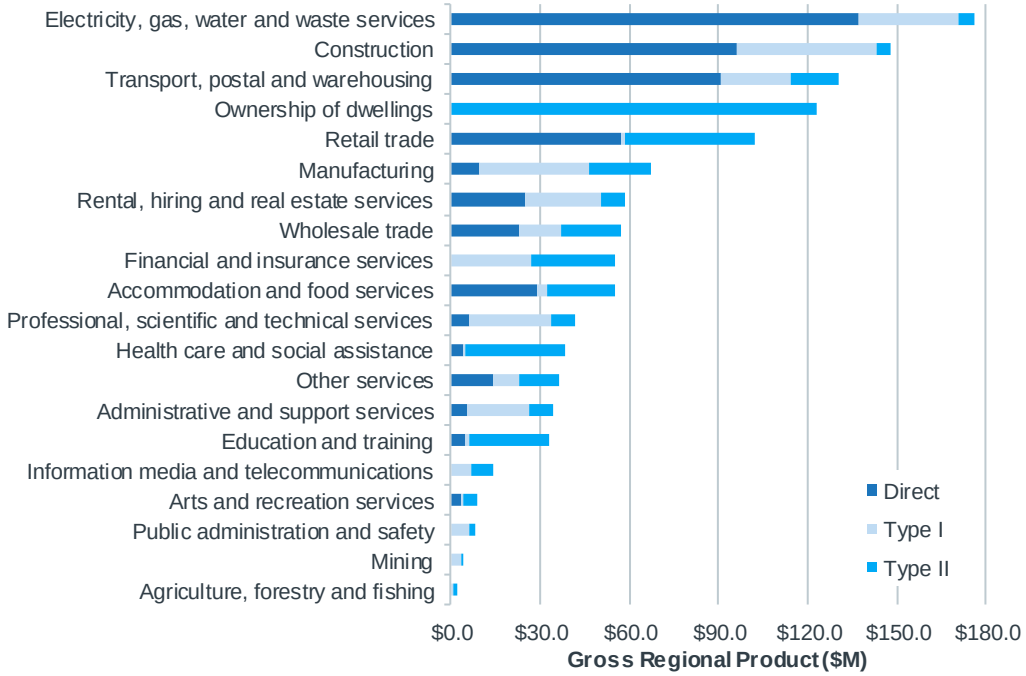
Impact	Output ($M)	Gross Regional Product ($M)	Incomes ($M)	Employment (FTEs)
Direct	$1,133.0	$505.4	$252.9	3,405
Type I Flow-On	$657.8	$287.0	$154.6	1,988
Type II Flow-On	$687.8	$401.4	$176.5	2,613
Total	**$2,478.6**	**$1,193.9**	**$584.0**	**8,006**

Source: AEC.

Significant industry beneficiaries of Proposal Case 1 include:

- Electricity, gas, water and waste services (GRP of $176.1 million per annum)
- Construction ($147.8 million)
- Transport, postal and warehousing ($130.5 million).

Figure 4.2. Gross Regional Product (GRP) Impacts by Industry – Proposal Case 1



Source: AEC.

Proposal Case 2

Proposal Case 2 is estimated to support the following annual economic activity through the direct and flow-on impacts associated (per annum), once fully developed and operational:

- $2.5 billion in output (including $1.1 billion in direct activity).
- $1.2 billion contribution to GRP (including $508.6 million in direct activity).
- $588.7 million in incomes and salaries paid to households.
- 8,047 FTE jobs (including 3,417 directly related to activity on the Site).

Table 4.4. Operational Impacts - Proposal Case 2

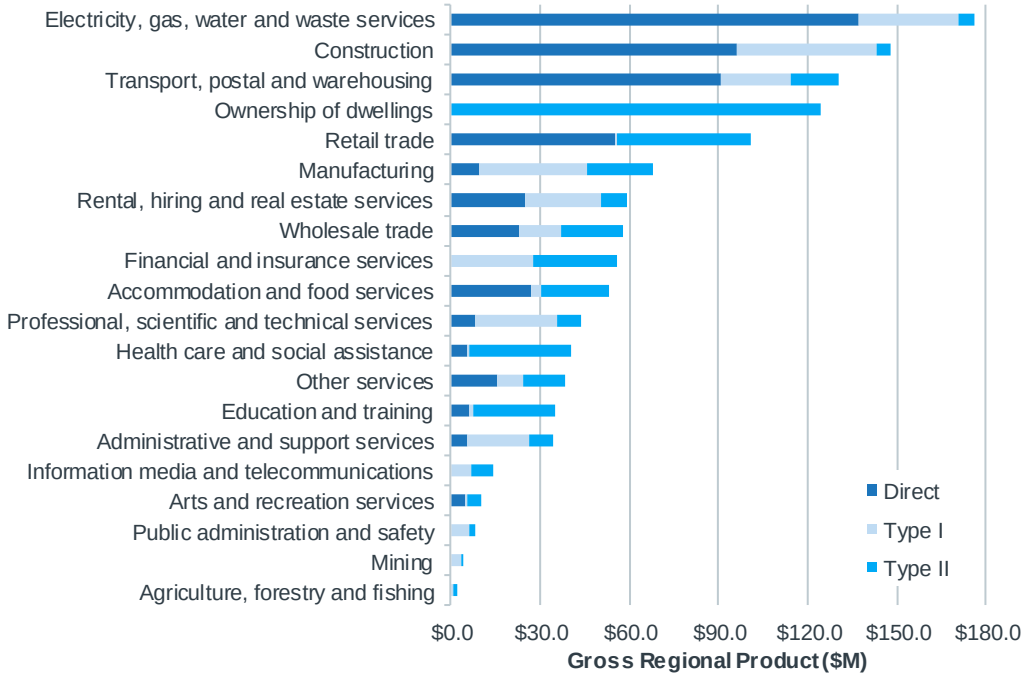
Impact	Output ($M)	Gross Regional Product ($M)	Incomes ($M)	Employment (FTEs)
Direct	$1,137.5	$508.6	$255.5	3,417
Type I Flow-On	$659.5	$288.0	$155.2	1,996
Type II Flow-On	$693.3	$404.7	$178.0	2,634
Total	**$2,490.4**	**$1,201.2**	**$588.7**	**8,047**

Source: AEC.

Significant industry beneficiaries of Proposal Case 2 include:

- Electricity, gas, water and waste services (GRP of $176.1 million per annum)
- Construction ($147.9 million)
- Transport, postal and warehousing ($130.7 million).

Figure 4.3. Gross Regional Product (GRP) Impacts by Industry – Proposal Case 2



Source: AEC

Net Impact on Economic Activity (Proposal Case 1)

The potential increase in ongoing economic activity supported by Proposal Case 1 (compared to the Base Case) is presented in Table 4.5. Proposal Case 1 is anticipated to result in a *net increase* in economic activity compared to what would be expected to be supported in the Base Case.

Table 4.5. Net Annual Change in Economic Activity Supported, Proposal Case 1

Net Impact	Output ($M)	Gross Regional Product ($M)	Incomes ($M)	Employment (FTEs)
Direct	$384.5	$171.8	$86.2	1,205
Type I Flow-On	$221.5	$96.5	$51.9	668
Type II Flow-On	$233.1	$136.0	$59.8	885
Total	**$839.0**	**$404.4**	**$197.9**	**2,758**

Source: AEC.

Net Impact on Economic Activity (Proposal Case 2)

The potential increase in ongoing economic activity supported by Proposal Case 2 (compared to the Base Case) is presented in Table 4.6. Proposal Case 2 is anticipated to result in a *net increase* in economic activity compared to what would be expected to be supported in the Base Case.

Proposal Case 2 results in a *marginally higher* net increase in economic activity compared to Proposal Case 1.

Table 4.6. Net Annual Change in Economic Activity Supported, Proposal Case 2

Net Impact	Output ($M)	Gross Regional Product ($M)	Incomes ($M)	Employment (FTEs)
Direct	$389.1	$175.0	$88.8	1,217
Type I Flow-On	$223.2	$97.5	$52.5	675
Type II Flow-On	$238.6	$139.2	$61.2	906
Total	**$850.9**	**$411.7**	**$202.6**	**2,798**

Source: AEC.

4.3.2 Construction Phase

This section describes the economic activity and impacts during development of the Site. These impacts are temporary and will cease on construction completion.

Base Case

The construction phase associated with the Base Case is expected to support the following economic activity through direct and flow-on impacts (over the course of the construction phase):

- $2.8 billion in output (including $1.1 billion in direct activity).
- $1.1 billion contribution to GRP (including $276.8 million in direct activity).
- $556.3 million in incomes and salaries paid to households.
- 7,985 FTE jobs (including 2,295 directly employed in the construction activity).

Table 4.7. Construction Impacts - The Base Case

Impact	Output ($M)	Gross Regional Product ($M)	Incomes ($M)	Employment (FTEs)
Direct	$1,107.0	$276.8	$135.8	2,295
Type I Flow-On	$945.5	$398.8	$240.6	3,026
Type II Flow-On	$701.3	$409.3	$180.0	2,664
Total	**$2,753.7**	**$1,084.9**	**$556.3**	**7,985**

Source: AEC.

Major industry beneficiaries of the construction phase of the Base Case development include:

- Construction (GRP of $280.4 million).

- Manufacturing ($142.9 million).
- Ownership of dwellings ($125.6 million).

Proposal Cases

The construction phase associated with both Proposal Cases is expected to support the following economic activity through direct and flow-on impacts (over the course of the construction phase):

- $3.8 billion in output (including $1.5 billion in direct activity).
- $1.5 billion contribution to GRP (including $377.9 million in direct activity).
- $761.3 million in incomes and salaries paid to households.
- 10,936 FTE jobs (including 3,142 directly employed in the construction activity).

Table 4.8. Construction Impacts - The Proposal Cases

Impact	Output ($M)	Gross Regional Product ($M)	Incomes ($M)	Employment (FTEs)
Direct	$1,515.4	$377.9	$185.4	3,142
Type I Flow-On	$1,295.2	$546.3	$329.4	4,145
Type II Flow-On	$960.3	$560.5	$246.5	3,648
Total	**$3,770.9**	**$1,484.6**	**$761.3**	**10,936**

Source: AEC.

Major industry beneficiaries of the construction phase of the Proposal Cases' development include:

- Construction (GRP of $382.6 million).
- Manufacturing ($195.5 million).
- Ownership of dwellings ($172.0 million).

Net Impact on Economic Activity

The potential increase in ongoing economic activity supported by both Proposal Cases (compared to the Base Case) is presented in Table 4.9. The Proposal Cases are anticipated to result in a *net increase* in economic activity compared to what would be expected to be supported in the Base Case.

Table 4.9. Net Annual Change in Economic Activity Supported, Campbelltown LGA, Proposal Cases

Net Impact	Output ($M)	Gross Regional Product ($M)	Incomes ($M)	Employment (FTEs)
Direct	$408.4	$101.1	$49.6	847
Type I Flow-On	$349.8	$147.5	$88.9	1,119
Type II Flow-On	$259.0	$151.2	$66.5	984
Total	**$1,017.2**	**$399.8**	**$205.0**	**2,951**

Source: AEC.

4.4 HOUSING IMPACTS

An upshot of the Masterplan is the development of 5,250 dwellings of various housing formats and densities.

4.4.1 Contribution to Housing

The Sydney metropolitan area is experiencing significant demand for housing and growing housing affordability issues, largely as a result of population growth. As a response State government is focused on ensuring that the planning system facilitates increased housing development.

Despite strong development activity in recent years, actual dwellings growth over the recent census period 2011-2016 fell short of dwelling target and projections based on State government guidance. It indicates a significant

and widening shortfall between the number of dwellings required and the number of dwellings approved. There is an imperative to increasing housing supply.

The Greater Sydney Region Plan (GSC, 2018) identifies the need to accelerate housing supply and provide a diversity of housing (Objective 10). It acknowledges the important role that housing diversity plays in driving and enabling housing affordability. Low, medium and high density housing product cater to a range of demographic and lifestyle requirements but also respond to different capacities of households to pay for housing.

Medium density housing product (or 'missing middle') in particular responds not only to affordability drivers but also lifestyle requirements where households are able to benefit from reducing the maintenance commitment that is associated with low density housing and yet have more private open space than with apartment living.

The Proposal would assist by providing greater housing choice by increasing the supply of a variety of housing types in the greenfield release area. New housing delivery is recognised as boosting economic activity, supporting the viability of infrastructure and stimulating business investment opportunities.

The provision of approximately 5,250 dwellings on the Site constitutes a strong positive economic impact.

4.4.2 Household Expenditure

This section outlines the household expenditure that would be associated with the net increase in dwellings associated with the Proposal Case (1,850 additional dwellings, the difference between Base Case and Proposal Case dwellings), and potential economic activity supported.

The household expenditure activity supported should not be combined with the impacts in section 4.3, as some of these impacts are likely to already captured in the assessment (e.g. some expenditure on retail and food and beverage by households is likely to spent at the retail and food and beverage outlets locating on the Site).

This section seeks to understand specific economic activity supported in Campbelltown LGA through household expenditure as its own separate analysis.

The ABS Household Expenditure Survey (ABS, 2017c) is used to identify the proportion of weekly household incomes that is spent across expenditure items. This was then applied to average weekly household incomes in Campbelltown LGA as outlined in the 2016 Census of Population and Housing (ABS, 2017d), annualised and allocated into their respective ANZSIC industries.

The breakdown to ANZSIC industries is developed based on assumptions by AEC regarding the most appropriate ANZSIC industries for each activity and is outlined in the table below. This average weekly household expenditure was then applied to the net additional dwellings in the Proposal Case compared to the Base Case (1,850 additional dwellings).

Table 4.10. Average Weekly Household Expenditure by Industry

Industry	Expenditure Estimate	Proportion Spent in Campbelltown	Campbelltown Estimate
Retail trade	$39.19	75%	$29.39
Ownership of Dwellings	$9.48	100%	$9.48
Food and Beverage Services	$7.92	50%	$3.96
Finance	$8.73	25%	$2.18
Primary and Secondary Education Services (incl Pre-Schools and Special Schools)	$2.59	80%	$2.07
Health Care Services	$2.54	80%	$2.03
Public Administration	$3.68	50%	$1.84
Construction Services	$3.35	50%	$1.68
Insurance and Superannuation Funds	$6.43	25%	$1.61
Rental and Hiring Services (excl. Real Estate)	$1.39	75%	$1.04
Personal Services	$1.38	75%	$1.04
Residential Care and Social Assistance	$1.72	50%	$0.86
Automotive Repair and Maintenance	$1.28	50%	$0.64
Sports and Recreation	$1.09	50%	$0.55

Industry	Expenditure Estimate	Proportion Spent in Campbelltown	Campbelltown Estimate
Road Transport	$0.97	50%	$0.48
Non-residential Property Operators and Real Estate Services	$0.58	75%	$0.43
Professional, Scientific and Technical Services	$0.73	35%	$0.26
Technical, Vocational and Tertiary Education Services (incl undergraduate and postgraduate)	$1.21	20%	$0.24
Heritage, Creative and Performing Arts	$0.48	50%	$0.24
Other Services	$0.33	50%	$0.16
Building Cleaning, Pest Control and Other Support Services	$0.32	50%	$0.16
Gambling	$0.30	50%	$0.15
Motion Picture and Sound Recording	$0.16	75%	$0.12
Other Repair and Maintenance	$0.23	50%	$0.11
Arts, Sports, Adult and Other Education Services (incl community education)	$0.29	25%	$0.07
Rail Transport	$0.12	50%	$0.06
Postal and Courier Pick-Up and Delivery Services	$0.05	50%	$0.02
Auxiliary Insurance Services	$0.06	25%	$0.01
Accommodation	$0.03	10%	$0.00
Electricity Transmission, Distribution, On Selling and Electricity Market Operation	$2.00	0%	$0.00
Gas Supply	$0.6	0%	$0.0
Water Supply, Sewerage and Drainage Services	$0.0	0%	$0.0
Telecommunications Services	$2.5	0%	$0.0
Internet Service Providers, Internet Publishing and Broadcasting, Websearch Portals and Data Processing	$0.4	0%	$0.0
Broadcasting (except Internet)	$0.4	0%	$0.0
Water, Pipeline and Other Transport	$0.0	0%	$0.0
Air and Space Transport	$0.6	0%	$0.0
Total	**$103.12**		**$60.91**

Source: ABS (2017c), AEC.

Economic Activity Supported

Household expenditure associated with the net residential dwellings is estimated to support the following economic activity through direct and flow-on impacts (per annum):

- $120.6 million in output (including $60.9 million in direct activity).
- $70.3 million contribution to Gross Regional Product (GRP, including $37.5 million in direct activity).
- $35.1 million in incomes and salaries paid to households.
- 567 full-time equivalent (FTE) jobs (including 350 direct employees).

Table 4.11. Household Expenditure Impacts - Net Residential Dwellings

Impact	Output ($M)	Gross Regional Product ($M)	Incomes ($M)	Employment (FTEs)
Direct	$60.9	$37.5	$19.7	350
Type I Flow-On	$18.3	$8.7	$4.8	60
Type II Flow-On	$41.4	$24.2	$10.6	157
Total	**$120.6**	**$70.3**	**$35.1**	**567**

Source: AEC.

Major industry beneficiaries of the household expenditure of the net dwellings include:

- Retail trade (GRP of $20.7 million per annum)
- Ownership of dwellings ($14.8 million)
- Financial and insurance services ($5.2 million).

4.5 CONCLUSION

The net economic impacts that result from the Proposal Case (both variations) are compelling.

- An additional 1,850 dwellings of a diversity of format and size, thereby catering to different household and lifecycle needs.
- Additional economic activity generated on the Site supporting:
    - More than $800 million in output (including nearly $400 million in direct activity).
    - More than $400 million contribution to GRP (including nearly $180 million in direct activity).
    - Around $200 million in incomes and salaries paid to households.
    - Circa 2,700 FTE jobs, including1,200 directly related to activity on the Site.
- By virtue of more intensive use of the Site, the economic activity generated during the construction period is accordingly greater than if developed under the Base Case.
- The additional households that the Proposal Case would accommodate would support economic activity not just on the Site but in the broader Campbelltown LGA. Key beneficiaries of this additional activity could include retail centres such as Campbelltown CBD/Macarthur and employment precincts such as Ingleburn. Economic modelling indicates the additional household expenditure would support:
    - $120 million in output ($60 million in direct activity).
    - $70 million in output ($37 million in direct activity).
    - $35 million in incomes and salaries paid to households.
    - 567 FTE jobs (including 350 direct employees).

Local Centre and Neighbourhood Centre

The Preliminary Strategy (DPE, 2015) identified the potential for a centre at Menangle Park of 20,000sqm to 30,000sqm floorspace, along with three other centres in the Menangle Park and Mount Gilead priority precinct.

The Masterplan proposes approximately 33,500sqm of floorspace within the centres, being 30,000sqm at the local centre and 3,500sqm in the neighbourhood centre. This is marginally greater than the upper end of the range envisaged in the Preliminary Strategy and is commensurate with the larger population now envisaged with more intensive residential yields.

By locating the local centre close to Spring Farm Parkway, it ensures the first full-line supermarket and other early retailers are accorded the greatest opportunity to achieve their highest sustainable level and be able to open at the earliest date. Over time, as additional facilities consolidate within the centre they will collectively create the greatest strength of destination and retailing.

Overall, viability and strength of a centre is underpinned by the building of a critical mass of retailers, directly influencing the level of resultant economic activity when operational, consequently leading to greater employment outcomes.

The proposed location and integration of the neighbourhood centre with a future primary school close to Club Menangle provides additional retail choice to future residents in the south portion of Menangle Park. Additionally, the attraction of Club Menangle and associated facilities will leverage this new neighbourhood centre which will contribute to drawing greater visitation to the area by providing visitors the opportunity to linger and patronise the shops therein. These are all positive economic impacts for the local government area.

Diversification of Housing Offer and Support for Centres

The Greater Sydney Region Plan acknowledges the important role that housing diversity plays in driving and enabling housing affordability. Low, medium and high density housing product cater to a range of demographic and lifestyle requirements but also respond to different capacities of households to pay for housing.

Medium density housing product (or 'missing middle') in particular responds not only to affordability drivers but also lifestyle requirements where households are able to benefit from reducing the maintenance commitment that is associated with low density housing and yet have more private open space than with apartment living.

A diversified housing product offer at Menangle Park would result in wider market appeal, addressing need at a broader level than envisaged by the original masterplan. A more diverse future community at Menangle Park has positive impacts on supporting the viability not only of the centres proposed within Menangle Park but also of higher order centres such as Campbelltown CBD and Narellan.

While the new centres at Menangle Park will cater to most of residents' daily convenience needs and some weekly shopping needs, they will be required to travel to centres such as Campbelltown and Narellan for comparison shopping and thereby strengthening the viability of these centres.

An increased population catchment for Campbelltown would result in increased economic activity (output, wages and incomes) and would support creation of a greater number of direct and indirect jobs for the Campbelltown LGA, as demonstrated in this chapter.

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APPENDIX A: INPUT-OUTPUT METHODOLOGY

INPUT-OUTPUT MODEL OVERVIEW

Input-Output analysis demonstrates inter-industry relationships in an economy, depicting how the output of one industry is purchased by other industries, households, the government and external parties (i.e. exports), as well as expenditure on other factors of production such as labour, capital and imports. Input-Output analysis shows the direct and indirect (flow-on) effects of one sector on other sectors and the general economy. As such, Input-Output modelling can be used to demonstrate the economic contribution of a sector on the overall economy and how much the economy relies on this sector or to examine a change in final demand of any one sector and the resultant change in activity of its supporting sectors.

The economic contribution can be traced through the economic system via:

- **Direct impacts**, which are the first round of effects from direct operational expenditure on goods and services.
- **Flow-on impacts**, which comprise the second and subsequent round effects of increased purchases by suppliers in response to increased sales. Flow-on impacts can be disaggregated to:
- **Industry Support Effects (Type I)**, which represent the production induced support activity as a result of additional expenditure by the industry experiencing the stimulus on goods and services in the intermediate usage quadrant, and subsequent round effects of increased purchases by suppliers in response to increased sales.
- **Household Consumption Effects (Type II)**, which represent the consumption induced activity from additional household expenditure on goods and services resulting from additional wages and salaries being paid within the economic system.

These effects can be identified through the examination of four types of impacts:

- **Output:** Refers to the gross value of goods and services transacted, including the costs of goods and services used in the development and provision of the final product. Output typically overstates the economic impacts as it counts all goods and services used in one stage of production as an input to later stages of production, hence counting their contribution more than once.
- **Gross Product:** Refers to the value of refers to the value of output after deducting the cost of goods and services inputs in the production process. Gross product (e.g. Gross Regional Product) defines a true net economic contribution and is subsequently the preferred measure for assessing economic impacts.
- **Income:** Measures the level of wages and salaries paid to employees of the industry under consideration and to other industries benefiting from the project.
- **Employment:** Refers to the part-time and full-time employment positions generated by the economic shock, both directly and indirectly through flow-on activity, and is expressed in terms of full-time equivalent (FTE) positions.

  Input-Output multipliers can be derived from open (Type I) Input-Output models or closed (Type II) models. Open models show the direct effects of spending in a particular industry as well as the indirect or flow-on (industrial support) effects of additional activities undertaken by industries increasing their activity in response to the direct spending.

  Closed models re-circulate the labour income earned as a result of the initial spending through other industry and commodity groups to estimate consumption induced effects (or impacts from increased household consumption).

MODEL DEVELOPMENT

Multipliers used in this assessment are derived from sub-regional transaction tables developed specifically for this project. The process of developing a sub-regional transaction table involves developing regional estimates of gross production and purchasing patterns based on a parent table, in this case, the 2014-15 Australian transaction table (ABS, 2017a).

Estimates of gross production (by industry) in the study area were developed based on the percent contribution to employment (by place of work) of the study area to the Australian economy (ABS, 2012), and applied to Australian gross output identified in the 2014-15 Australian table.

Industry purchasing patterns within the study area were estimated using a process of cross-industry location quotients and demand-supply pool production functions as described in West (1993).

Where appropriate, values were rebased from 2014-15 (as used in the Australian national IO transaction tables) to current values using the Consumer Price Index (ABS, 2017b).

MODELLING ASSUMPTIONS

The key assumptions and limitations of Input-Output analysis include:

- **Lack of supply-side constraints:** The most significant limitation of economic impact analysis using Input-Output multipliers is the implicit assumption that the economy has no supply-side constraints, so the supply of each good is perfectly elastic. That is, it is assumed that extra output can be produced in one area without taking resources away from other activities, thus overstating economic impacts. The actual impact is likely to be dependent on the extent to which the economy is operating at or near capacity.
- **Fixed prices:** Constraints on the availability of inputs, such as skilled labour, require prices to act as a rationing device. In assessments using Input-Output multipliers, where factors of production are assumed to be limitless, this rationing response is assumed not to occur. The system is in equilibrium at given prices, and prices are assumed to be unaffected by policy and any crowding out effects are not captured. This is not the case in an economic system subject to external influences.
- **Fixed ratios for intermediate inputs and production (linear production function):** Economic impact analysis using Input-Output multipliers implicitly assumes that there is a fixed input structure in each industry and fixed ratios for production. That is, the input function is generally assumed linear and homogenous of degree one (which implies constant returns to scale and no substitution between inputs). As such, impact analysis using Input-Output multipliers can be seen to describe average effects, not marginal effects. For example, increased demand for a product is assumed to imply an equal increase in production for that product. In reality, however, it may be more efficient to increase imports or divert some exports to local consumption rather than increasing local production by the full amount. Further, it is assumed each commodity (or group of commodities) is supplied by a single industry or sector of production. This implies there is only one method used to produce each commodity and that each sector has only one primary output.
- **No allowance for economies of scope:** The total effect of carrying on several types of production is the sum of the separate effects. This rules out external economies and diseconomies and is known simply as the “additivity assumption”. This generally does not reflect real world operations.
- **No allowance for purchasers’ marginal responses to change:** Economic impact analysis using multipliers assumes that households consume goods and services in exact proportions to their initial budget shares. For example, the household budget share of some goods might increase as household income increases. This equally applies to industrial consumption of intermediate inputs and factors of production.
- **Absence of budget constraints:** Assessments of economic impacts using multipliers that consider consumption induced effects (type two multipliers) implicitly assume that household and government consumption is not subject to budget constraints.

Despite these limitations, Input-Output techniques provide a solid approach for taking account of the inter-relationships between the various sectors of the economy in the short-term and provide useful insight into the quantum of final demand for goods and services, both directly and indirectly, likely to be generated by a project.

In addition to the general limitations of Input-Output Analysis, there are two other factors that need to be considered when assessing the outputs of sub-regional transaction table developed using this approach, namely:

- It is assumed the sub-region has similar technology and demand/ consumption patterns as the parent (Australia) table (e.g. the ratio of employee compensation to employees for each industry is held constant).

Intra-regional cross-industry purchasing patterns for a given sector vary from the national tables depending on the prominence of the sector in the regional economy compared to its input sectors. Typically, sectors that are more prominent in the region (compared to the national economy) will be assessed as purchasing a higher proportion of imports from input sectors than at the national level, and vice versa.

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