55-59 KIRBY STREET, RYDALMERE
ECONOMIC IMPACT ASSESSMENT

FIFE CAPITAL
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Client:	FIFE Capital
Client Contact:	Michael Wiseman
Project Manager:	Esther Cheong
Email:	esther.cheong@aecgroupltd.com
Telephone:	(02) 9283 8400
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EXECUTIVE SUMMARY

BACKGROUND

FIFE Capital prepared and submitted a planning proposal to amend the planning controls as they relate to 55-59 Kirby Street, Rydalmere (the Site). An amended planning proposal is now prepared in response to Council comments - to facilitate redevelopment into 795 new dwellings (approximately), with ancillary retail/commercial floorspace, child care facilities and recreation floorspace.

The planning proposal seeks the following amendments:

- Land zoning amended from IN1 General Industrial to R4 High Density Residential.
- An increase in the floorspace ratio from 1.0:1 to 1.5:1.

The Site is a relatively small industrial precinct (circa 5ha) and is comprised of 55 Kirby Street and 57-59 Kirby Street. Traditionally, the Site has accommodated pharmaceutical manufacturing and related activities including wholesale trade and distribution type businesses for the pharmaceutical industry.

The buildings accommodate commercial/industrial floorspace; 55 Kirby Street is occupied (by pharmaceutical business Homart Pharmaceuticals) while 57-59 Kirby Street is vacant (following departure of tenant Symbion).

AEC Group (AEC) has been engaged by FIFE Capital to the prepare an EIA to analyse the economic impacts likely to result from the proposed planning controls amendments and subsequent redevelopment of the Site.

STRATEGIC CONTEXT AND THE PROPOSAL

The Site is comprised of the Kirby Street employment precinct (also referred to as 'the Precinct'). The Site is irregular in shape, bounded on three sides (north, south, west) by residential uses with a part eastern border to Silverwater Road. Access to and from the Site is via Victoria Road along Kirby Street traversing residential areas for about 600m. Kirby Street also provides access to the adjoining Upjohn Park in the immediate north.

Employment and Economic Activity

The buildings on the Site are generally purpose-built for pharmaceutical occupiers, with the Precinct generally perceived as a 'pharmaceutical precinct'. Analysis of the Precinct's employment profile indicates that of the key industries represented (i.e. manufacturing, wholesale trade, transport, postal & warehousing, retail trade), between 70% and 95% of those industries are in pharmaceutical and medicinal product activities.

Businesses in Australia's pharmaceutical product manufacturing industry have undergone significant structural change, with many increasingly limiting their involvement to the later stages of the manufacturing process, i.e. packaging, distribution and dispensing. These structural trends have been borne out in real estate decisions by pharmaceutical companies - exit and divestment of sites in VIC (Merck in Kilsyth and Sigma Pharmaceuticals in Croydon) and NSW (Pfizer and GlaxoSmithKline from Melrose Park and Symbion from the Precinct). The result is a changing nature of Australian industry and the industrial parks in which they operate.

Employment in the Precinct is absolutely dominated by a small number of businesses, the majority of which are engaged in the pharmaceutical industry (as high as almost 95%). While large firms can have a significant impact on a local economy through the large number of workers they employ and the significant supply chains that are attracted to their activities, reliance on a small number of firms in one industry represent an inherent vulnerability.

If the industry or one of the firms were to undergo a structure transition or face a significant downturn, it would have devasting impacts for the precinct. This danger is amplified when facilities are customised to these uses and poorly suited for other economic activity.

In contrast, the Rydalmere Employment Area as one of Parramatta's key employment areas is a thriving light and general industrial sub-market that enjoys excellent market acceptance and in recent years has grown in popularity with less traditional industrial-type businesses. Located 2.5km to the southwest and despite bearing the same suburb address of 'Rydalmere', the Rydalmere Employment Area functions distinctly separate from the Precinct. It has direct access off Victoria Road and is well buffered from sensitive uses, including residential.

Large clusters of industrial lands with good access and that are well-buffered from sensitive land uses are generally better able to mitigate against vacancy risk. Rydalmere Employment Area is a good example, where despite fluctuations in overall employment, vacancy risk is able to be mitigated due to its broad industry base and wide appeal to a range of business types and industries.

Desirable characteristics of these industrial precincts underpin overall market appeal which is critical for the securing of replacement occupiers to occupy vacated space. By contrast, fragmented and 'orphaned' industrial precincts/sites (such as the Precinct) can struggle to attract new occupiers if current occupiers vacant. This is due to challenges with truck access and land use conflicts.

The main challenge for the Site/Precinct is to manage its reliance on the pharmaceutical industry (for employment) with global competitive pressures and recent trends of pharmaceutical companies reducing manufacturing capacity in Australia. An additional challenge for the Site to be sustainable is the access through residential areas and lack of buffer from these residential uses that present the risk of land use conflicts.

Planning Context

The Proposal responds to the District Plan's approach which recognises that sectoral and industry trends have direct implications for demand for industrial lands. This nuanced approach reinforces the Parramatta Employment Lands Strategy's (PELS) recommendations for change in the Precinct, recognising the vulnerability of the Precinct to sectoral change in the pharmaceutical sector, particularly as employment and business activity in the Precinct (>90%) is dominated by a single industry.

PELS observed that the Precinct was operating at a relatively inefficient level, heavily reliant on the continued presence of pharmaceutical occupiers Symbion and Homart. PELS additionally noted that due to the Precinct's isolation and lack of direct access/egress points, re-leasing vacant premises on the Site would be difficult.

PELS recommended that land use change was appropriate in the Precinct and that a developer-initiated planning proposal was the appropriate process for pursuing this change. Key actions listed for the Precinct are to:

- Allow for a net reduction of existing employment lands.
- Facilitate renewal of isolated industrial precincts.
- Prepare structure plans for key employment precincts which are undergoing economic change.
- Proposed rezoning must be supported by an economic impact study.

The Proposal envisages a transformation of the Site from an industrial site, consistent with the recommendations of PELS, with concurrent regard to the surrounding residential setting and parklands to the north.

ECONOMIC IMPACTS

To estimate the economic impacts arising from the Proposal, a Base Case and Proposal Case are defined:

- **Base Case**: The Base Case assumes a Do-Nothing scenario, that the Site will continue in its existing use, i.e. as a site zoned IN1 General Industrial.

  Two scenarios are considered, where the first scenario reflects the challenges of re-letting the vacant portion of the Site (in line with market feedback and the observations in the Parramatta Employment Lands Strategy). The second scenario assumes that 55 Kirby Street is re-let and a similar number of workers (as were employed by former tenant Symbion) are accommodated. The scenarios are:

  - **Scenario 1**: Homart Pharmaceuticals continues current operations, accommodating 48 jobs, whilst 55 Kirby Street is not re-let and thereby accommodates no economic activity.
  - **Scenario 2**: Homart Pharmaceuticals continues its business and accommodates 48 jobs. 55 Kirby Street is leased to a mix of businesses, accommodating 60 jobs.
- **Proposal Case:** The Proposal Case assumes the Site is redeveloped into 795 dwellings plus other uses with approximate areas, including retail/commercial floorspace (1,260sqm), childcare facilities (140sqm) and recreational/fitness floorspace (1,000sqm).

The assessment distinguishes 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

Economic activity in the Base Case (both scenarios) is associated with the Site remaining as IN1 industrial lands.

Although industrial-type jobs are generally associated with greater multiplier effects for the economy, the locational characteristics of the Precinct result in limited market appeal and therefore likely to result in a lower intensity of use than if the Site were located in say the Rydalmere Employment Area.

During the operational phase, the Site is expected to generate ongoing economic/ operational activity through:

- Direct turnover generated by the retail/commercial operational activities on-site.
- Economic activity that would not otherwise occur in the Parramatta LGA as a result of employment activity from 'dispersed jobs', i.e. residents who work from home (only in the Proposal Case).
- Economic activity that would not otherwise occur in the Parramatta LGA as a result of direct expenditure of new households, i.e. those households who live in the new dwellings (only in the Proposal Case).

The economic impacts/contribution of the Proposal 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.

Net Economic Activity

During the operational phase, compared to the Base Case (and depending on the scenario), the Proposal is anticipated to result in a range of *net increase* in economic activity.

If compared to Base Case (Scenario 1), the Proposal results in the following annual direct and flow-on impacts:

- $32.2 million *additional* output (including $9.6 million in direct activity).
- $18.8 million *additional* contribution to Gross Regional Product (including $6.2 million in direct activity).
- $11.5 million *additional* incomes and salaries paid to households.
- 161 *additional* FTE jobs (including 85 jobs directly related to activity on the Site).

If compared to Base Case (Scenario 2), the Proposal is estimated to result in a net reduction in output and GRP despite an increase in incomes and FTE jobs. This is because industrial-type jobs have higher multiplier effects.

Table ES.1: Employment Net Economic Impacts in Parramatta LGA, Operational Phase

Impact	Output ($M)	GRP ($M)	Incomes ($M)	Employment (FTEs)
Proposal Case v Base Case (Scenario 1)				
Direct	$9.6	$6.2	$5.3	85
Type I Flow-On	$8.2	$4.2	$2.7	30
Type II Flow-On	$14.4	$8.4	$3.4	46
Total	**$32.2**	**$18.8**	**$11.5**	**161**
Proposal Case v Base Case (Scenario 1)				
Direct	-$11.2	-$2.2	$0.6	25
Type I Flow-On	-$2.3	-$0.5	$0.0	-1
Type II Flow-On	$1.0	$0.6	$0.2	4
Total	-$12.4	-$2.1	$0.8	26

Source: ABS(2017c, 2017d), AEC

Household Expenditure Supported

Increase to household expenditure levels can be expected from the new dwellings (estimated annual $32.65m expenditure in the Parramatta economy) to support economic activity in centres.

Household expenditure in the Proposal Case is estimated to support 186 direct FTE (full-time-equivalent) jobs and 306 total FTE jobs in the Parramatta LGA. Other impacts include incomes and salaries paid to those households and contribution in output to the Parramatta local economy.

Construction Phase

The construction phase in the Proposal Case is expected to support economic activity for the Parramatta LGA businesses and workers through direct and flow-on impacts:

- $696.3 million in output (including $309.2 million in direct activity).
- $264.6 million contribution to GRP (including $67.2 million in direct activity).
- $138.8 million in incomes and salaries paid to households.
- 1,813 FTE jobs (including 615 directly employed in construction activity).

CONCLUSION

Sustainability of Industrial/Employment Lands

Industrial lands require certain features in order to be competitive and sustainable in the long term, including:

- Location directly off major arterial corridors which facilitate unimpeded road access.
- Ability to operate in a conflict-free environment with sufficient buffer from sensitive uses such as residential.
- Critical mass of lands to enable businesses to cluster and to enable provision of supporting worker amenity and services.
- Diversity of occupiers (by industry) to mitigate against vacancy risk following structural changes in a particular industry. For example, in industrial areas dominated by automotive manufacturers, large scale shutdown and departure by car manufacturers can put these areas at serious risk.
- Generic buildings that can easily be re-purposed following relocation of occupiers.

While the Precinct is centrally located, the Precinct is challenged on a number of fronts. Having to traverse residential roads to and from the Precinct is its key failing as an industrial destination. By necessity, businesses who are heavily reliant on frequent truck movements have to either scale back load or frequency of trips, or both. This is ultimately not a sustainable position as it compromises business efficiency and viability.

The Precinct is not competitive due to its relative isolated position, lack of worker amenity and unsuitability of many existing buildings for re-purpose, putting the Precinct at further risk should the remaining tenant Homart Pharmaceuticals also depart. PELS recognised these challenges and recommended for change in the Precinct.

Renewal and Contribution to Housing

The Proposal envisages a transformation of the Site from an industrial site to a residential uses consistent with PELS' recommendations, with concurrent regard to the surrounding residential setting and parklands to the north.

The Proposal will assist in meeting demand for housing that is close to existing residential areas, transport nodes and employment centres. Sustained price growth in recent years is reflective of a market that is inadequately supplied. Population growth in the immediate catchment of the Site averaged 2.1% per annum (2006-2016) and outstripped dwellings growth that averaged 1.6% per annum over the same period. It is unsurprising that occupancy rates (persons per dwelling) has increased, from 2.8 persons in 2006 to nearly 3.0 persons in 2016.

Similar observations can be made in the Parramatta LGA, where population growth exceeded dwellings growth and average household occupancy rates increased, from 2.7 persons (2006) to 2.8 persons (2016).

The Proposal's inclusion of recreational and retail/commercial floorspace within a residential setting responds to the existing residential surrounds and adjacency of the Site to Upjohn Park. Increased opportunity to recreate and leverage the facilities of Upjohn Park contribute to social and liveability outcomes.

TABLE OF CONTENTS

1. INTRODUCTION

1.1 BACKGROUND

FIFE Capital prepared and submitted a planning proposal to amend the planning controls as they relate to 55-59 Kirby Street, Rydalmere (the Site). An amended planning proposal is now prepared in response to Council comments - to facilitate redevelopment into 795 new dwellings (approximately), with ancillary retail/commercial floorspace, child care facilities and recreation floorspace. This is referred to as “the Proposal”.

The Site is a relatively small industrial precinct and measures approximately five hectares. It is comprised of two properties (Lot 21 in DP 855339 and Lot 20 in DP 855339). Traditionally, the Site has accommodated pharmaceutical manufacturing and related activities including wholesale trade and distribution type businesses for the pharmaceutical industry.

The Australian manufacturing sector continues to undergo a period of significant change. Globalisation, high labour and operational costs and fierce import competition has contributed to traditional manufacturing operations relocating offshore, with the Australian pharmaceutical industry not exempt from these structural changes. The result is a changing nature of Australian industry and the industrial parks in which they operate.

The changing trends of the Australian manufacturing sector pose an immediate threat to jobs and business on the Site, which has traditionally been dominated by these key sectors under threat.

The buildings on the Site accommodate commercial/industrial floorspace; one of the properties is occupied (by pharmaceutical business Homart Pharmaceuticals), the other property is vacant (following the departure of pharmaceuticals business Symbion).

The Proposal seeks the following amendments to the planning controls:

- Land zoning amended from IN1 General Industrial to R4 High Density Residential.
- An increase in the floorspace ratio from 1.0:1 to 1.5:1.

AEC Group (AEC) is engaged to by FIFE Capital to prepare an economic impact assessment (EIA) to analyse the likely economic impacts resulting from implementation of the Proposal.

1.2 SCOPE AND APPROACH

AEC has been engaged by FIFE Capital to the prepare an updated EIA to analyse the economic impacts likely to result from the proposed planning controls amendments and subsequent redevelopment of the Site.

To assess the economic impacts of implementing the proposed planning controls on the Site, a Base Case and Proposal Case were developed.

- **Base Case**: The Base Case assumes the Site continues to be occupied in its existing use, representing a Do-Nothing scenario.
- **Proposal Case:** The Site is redeveloped under the Proposal’s amended planning controls to facilitate a residential development (795 new dwellings) with ancillary retail, commercial and recreational floorspace.

The EIA examines the economic impacts if the Site were redeveloped pursuant to the Proposal.

1.3 STRUCTURE OF STUDY

The report has been structured in the following manner:

- **Chapter 1: Introduction**
  This chapter provides an overview of the Study, the scope, purpose and overall structure of the report.

- **Chapter 2: The Site and The Precinct**
  This chapter reviews the Site, its current context within the Parramatta LGA and analyses key planning policies as are relevant. The chapter examines the employment profile of the Site/Precinct and identifies how the Proposal responds to employment trends and strategic planning for the Site/Precinct.
- **Chapter 3: Economic Trends and Drivers**
  This chapter examines economic and market factors that help shape demand for industrial floorspace both generally and in the Precinct. The chapter additionally examines the market context of the Site, gathering market intelligence to investigate the Site's competitive market position.

  The chapter also examines the socio-demographic characteristics of the area immediately surrounding the Site and the broader Parramatta LGA.
- **Chapter 4: Economic Impact Assessment**
  This chapter assesses the economic impacts of development on the Site by investigating two scenarios:
  - Base Case: the economic impacts should the Site remain in its current use.
  - Proposal Case: the economic impacts following implementation of changes to planning controls as envisaged by the Proposal.
- **Chapter 5: Policy Assessment**
  This chapter reviews and translates the findings from Chapters 2 to 4 and applies them in an assessment of the Proposal against policy considerations.

2. THE SITE AND THE PRECINCT

2.1 LOCATION AND OVERVIEW

55-59 Kirby Street, Rydalmere (the Site) is located approximately six and 20 kilometres from the Parramatta and Sydney CBDs, respectively. It is situated to the north of the Parramatta River and is within the Parramatta Local Government Area (LGA). The Site is comprised of the Kirby Street employment precinct (referred to as 'the Precinct'). "The Site" and "the Precinct" are used interchangeably for the remainder of the report.

The Site is irregular in shape, bounded on three sides (north, south, west) by residential uses with a part eastern border to Silverwater Road. Access to and from the Site is via Victoria Road along Kirby Street traversing residential areas for about 600m. Kirby Street also provides access to Upjohn Park in the immediate north.

Figure 2.1: Site Context Map

Source: Nearmap

Public transport options include local bus services from Victoria Road and ferry services at Rydalmere Wharf which operates between Circular Quay and Parramatta. A potential light rail stop and metro station at Rydalmere are currently under investigation by NSW State Government.

The immediate surrounding area of the Site is characterised by a variety of uses, dominated by low-density housing, public recreation areas (Upjohn Park) with local shopping facilities (including a supermarket) available at Ermington approximately one kilometre away (reduced to 400m on foot following development), on the southeastern corner of Silverwater Road and Victoria Road.

The Site adjoins Upjohn Park along its northern boundary, which comprises at-grade parking on-site, amenities, a playground and barbeque and picnic facilities. Patrons of the park have access to the sports fields and exercise equipment, with sporting activities conducted on the Park on weekends.

Site Description and Existing Occupiers

The Site is comprised of two allotments, each improved with commercial/industrial buildings: 55 Kirby Street (vacant, previously occupied by Symbion Clinical Trials) and 57-59 Kirby Street, which is occupied by Homart Pharmaceuticals Pty, a distributor and exporter of health supplements products.

The Site is improved with two buildings (understood to have been purpose-built for pharmaceutical occupiers):

- 55 Kirby Street (3.53ha) is an office/warehouse facility, comprising about 24,500sqm of floorspace. It was previously occupied by Symbion Clinical Trials (employing circa 60 workers), a national wholesaler of healthcare services for retail pharmaceutical companies and hospitals. The premises are now vacant.
- 57-59 Kirby Street (1.53ha) is an office/warehouse facility, comprising approximately 6,700sqm of floorspace. These premises are occupied by Homart Pharmaceuticals. A freestanding heritage-listed Victorian building located on the premises has been converted for office use and adjoins a freestanding storage building.

Due to the purpose-built nature of the buildings and dominance by pharmaceutical occupiers, the Precinct is generally perceived as a 'pharmaceutical precinct'. This perception is further emphasised by its separation from the main Rydalmere Employment Area to the west and its historical occupation by pharmaceutical tenants.

Informal discussions with Homart Pharmaceuticals indicate the business employs just under 50 full-time-equivalent staff. Approximately 48 staff are employed in a variety of functions, understood to be split across: manufacturing of tablets (10), packaging (20), warehousing (8), quality assurance (5) and operations (5).

Former tenant Symbion is understood to have relocated to a site in Greystanes that offers B-double access directly off the orbital road network.

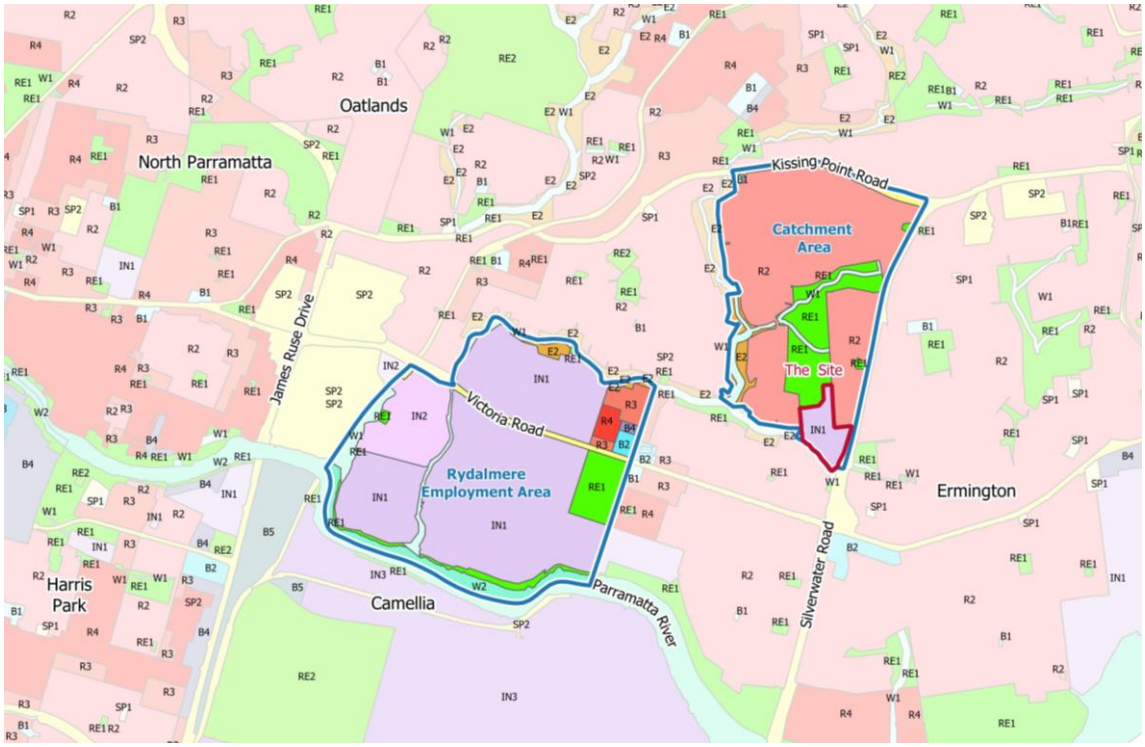
2.2 EMPLOYMENT PROFILE

In order to understand the nature of employment and business activity occurring on the Site, Australian Bureau of Statistics census data is examined using statistical geographical boundaries of Destination Zone (DZ) area. This section considers the employment profile of workers in the immediate area of the Site by analysing types of employment categorised under the Australian and New Zealand Standard Industry Classification (ANZSIC.)

The ANZSIC is a hierarchical classification of industry with four levels, namely Divisions (the broadest level), Subdivisions, Groups and Classes (the finest level). At the Divisional level (referred to as 1-digit ANZSIC), the main purpose is to provide a limited number of categories which provide a broad overall picture of the economy.

The boundaries of the DZ statistical area are depicted in Figure 2.2 ("the Catchment Area"). The Catchment Area is notably larger than the Site, however is the smallest geography at which 2016 employment data is available. For benchmarking purposes, the employment profile of the Catchment Area is compared against the Rydalmere Employment Area (2.5km to the west of the Site) and Parramatta LGA.

Figure 2.2: The Site and Catchment Area



Source: AEC

The Catchment Area employed just under 350 workers in 2016 (ABS, 2017). Table 2.1 provides an overview of the Catchment Area's employment profile including key industries and occupations.

As is shown in Figure 2.2, the Catchment Area covers an area broader than the Site/Precinct, incorporating large swathes of residential zoned land (R2 Low Density Residential), with the exception of the Site which is zoned IN1 General Industrial and Upjohn Park which is zoned RE1 Public Recreation. The St Patrick's Marist College is also within the Catchment Area, to the north of the Site and is within an R2 zone. Accordingly, the 349 workers recorded in the Catchment Area occupy an area broader than the Site.

Table 2.1: Employment Profile Overview, Catchment Area

Indicator	Catchment Area	Rydalmere Employment Area	Parramatta LGA
Total Employment			
2016	349	7,504	143,541
2011	149	7,197	134,646
2006	141	6,842	118,496
Key Industries (2016, % of Total Employment)			
Manufacturing	25.4%	27.6%	8.0%
Construction	16.1%	17.1%	8.4%
Wholesale Trade	11.2%	10.4%	4.4%
Key Occupations (2016, % of Total Employment)			
Machinery Operators and Drivers	21.9%	10.0%	5.1%
Professionals	16.0%	15.1%	26.8%
Clerical and Administrative Workers	15.2%	19.0%	21.6%

Source: ABS (2012, 2017a)

The number of workers in the Catchment Area more than doubled between 2011 and 2016. This is contrary to that which occurred in the Rydalmere Employment Area and broader Parramatta LGA, where employment increased by 4.3% and 6.5% respectively over the 2011 and 2016 period.

As a proportion of total employment in 2016, the key employment industries in the Catchment Area (manufacturing, construction, wholesale trade) are not too dissimilar to that of the Rydalmere Employment Area. The next section considers more specifically the nature of industry change over the 2006-2016 period.

2.2.1 Employment by Industry

The Catchment Area

In 2016, the Catchment Area employed 349 workers, with 25% of these employed in manufacturing, 16% in construction and 11% in wholesale trade. Table 2.2 illustrates the employment profile of the Catchment Area from 2006 to 2016.

Table 2.2: Employment by Industry, Catchment Area (1-digic ANZSIC)

Industry	2006		2011		2016		Change (06-16)	
	No.	%	No.	%	No.	%	No.	%
Agriculture, Forestry and Fishing	1	0.4%	0	0.2%	0	0.1%	0	-64%
Mining	0	0.0%	0	0.0%	0	0.0%	0	-
Manufacturing	41	29.3%	38	25.8%	89	25.4%	47	115%
Electricity, Gas, Water and Waste Services	0	0.3%	0	0.3%	0	0.0%	0	-100%
Construction	21	14.6%	19	12.9%	56	16.1%	36	173%
Wholesale Trade	34	24.4%	36	23.9%	39	11.2%	5	13%
Retail Trade	0	0.0%	0	0.0%	33	9.6%	33	3300%
Accommodation and Food Services	0	0.0%	0	0.0%	0	0.0%	0	-
Transport, Postal and Warehousing	8	5.4%	10	6.5%	33	9.5%	26	337%
Information Media and Telecommunications	0	0.2%	0	0.2%	5	1.4%	4	-
Financial and Insurance Services	0	0.0%	0	0.0%	0	0.0%	0	-
Rental, Hiring and Real Estate Services	0	0.0%	0	0.0%	4	1.2%	4	-
Professional, Scientific and Technical Services	3	2.3%	3	2.3%	8	2.2%	4	127%
Administrative and Support Services	6	4.6%	7	4.9%	29	8.2%	22	343%
Public Administration and Safety	3	2.3%	4	2.5%	0	0.0%	-3	-100%

Industry	2006		2011		2016		Change (06-16)	
	No.	%	No.	%	No.	%	No.	%
Education and Training	17	11.8%	19	12.7%	17	4.8%	0	0%
Health Care and Social Assistance	4	2.5%	6	3.9%	24	6.9%	21	575%
Arts and Recreation Services	3	1.9%	6	3.8%	5	1.5%	3	98%
Other Services	0	0.1%	0	0.1%	7	2.1%	7	-
Total	**141**	**100%**	**149**	**100%**	**349**	**100%**	**208**	**147%**

Source: ABS (2012, 2017a)

Disaggregation of key industries in the Catchment Area (2016) to 2-digit ANZSIC categories affirms it is highly reliant on the pharmaceutical industry:

- Of the 89 jobs in manufacturing, 83 jobs are in pharmaceutical and medicinal product manufacturing (93%).
- Of the 39 jobs in wholesale trade, 36 jobs are in pharmaceutical and toiletry goods wholesaling (73%).
- Of the 33 jobs in retail trade, 30 jobs are in pharmaceutical and other store-based retailing (91%).

The above statistics are representative of pharmaceutical and medicinal product manufacturing that occurs in the Precinct, and the associated wholesale trade, retail trade and warehousing activity that occurs in conjunction with these businesses.

It is conceivable that all full occupancy, the Site accommodated 110-150 workers. Following the departure of former tenant Symbion, less than 50 workers remain on the Site (within Homart Pharmaceuticals building).

Rydalmere Employment Area

The Rydalmere Employment Area (REA) is one of Parramatta's key employment areas. Located 2.5km to the southwest and despite bearing the same suburb address of 'Rydalmere', REA functions distinctly separate from the Precinct. It has direct access off Victoria Road and is well buffered from sensitive uses, including residential.

Rydalmere is a thriving light and general industrial sub-market that enjoys excellent market acceptance and in recent years has grown in popularity with less traditional industrial-type businesses. The REA comprises around 105 hectares of land and forms most of the southern fringe of the suburb Rydalmere.

The Rydalmere train station offers public transport access in addition to bus services that link REA to Silverwater and Parramatta. While B-double access is not available, the REA nevertheless appeals to a diverse range of business types and industry that includes high-technology and those that are more traditional in nature (warehousing, construction, etc.).

Table 2.3 illustrates the employment profile of the REA (2006-2016) while Table 2.4 shows the disaggregation of manufacturing jobs into industry sub-sectors.

Table 2.3: Employment by Industry, Rydalmere Employment Area (1-digit ANZSIC)

Industry	2006		2011		2016		Change (06-16)	
	No.	%	No.	%	No.	%	No.	%
Agriculture, Forestry and Fishing	1	0.0%	0	0.0%	0	0.0%	-1	-78%
Mining	0	0.0%	6	0.1%	6	0.1%	6	-
Manufacturing	2,071	30.3%	2,207	30.7%	2,071	27.6%	-1	0%
Electricity, Gas, Water and Waste Services	6	0.1%	10	0.1%	50	0.7%	44	728%
Construction	1,098	16.1%	1,271	17.7%	1,282	17.1%	184	17%
Wholesale Trade	1,402	20.5%	1,315	18.3%	780	10.4%	-622	-44%
Retail Trade	409	6.0%	380	5.3%	534	7.1%	124	30%
Accommodation and Food Services	36	0.5%	38	0.5%	167	2.2%	132	371%
Transport, Postal and Warehousing	318	4.6%	345	4.8%	480	6.4%	162	51%
Information Media and Telecommunications	67	1.0%	50	0.7%	64	0.9%	-4	-5%
Financial and Insurance Services	80	1.2%	43	0.6%	37	0.5%	-42	-53%

Industry	2006		2011		2016		Change (06-16)	
	No.	%	No.	%	No.	%	No.	%
Rental, Hiring and Real Estate Services	102	1.5%	90	1.3%	89	1.2%	-13	-13%
Professional, Scientific and Technical Services	162	2.4%	191	2.7%	324	4.3%	162	100%
Administrative and Support Services	51	0.7%	57	0.8%	300	4.0%	249	491%
Public Administration and Safety	434	6.3%	505	7.0%	706	9.4%	272	63%
Education and Training	55	0.8%	76	1.1%	94	1.3%	39	72%
Health Care and Social Assistance	209	3.0%	258	3.6%	152	2.0%	-57	-27%
Arts and Recreation Services	7	0.1%	10	0.1%	14	0.2%	7	109%
Other Services	335	4.9%	345	4.8%	354	4.7%	19	6%
Total	**6,842**	**100%**	**7,197**	**100%**	**7,504**	**100%**	**662**	**9.7%**

Source: ABS (2012, 2017a)

In 2016, REA employed 7,504 workers, with:

- 28% of these employed in manufacturing;
- 17% in construction; and
- 10% in wholesale trade.

While the above proportional shares of employment are comparable to the Precinct, disaggregation of these industries indicates a more diverse sectoral base in REA, employment is not dominated by any major industry. Table 2.4 illustrates the Manufacturing industry of the REA, disaggregated into 2-digit ANZSIC industries.

Table 2.4: Employment by Industry, Rydalmere Employment Area (Manufacturing, 2-digit ANZSIC)

Sub-Industry	2006		2011		2016	
	No.	%	No.	%	No.	%
Food Product Manufacturing	131	6.3%	168	7.6%	113	5.5%
Beverage and Tobacco Product Manufacturing	34	1.7%	60	2.7%	47	2.3%
Textile, Leather, Clothing and Footwear Manufacturing	133	6.4%	284	12.9%	286	13.8%
Wood Product Manufacturing	7	0.4%	9	0.4%	9	0.5%
Pulp, Paper and Converted Paper Product Manufacturing	35	1.7%	23	1.0%	0	0.0%
Printing (and Reproduction of Recorded Media)	112	5.4%	106	4.8%	101	4.9%
Petroleum and Coal Product Manufacturing	0	0.0%	0	0.0%	0	0.0%
Basic Chemical and Chemical Product Manufacturing	22	1.1%	26	1.2%	100	4.8%
Polymer Product and Rubber Product Manufacturing	63	3.0%	48	2.2%	34	1.6%
Non-metallic Mineral Product Manufacturing	30	1.4%	9	0.4%	0	0.0%
Primary Metal and Metal Product Manufacturing	65	3.1%	65	2.9%	15	0.7%
Fabricated Metal Product Manufacturing	152	7.3%	91	4.1%	37	1.8%
Transport Equipment Manufacturing	107	5.2%	267	12.1%	504	24.3%
Machinery and Equipment Manufacturing	1,131	54.6%	1,012	45.9%	806	38.9%
Furniture and Other Manufacturing	49	2.4%	39	1.8%	19	0.9%
Total	**2,071**	**100.0%**	**2,207**	**100.0%**	**2,071**	**100.0%**

Source: ABS (2012, 2017a)

'Manufacturing' employed 28% of workers in REA in 2016, slightly reduced from 30% in 2006. Disaggregation of the industry observes:

- In 2006, machinery and equipment manufacturing employed more than 50% of workers in manufacturing. In 2016, machinery and equipment manufacturing employed 39% of workers in manufacturing.
- In 2006, transport equipment manufacturing employed a little over 5% of workers in manufacturing. In 2016, transport equipment manufacturing employed more than 24% of workers in manufacturing.

- Many other manufacturing sub-sectors are represented in REA, with many of these sub-sectors observed to have fluctuated in numbers (expanded and contracted) over the 10-year period to 2016.

An obvious advantage/strength the REA has over the Precinct is its diversity of industry and business activity. In contrast, the Precinct is absolutely dominated by a small number of businesses, the majority of which are engaged in the pharmaceutical industry (>90%).

While large firms can have a significant impact on a local economy through the large number of workers they employ and the significant supply chains that are attached to their activities, there is a danger associated with reliance on only a small number of firms in one industry.

If the industry or one of the firms were to undergo a structural transition or face a significant downturn, it would have devastating impacts for the precinct. This danger is amplified when the facilities are customised to these uses and ill-suited for other economic activity.

2.2.2 Employment by Occupation

Table 2.5 shows the employment by occupation distribution of employees working in the Catchment Area. While blue collar workers (e.g. machinery operators and drivers, labourers) accounted for more than a third of occupations in 2016, there is observed to be a growing importance of white collar type occupations.

Owing to the relatively low levels of employment activity in the Study Area, small nominal changes will likely have an impact on the overall occupation composition.

Table 2.5: Employment by Occupation, Catchment Area

Industry	2006		2011		2016		Change (06-16)	
	No.	%	No.	%	No.	%	No.	%
Study Area								
Managers	16	11.0%	17	11.6%	45	12.9%	30	190%
Professionals	21	14.6%	24	16.5%	56	16.0%	35	172%
Technicians and Trades Workers	12	8.2%	12	7.9%	33	9.6%	22	189%
Community and Personal Service Workers	4	2.8%	5	3.0%	19	5.3%	15	366%
Clerical and Administrative Workers	35	24.5%	39	26.2%	53	15.2%	18	53%
Sales Workers	5	3.4%	5	3.0%	21	5.9%	16	327%
Machinery Operators and Drivers	32	22.9%	31	20.7%	77	21.9%	44	137%
Labourers	18	12.6%	16	11.0%	46	13.2%	28	160%
Total	**141**	**100%**	**149**	**100%**	**349**	**100%**	**208**	**148%**

Source: ABS (2012, 2017a)

2.3 PLANNING CONTEXT

This section considers state and local planning policies of relevance to the Site/Precinct.

2.3.1 Greater Sydney Region Plan (2018)

The Greater Sydney Region Plan (the Region Plan) sets out a vision, objectives, strategies and actions for a metropolis of three cities across Greater Sydney.

A framework for the liveability, productivity and sustainability of the metropolis of three cities is detailed in the Region Plan. 10 Directions, each comprised of a series of objectives are articulated to deliver and monitor the Region Plan.

The objectives of direct relevance to the Proposal are:

- Objective 10: Greater housing supply.
- Objective 14: Integrated land use and transport creates walkable and 30-minute cities.
- Objective 15: The Eastern, GPOP and Western Economic Corridors are better connected and more competitive.
- Objective 23: Industrial and urban services land is planned, retained and managed.

Table 2.6: Greater Sydney Region Plan, Relevant Objectives

Objective	Summary
Objective 10	Greater Sydney's growing population will need to be supported with a greater number and more diverse range of housing options. Crucial factors when considering increased housing capacity include an acute awareness of locational attributes of existing infrastructure and its capacity to foster a well-connected city. Development of housing targets will help inform preparation of councils' housing strategies. The 0-5 year targets are reflective of the existing development pipeline and provide a focus for infrastructure delivery. Beyond that, councils are to identify areas suitable for housing supply beyond 5 years and attributes of suitable areas for housing supply beyond 10 years.
Objective 14	Integrated land use and transport planning will maximise the benefits of productivity, efficiency and competitiveness in Greater Sydney's economy. Transport initiatives and a clear understanding of the long-term spatial pattern of land-use activities will support the delivery of 30-minute cities by alleviating congestion, and promoting walkable, pedestrian-orientated precincts.
Objective 15*	Greater Parramatta and the Olympic Peninsula (GPOP) is an identified Collaboration Area, comprised of four 'quarters'. Rydalmere is located within Quarter 3, and will accommodate essential urban services, advanced technology and knowledge sectors, alongside other industrial/urban services hubs of Camellia, Silverwater and Auburn. The Region Plan will strive to retain urban services in and around these hubs and also assess the potential for a 21st century clean-tech cluster in these areas.
Objective 23	Industrial and urban services land refers to employment lands identified in the Employment Lands Development Monitor (DPE) and includes industrial zoned land and some business zoned land which permits a number of industrial uses. This land can include a range of activities from major freight and logistics and heavy manufacturing to light industry, urban services, integrated enterprises with a mix of administration, production, warehousing, research and development and new economy or creative uses. The Region Plan states that management of industrial and urban services lands should evolve in response to changing business practices and needs and manage uses to allow sites to transition to higher-order employment activities to maximise business productivity, efficiency and competitiveness. Factors considered in review of changing business practices and needs take into account the evolution in industries which impact the changing demand for land, the changing nature of industries, and current levels of industrial and urban services land supply.

Source: GSC (2018a)

*While in the suburb of Rydalmere, the Site is located *outside* the GPOP Collaboration Area.

2.3.2 Central City District Plan (2018)

The Central City District Plan (the District Plan) is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney.

The District Plan assists councils to plan for and deliver growth and change and align their local planning strategies to place-based outcomes, through a set of planning priorities and actions. The planning priorities and actions align with the Directions and corresponding Objectives of the Region Plan.

Those relevant to the Proposal include the following Planning Priorities:

- Planning Priority C5: Providing housing supply, choice and affordability, with access to jobs, services and public transport
- Planning Priority C8: Delivering a more connected and competitive GPOP Economic Corridor
- Planning Priority C9: Delivering integrated land use and transport planning and a 30-minute city
- Planning Priority C11: Maximising opportunities to attract advanced manufacturing and innovation in industrial and urban services land

Table 2.7: Central City District Plan, Relevant Planning Priorities

Objective	Summary
Priority C5	This priority relates to Objective 10 of the Region Plan. Specifically, the District Plan sets out five-yearly targets for the Central City District. The 2016-2021 housing target for Parramatta LGA is 21,650 dwellings.
Priority C8	This priority gives effect to Objective 15 of the Region Plan. Strategic decisions about major infrastructure and the future of government-owned land are critical to shaping the future of the GPOP Economic Corridor. The District Plan identifies potential opportunities and synergies to foster the growth of GPOP. The priority notes the retention of urban services lands in Camellia, Silverwater and Rydalmere*.
Priority C9	Planning Priority C9 affirms and builds on Objective 14 of the Region Plan. • Access to local jobs and services will reduce the need for travelling long distances to access necessary jobs and services, improving efficiency and social equity. • City-shaping transport, such as the Sydney Metro and Parramatta Light Rail provide better connections to centres and services, enabling efficient access to workplaces, services and community facilities. • The safeguarding of and planning for lands surrounding future rail corridors is vital in minimising land use conflicts in the future and optimising opportunities for transit-oriented developments.
Priority C11	This priority gives effect to Objective 23 of the Region Plan. • Industrial and urban services lands accommodate activities including freight and logistics, advanced manufacturing, motor vehicle services, waste management, courier services and waste management. Demand for these services, and land will increase commensurate with population growth. • Careful planning is essential in ensuring there is sufficient capacity to accommodate the range of industrial and urban services activities, fundamental to the functioning of the city given the growing pressure to convert industrial/urban services land to residential/retail uses. • The changing nature of industries and sectoral transformations, however, has an impact on the demand for industrial and urban services land. In some cases, conversion to other uses may be appropriate.

Source: GSC (2018b)

*While in the suburb of Rydalmere, the Site is located *outside* the GPOP Collaboration Area.

The Plans note that sectoral and industry trends have a direct impact on demand for industrial lands and **conversion to other uses may be appropriate**. The Proposal's conversion of industrial lands to residential lands will need to take into careful consideration the effects on the existing business and proximate employment lands to mitigate negative impacts from its proposed conversion to residential uses.

2.3.3 Parramatta Local Environmental Plan (2011)

The Site is zoned IN1 General Industrial under the Parramatta Local Environment Plan (2011) (LEP) with a designated FSR of 1:1. Under the LEP, the objectives of the zone are to:

- Provide a wide range of industrial and warehouse land uses.
- Encourage employment opportunities.
- Minimise any adverse effect of industry on other land uses.
- Support and protect industrial land for industrial uses.
- Facilitate a range of non-industrial land uses that serve the needs of workers and visitors.

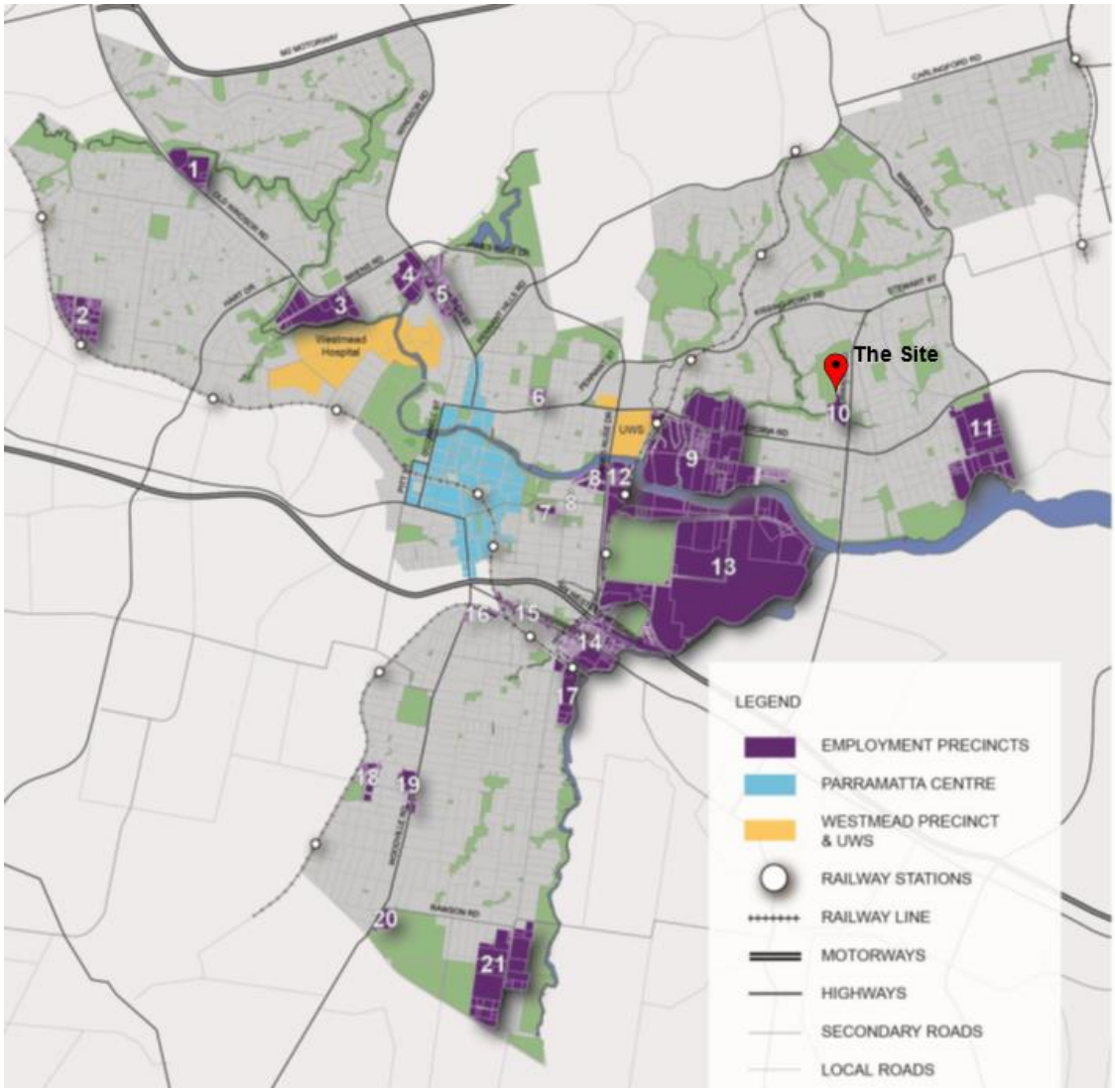
Land uses permitted with consent are: building identification signs; business identification signs; depots; food and drink premises; freight transport facilities; garden centres; general industries; hardware and building supplies; horticulture; industrial training facilities; kiosks; landscaping material supplies; light industries; liquid fuel depots; neighbourhood shops; places of public worship; plant nurseries; roads; rural supplies; timber yards; vehicle sales or hire premises; warehouse or distribution centres.

2.3.4 Parramatta Employment Lands Strategy (2011)

In July 2016, Parramatta City Council (Council) adopted the Parramatta Employment Lands Strategy (2011) (PELS) to ensure a consolidated set of land use planning actions and recommendations guide the future of 'employment lands precincts' in the Parramatta LGA. PELS defined "employment lands" as lands zoned IN1 General Industrial, IN2 Light Industrial, IN3 Heavy Industrial, B5 Business Development and B6 Enterprise Corridor.

PELS identified 21 employment lands precincts within the Parramatta LGA (five are now within Cumberland LGA), illustrated in Figure 2.3.

Figure 2.3: Employment Lands Precincts, former Parramatta LGA



Source: City of Parramatta Council (2013)

The Site's is located in Precinct 10. PELS observed that the Site/Precinct was operating at a relatively inefficient level, heavily reliant on the continued presence of pharmaceutical occupiers Symbion and Homart. PELS additionally noted that due to the Precinct's isolation and lack of direct access/egress points, re-leasing vacant premises on the Site would be difficult.

PELS recommended that land use change was appropriate for the Precinct, advising that a developer-initiated planning proposal was the appropriate process for pursuing residential development on the Site. It further noted that a planning proposal should ensure future land use and built form outcomes are appropriate, taking into consideration the following issues:

- The loss of employment lands.
- Potential site contamination.
- Heritage, traffic impact, natural environment (including Subiaco creek and riparian corridor).
- Residential density in context of surrounding low density residential.
- Infrastructure and services to support residential development.

PELS listed key actions listed for the Precinct as to:

- Allow for a net reduction of existing employment lands.
- Facilitate renewal of isolated industrial precincts.
- Prepare structure plans for key employment precincts which are undergoing economic change.
- Proposed rezoning must be supported by an economic impact study.

The next section describes the Proposal and how it responds to relevant planning policy recommendations.

2.4 THE PROPOSAL

Large clusters of industrial lands with good access and that are well-buffered from sensitive land uses are generally better able to mitigate against vacancy risk. Rydalmere Employment Area is a good example, where despite fluctuations in overall employment, vacancy risk is able to be mitigated due to its broad industry base and wide appeal to a range of business types and industries.

Desirable characteristics of these industrial precincts underpin overall market appeal which is critical for the securing of replacement occupiers to occupy vacated space. By contrast, fragmented and 'orphaned' industrial precincts/sites can struggle to attract new occupiers if current occupiers vacant. This is due to challenges with truck access and land use conflicts.

The Site is generally accessible via major arterial roads including Victoria Road, Silverwater Road, James Ruse Drive and Kissing Point Road. Despite its proximity to major roads, access is hindered by a lack of direct entry/exit points to the Site, vehicular traffic traversing residential streets between the Site and Victoria Road.

The main challenge for the Site/Precinct is to manage its reliance on the pharmaceutical industry (for employment) with global competitive pressures and recent trends of pharmaceutical companies reducing manufacturing capacity in Australia. An additional challenge for the Site is the access through residential areas that present the risk of land use conflicts.

The Proposal responds to the District Plan's approach which recognises that sectoral and industry trends have direct implications for demand for industrial lands. This nuanced approach reinforces PELS recommendations for change in the Precinct, recognising the vulnerability of the Precinct to sectoral change in the pharmaceutical sector, particularly as employment and business activity in the Precinct (>90%) is dominated by a single industry.

A large proportion of the Site is vacant, following the departure of Symbion. Given the isolation of the Precinct and lack of direct vehicular access that is buffered from sensitive uses, it is conceivable that the vacant buildings will struggle to be re-leased and for the Site to be sustainable in the long term.

The Proposal envisages a transformation of the Site from an industrial site to a residential development consistent with the recommendations of PELS, with concurrent regard to the surrounding residential setting and parklands to the north. The Proposal contemplates a diverse mix of uses, including:

- Retail and commercial floorspace (1,260sqm).
- Childcare facilities (140sqm).

- Recreational/Fitness Area (1,000sqm).
- 795 apartments (comprised of a mix of one-bedroom, two-bedroom and three-bedroom units).

The Site's redevelopment will require a change in existing planning controls, as outlined in Table 2.8.

Table 2.8: Existing and Proposed Planning Controls

Planning Control	Existing	Proposed
Land Zone	IN1 General Industrial	R4 High-Density Residential
Floorspace Ratio (n:1)	1.0:1	1.5:1

Source: AEC

The Proposal's inclusion of recreational and retail/commercial floorspace within a residential setting responds to the existing residential surrounds and adjacency of the Site to Upjohn Park. Increased opportunity to recreate and leverage the facilities of Upjohn Park contribute to social and liveability outcomes.

The mix of uses envisaged by the Proposal will enable 'destination' and complementary resident facilities (i.e. those uses that do not require high visibility or exposure) to establish on-site, for example, child care facilities, health and education related practitioners and recreational and fitness businesses wishing to leverage the Site's adjacency to Upjohn Park and the existing recreational infrastructure therein.

The Proposal's new dwellings and mix of supporting uses is considered appropriate for the locational context of the nearby dwellings and adjacent Upjohn Park. Importantly, the Proposal would respond to economic and market trends that impact on the use of industrial/employment lands that are isolated and 'orphaned' like the Precinct.

These trends are examined next.

3. ECONOMIC TRENDS AND DRIVERS

3.1 MACRO-ECONOMIC TRENDS

A broad spectrum of factors influences industrial activity in the Precinct and other areas in Sydney's middle ring. Some of these are internal factors centric to the local area while many are not. Significant influences on industrial activity are driven at the global and national level. Understanding the broader context in which the Precinct's industrial sector operates is essential in understanding future demand for employment in the Precinct.

Traditional Industrial Activity

The following global factors have had significant implications for industrial and business activity in Australia:

- **Globalisation and Globalised Competition**
  Increased global interconnectedness has facilitated the integration of markets and supply chains on a global level. As Australian businesses benefit from branching out into new markets, the vulnerability of local business to global economic trends and international competition has also increased.

  Local businesses involved in manufacturing and processing of goods face fierce competition on the global market. Cheap imports (produced with significantly lower wage costs and often very large economies of scale) have been further supported by low tariffs and the recent high value of the Australian dollar.

  Examples of industry vulnerabilities have been witnessed at the local level in the Parramatta LGA, wherein machinery equipment manufacturing, chemical product and polymer product manufacturing were key industries that declined in number over the 2006-2016 period. More high profile and large impacts (whilst not of direct relevance to Parramatta of the Precinct) can be observed from the exit of Toyota, GM Holden and Ford from local automotive manufacturing.

  The trends and impacts from global competition are not isolated to the pharmaceutical and medicinal product sector and affects most sectors of the economy.

- **High Australian Dollar**
  The value of the Australian dollar is a major determinant of purchasing power for businesses, particularly in the industrial sector where many businesses rely on international supply chains. Higher exchange rates increase businesses' purchasing power (in terms of imports), while reducing the competitiveness of their exports on the international market. Profit margins related to industrial activity remain squeezed and import substitution continues to account for a greater proportion of local demand. Indeed, imports across most product categories have continued to rise in Australia over the last decade.

  The high Australian dollar and exposure to globalised competition in Asia has forced an increasing number of trade-exposed business in the industrial sector move production offshore. The decline in Australia's traditional manufacturing sector, has had significant flow-on impacts for related sectors including wholesale/retail trade and transportation sectors. However, as imports increase and the proliferation of e-commerce grows, growth in the transport and logistics sector is countering other decline.

- **Productivity**
  Rising input costs such as capital, utilities and labour are reducing profit margins, significant impacting upon the competitiveness of Australian business. In response, many businesses are actively seeking productivity gains, most notably those associated with technological growth, capital investment, improved workforce skills and effective industrial relations.

  Productivity is inherently associated with globalisation and exchange rates as businesses capture productivity gains by utilising global supply chains. It accordingly plays a key role in determining profit margins and the ability of businesses to engage in industrial activity in Australia.

  While some businesses have found productivity gains by offshoring production, others will gain from the competitive advantage Australia has to offer through higher workforce skills, state of the art technology, strong corporate governance and financial sector. Businesses that succeed in this environment have often embraced technology and knowledge in order to gain a competitive advantage.

3.2 INDUSTRIAL SECTOR OVERVIEW

Australian industry is undergoing the most significant transition since its birth over 100 years ago. Embracing this transition at a local level requires firstly the need to identify national trends which will likely shape the demand for specific types of industrial land.

Preparing for and anticipating national influences is an important part of economic development and land use planning. Eluded to in the previous section, businesses which undertake industrial activity in Australia do so by pursuing productivity and leveraging competitive advantages. These are often high value-added operations, which utilise advanced technology and draw from Australia's relatively large pool of skilled labour. Such industrial activity is expected to drive demand for land in industrial precincts that are well located and offer a functional operating environment.

The following trends are likely to influence sustainable outcomes for industrial lands in the Precinct in terms of investment and jobs.

Transition of Australian Manufacturing

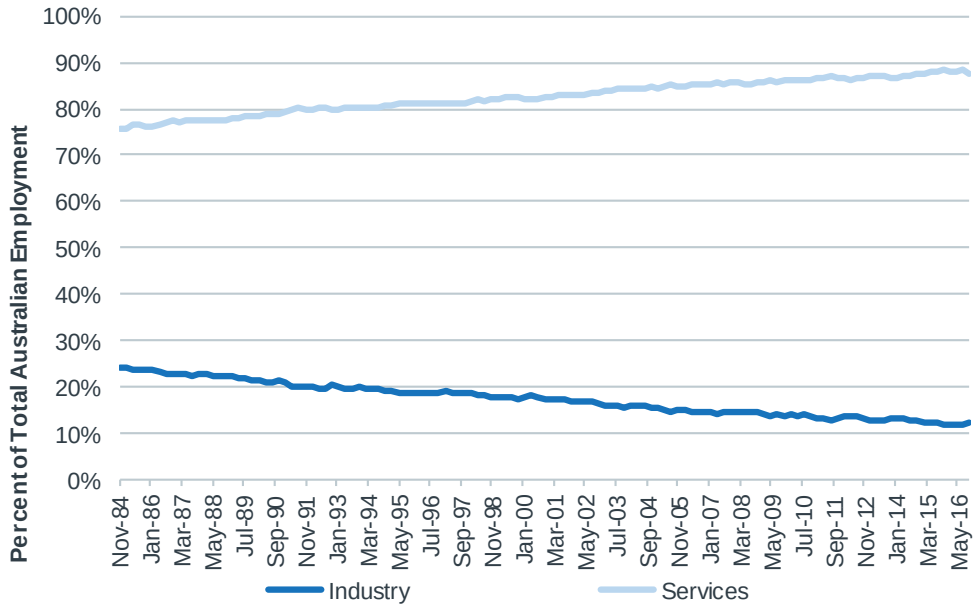
There has been much public commentary on the transition of traditional manufacturing in Australia to survive on the global market. Manufacturers are redefining their operations and the scope of their activities by adopting technologies which offer new and exciting innovation. As this battle for survival occurs, innovative thinking brings about new ways of adding value to products and incorporating new technologies into the production process.

Investment into Research and Development (R+D) allows the manufacturing industry access to higher levels of technology, which provides a solid base for the manufacturing sector to transition towards more advanced technologies.

The transition to advanced manufacturing is not always possible. In some sectors (such as automotive manufacturing), it is a transition away from manufacturing altogether, to activities that relate to distribution and retail.

Changes in the sector have brought about a fundamental structural shift in the economy with many of Australia's traditional industrial sectors becoming high-cost and non-competitive with businesses in lower cost emerging economies. This structural shift in Australian business is further demonstrated through the historical declines in employment in traditional industry sectors and the rise of employment in the service sectors (refer to **Figure 3.1**).

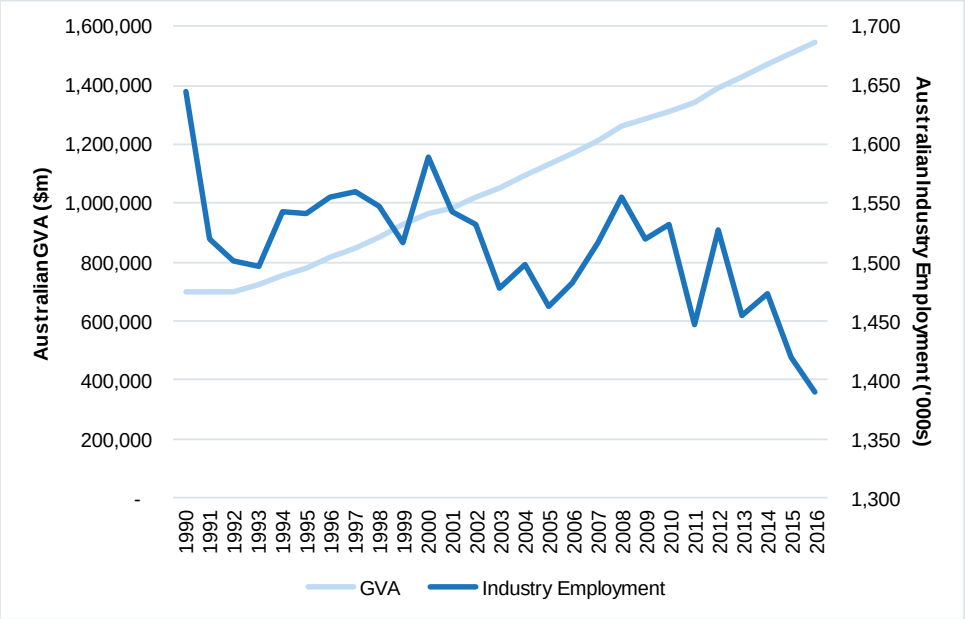
Figure 3.1: Australian Employment, 1984-2016



Source: ABS (2016)

The transition of manufacturing in Australia is distinct by observing employment against the value of what the sector produces (as measured by Gross Value Added), refer to **Figure 3.2**).

Figure 3.2: GVA and Industry Employment, 1990-2016



Source: ABS (2016)

This change (lower employment to production) signals the increasing prominence and importance of the knowledge-based economy in Australia and highlights the importance that adaptability and innovation will play in future productivity and competitiveness of Australian business.

In summary, the nature of the Australian industrial landscape is changing with an increasing emphasis on greater levels of value-adding and high-technology activities supported by a strong imports culture which will drive demand for greater levels of wholesale trade, warehousing and logistics activities in the economy into the future.

Manufacturing and Related Activities

The transition of Australian manufacturing has resulted in the evolution of the manufacturing process supply chain into a complex web of activity. Manufacturers are leveraging technology and knowledge to be productive and remain competitive. In many cases businesses are importing base products manufactured offshore for value-add prior to sale and distribution.

It is difficult to aggregate the accommodation requirements of these activities, however given the importance of skill and knowledge in the evolved manufacturing process, many businesses need to attract and retain employees who are suitably qualified. Knowledge workers have higher amenity expectations, e.g. public transport (usually train), attractive public domain and quality retail in facilities. It is for this reason that businesses in advanced manufacturing select locations such as Macquarie Park, Norwest business park and to a lesser extent South Sydney (Zetland, Alexandria) where the quality of urban amenity has improved over the last decade.

The Precinct is less well positioned to appeal to businesses involved in advanced manufacturing and related activities, primarily owing to its small scale and relative isolation from the main arterial road network and lack of overall worker amenity. Business and enterprise parks that generally appeal to these types of occupiers also have a certain critical mass of occupiers, which then underpins the provision of facilities that contribute to retail urban amenity.

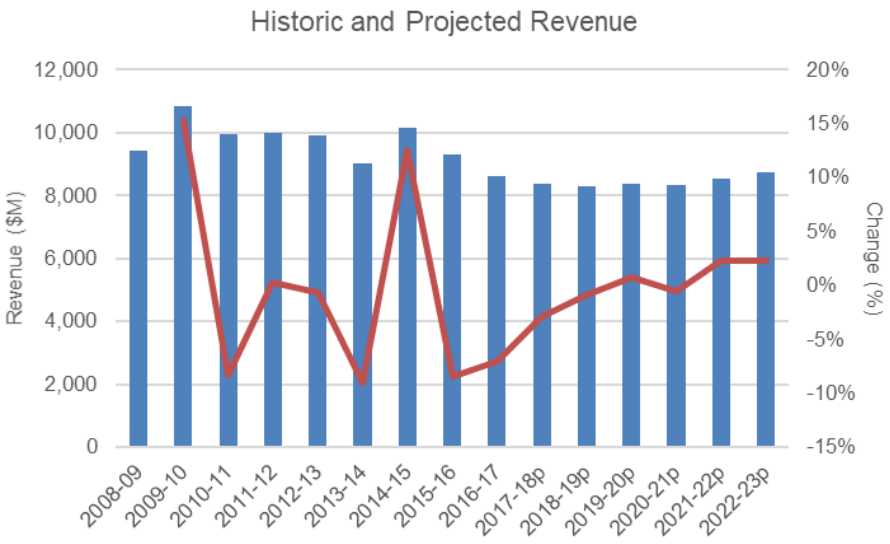
Australian Pharmaceutical Industry

Businesses in Australia's pharmaceutical product manufacturing industry are increasing limiting their involvement to the later stages of the manufacturing process, i.e. packaging, distribution and dispensing. Major companies in the pharmaceutical industry include Pfizer, GlaxoSmithKline, AstraZeneca, Aspen and Merck Sharp & Dohme.

Two of these companies (Pfizer and GlaxoSmithKline) were located in Melrose Park and have since transitioned off. AstraZeneca is located in Macquarie Park where it carries out research and development.

Structural changes and increasing competitive pressures have resulted in a volatility of industry revenue in the last decade, as depicted in Figure 3.3. In the short term, industry revenue is expected to continue to contract before stabilising. The transformation of the industry will continue to have implications for the level of pharmaceutical manufacturing and R+D in Australia (IBISWorld, 2017).

Figure 3.3: Australian Pharmaceutical Industry, Past and Projected Revenues



Source: AEC, IBISWorld (2017)

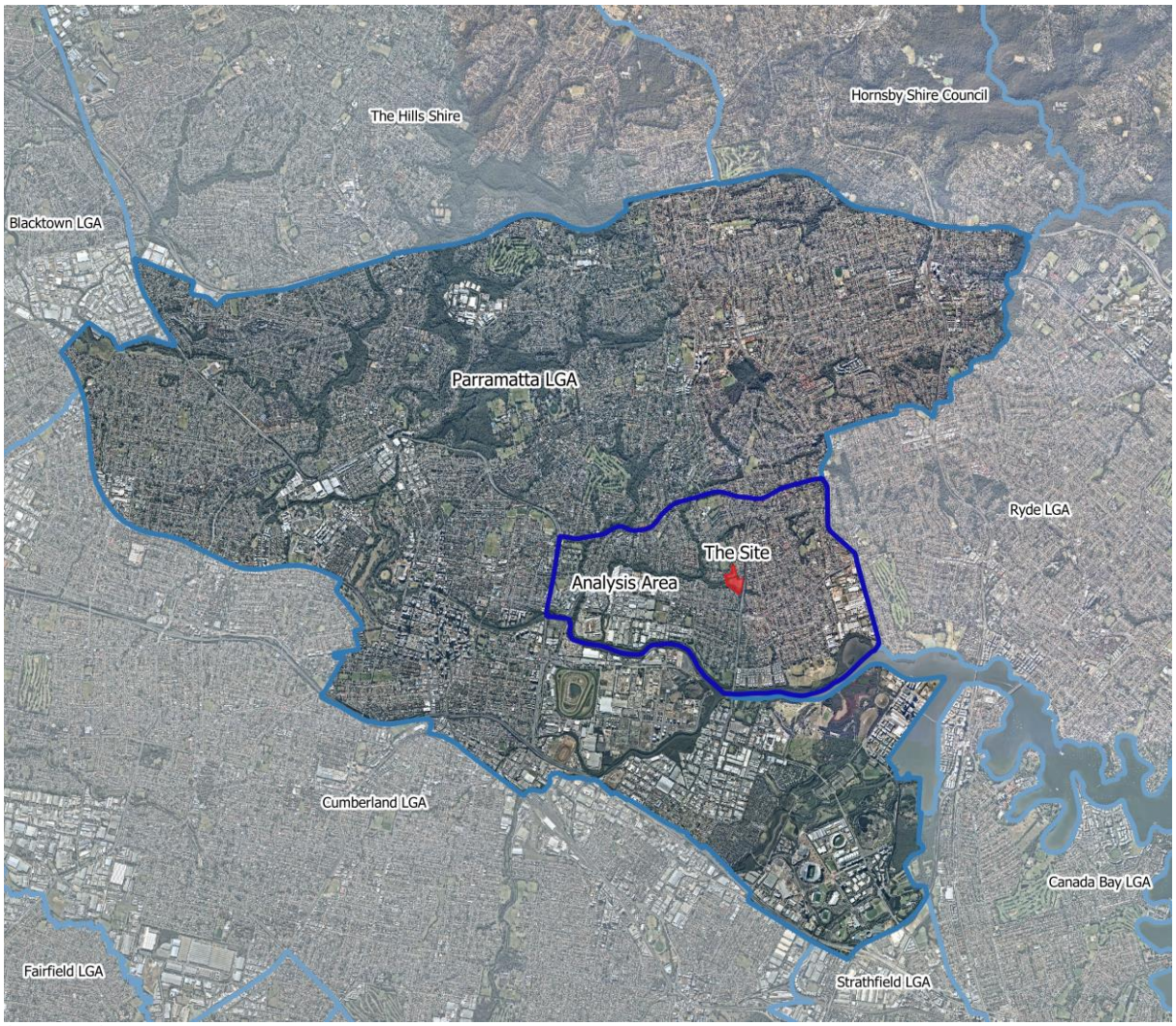
Pharmaceutical businesses have cited the following challenges as impediments to sustained growth: increasing regulatory and compliance pressures, higher consumer and patient expectations, price scrutiny (PwC, 2015).

These structural trends have been borne out in real estate decisions, with pharmaceutical companies observed to have exited and divested of their facilities in VIC (Merck from Kilsyth and Sigma Pharmaceuticals in Croydon) and NSW (Pfizer and GlaxoSmithKline from Melrose Park and Symbion from the Precinct).

3.3 SOCIO-DEMOGRAPHIC PROFILE

This section provides an overview of the socio-economic profile of the area immediately surrounding the Site as depicted in Figure 3.4 (referred to as the 'Analysis Area'). Analysis of the Analysis Area's socio-demographic profile provides insight into resident characteristics and changes which have occurred over time. The analysis is benchmarked against the Parramatta LGA.

Figure 3.4: Socio-Demographic Profile, Analysis Area



Source: ABS

The basis of the demographic analysis is ABS geographical level known as Statistical Area Level 2 (SA2). SA2s represent the smallest ABS geographical areas which can be analysed over a time series (e.g. 2006, 2011, 2016) and is thus the most useful geographical area to examine change over time.

3.3.1 Population and Households

Historical Population Growth

The Analysis Area recorded a population of 22,020 in 2016, comprising 9.4% of the broader Parramatta LGA's total population of 234,968 persons. The Analysis Area recorded an average annual growth of 2.1% over the 2006-2017 period; this pace of growth is slightly lower than that recorded for the Parramatta LGA with an average annual growth rate of 2.7% over the same period.

Table 3.1 illustrates historical population growth for the Analysis Area and Parramatta LGA.

Table 3.1: Historical Population Growth, Analysis Area & Parramatta LGA (2006-2016)

Year	Population		Average Annual Growth	
	Analysis Area	Parramatta LGA	Analysis Area	Parramatta LGA
2006	17,981	180,919	-	-
2007	18,640	185,175	3.7%	2.4%
2008	19,031	189,684	2.1%	2.4%
2009	19,426	195,136	2.1%	2.9%
2010	19,757	199,575	1.7%	2.3%
2011	19,881	203,205	0.6%	1.8%
2012	20,283	208,363	2.0%	2.5%
2013	20,717	214,818	2.1%	3.1%
2014	21,199	221,568	2.3%	3.1%
2015	21,622	228,248	2.0%	3.0%
2016	22,020	234,968	1.8%	2.9%
2006-2016	**4,039**	**54,049**	**2.1%**	**2.7%**

*Estimated Resident Population
Source: ABS (2018)

Household and Family Composition

The Analysis Area comprises a high proportion of family households (74.4%), followed by lone person households (20.1%).

Family households have risen over the 2006-16 period, accounting for only 72.6% of all households in 2006. Conversely, the proportion of lone person households has fallen over this period to 20.1%, previously accounting for 21.0% of all households in 2006.

These rates and trends generally align with those of Parramatta LGA that has similarly recorded increases in family households and declines in lone person households.

Table 3.2: Household Composition, Analysis Area & Parramatta LGA (2016)

Household Type	Analysis Area	Parramatta LGA
Family households	74.4%	71.2%
Lone person households	20.1%	19.0%
Group households	2.9%	4.4%
Other households	3.5%	5.4%
Total	**100.0%**	**100.0%**

Source: ABS (2017c)

Families with children are the dominant family cohort within the Analysis Area, accounting for 58.7% of all family households. Couples without children were also a major family type, representing just under 30% of families followed by one parent families at 10.4%. The structure of family composition in the Analysis Area and Parramatta LGA has remained generally stable over the 2006-2016 period.

Table 3.3: Family Composition, Analysis Area & Parramatta LGA (2016)

Household Type	Analysis Area	Parramatta LGA
Couple family with no children	29.7%	26.9%
Couple family with children	58.7%	62.5%
One parent family	10.4%	9.7%
Other family	1.3%	0.9%
Total	**100.0%**	**100.0%**

Source: ABS (2017c)

Household Income and Housing Costs

Households in the Analysis Area on average earn $1,980 per week, below the average household income recorded for the Parramatta LGA at $2,100. Household incomes across the Analysis Area are observed to have risen by approximately 4.1% per year over the 2006-2016 period, with similar growth also observed in the LGA.

Households in the Analysis Area spend approximately 28.2% of their weekly income on mortgage repayments which is higher than average repayment rates observed in the broader Parramatta LGA at 25.5%. For those households renting, approximately 18.2% of their weekly income is spent on rental payments; slightly below the Parramatta LGA rate of 20.8%.

Table 3.4: Household Income v Housing Costs, Analysis Area & Parramatta LGA (2016)

Household Type	Analysis Area	Parramatta LGA
Average Weekly Household Income	$1,980	$2,100
% of household income spent on mortgage	28.2%	25.5%
% of household income spent on rent	18.2%	20.8%

Source: ABS (2017b,c)

3.3.2 Dwelling Type and Ownership

Historical Dwelling Growth and Type

A total of 7,241 dwellings were recorded in the Analysis Area as at Census 2016, comprising 9% of the total housing stock within the Parramatta LGA with a total of 80,162 dwellings.

Just over 1,000 new dwellings were added to Analysis Area's housing stock over the 2006-16 period; equating to a 1.6% average annual growth rate, or 106 dwellings per year. This is lower than the Parramatta LGA average annual growth rate of 2.2% over the same period. Of the 15,919 new dwellings delivered across the Parramatta LGA over the 2006-16 period, just under 7% were delivered within the Analysis Area.

Table 3.5: Historical Dwelling Growth, Analysis Area & Parramatta LGA (2006-2016)

Region	Dwellings			Average Annual Growth		
	2006	2011	2016	2006-11	2011-16	2006-16
Analysis Area	6,173	6,654	7,241	1.5%	1.7%	1.6%
Parramatta LGA	64,243	70,407	80,162	1.8%	2.6%	2.2%

Source: ABS (2017b)

Notably, the average annual growth in population (in both the Analysis Area and Parramatta LGA) outstripped average annual growth in dwellings over the 2006-2016 period:

- Average annual population growth of 2.1% (Analysis Area) and 2.7% (Parramatta LGA).
- Average annual dwellings growth of 1.6% (Analysis Area) and 2.2% (Parramatta LGA).

Dwelling Ownership

The majority of residents within the Analysis Area are owner-occupiers; 35% of residents own their home with a mortgage whilst 26% of residents own their home outright. Renters also comprise a major portion of the market with 39% of residents being renters. By comparison, slightly lower home ownership rates are observed across the Parramatta LGA with approximately 31% of residents owning their home with a mortgage and 25% owning their home outright. A higher proportion of renters are also observed throughout the rest of the LGA.

Table 3.6: Dwelling Ownership, Analysis Area & Parramatta LGA (2006-2016)

Region	Owned Outright	Owned with a Mortgage	Rented	Other Tenure Type	Total
2006					
Analysis Area	23.9%	33.6%	42.1%	0.4%	100.0%
Parramatta LGA	26.5%	29.2%	43.7%	0.5%	100.0%
2011					

Analysis Area	23.5%	34.9%	41.4%	0.3%	100.0%
Parramatta LGA	25.5%	31.3%	42.7%	0.5%	100.0%
2016					
Analysis Area	24.5%	33.5%	41.5%	0.4%	100.0%
Parramatta LGA	25.4%	29.1%	45.0%	0.5%	100.0%

Source: ABS (2017b)

Persons per Dwelling

Comparison of population and dwelling data indicates a rising trend in average household occupancy rates over the decade to 2016 as detailed in Table 3.7.

Table 3.7: Persons per Dwelling, Analysis Area & Parramatta LGA (2006-2016)

Region	2006	2011	2016
Analysis Area	2.84	2.89	2.96
Parramatta LGA	2.72	2.76	2.82

Source: ABS (2017b,c)

In 2006, there are approximately 2.84 persons per dwelling in the Analysis Area, rising to 2.89 persons per dwelling in 2011 and 2.96 persons per dwelling in 2016.

A similar trend is observed in the broader Parramatta LGA, wherein 2.72 persons per dwelling was observed in 2006 and 2.82 persons per dwelling in 2016.

The rising household occupancy rates are commensurate with differential growth rates of population and dwellings over the analysis period (2006-2016), population growth outstripping dwellings growth in both the Analysis Area and the Parramatta LGA:

- Analysis Area: population growth (2.1%) compared to dwellings growth (1.6%).
- Parramatta LGA: population growth (2.7%) compared to dwellings growth (2.2%).

The next section investigates business and market activity in areas proximate to the Site.

3.4 INDUSTRIAL MARKET CONTEXT

Sydney's metropolitan industrial market is experiencing a growth spurt whilst undergoing a significant sectoral evolution. Buoyed by a combination of substantial government infrastructure investment, the rise of online retailing and significant withdrawals of industrial stock, industrial markets within Sydney's inner and middle rings have been subject to an influx of demand from businesses seeking accessible facilities in conflict-free locations.

The decline of traditional manufacturing activity within Australia has been counteracted by the rise of e-commerce based service-industries with a focus on distribution and warehousing. This has resulted in a dramatic shift in the demand profile of industrial users and the specific physical characteristics of industrial land sought by such occupiers. For example, aged industrial buildings with low clearance heights or poorly configured access points exhibit little demand from modern logistic operators.

Distribution and warehousing operators must be located near major motorways and arterial road networks given their time-critical business models. The level of congestion on road networks that surround industrial precincts has direct implications on the desirability of such precincts to these operators.

In addition to the growth in demand from logistics and transport operators, strong population growth throughout metropolitan Sydney is driving strong demand for space from light industrial users. Operators such as auto mechanics, food and beverage wholesalers, cabinetry and joinery makers and the like who service a local population are becoming increasingly dominant in the industrial market, typically seeking space sub-300sqm.

Areas that enjoy direct access from main arterial roads and are well buffered from residential uses are sought after, often characterised by rising rents and prices, falling vacancies and disappearing incentives.

Parramatta and Central West Region

Sydney's industrial market is commonly referred to in the marketplace as comprised of seven geographically defined regions: North West, West, Inner/Central West, North Shore and South, South West and Outer South regions. The geographical boundaries are defined with consideration to factors such as access to transport and services, and the nature of existing and future industrial and employment lands. The Precinct is located within the Central West region.

The Parramatta LGA and Central West region have experienced sales and leasing demand from investors and tenants seeking quality assets and land. The supply of A Grade stock in the Parramatta LGA and West Central region is limited and tightly held, this coupled with demand from investors has driven an increase in capital values for premium industrial property and has resulted in compressed yields.

Unlike premium industrial stock, older grade secondary properties and those inferiorly located typically experience prolonged vacancies and attract higher incentives making them less attractive. Following relocation by large businesses, particularly specialised buildings are observed to be difficult to lease. These properties often offer reduced rents and large incentives to attract new tenants.

The changing nature of industry drivers and a shift from manufacturing to supply chain and logistics has resulted in changing requirements for industrial floorspace. Growing demand for warehouse and distribution facilities has focused activity in regions like the South West and Outer West where large allotments are available at competitive prices. This is testament to the significant levels of market and development activity in Eastern Creek and Erskine Park.

Rydalmere Employment Area (REA)

Rydalmere and Silverwater are premier employment precincts in the West Central region and are located within the boundaries of the Parramatta LGA.

These employment areas enjoy a centrality of location, have the benefit of critical mass, have direct truck access from main arterial roads and are sufficiently buffered from residential uses. By virtue of their critical mass and established nature, facilities that support worker amenity (e.g. takeaway food premises, cafés) contribute to their overall desirability.

REA is experiencing historically strong market conditions. Importantly, an increase in non-traditional industrial occupiers (food and beverage manufacturers, events management and IT firms) are observed to be locating in Rydalmere in order to take advantage of the high-quality mezzanine offices available.

Despite some of the older-style buildings in the Precinct, prospective tenants are attracted to the area due to its proximity with Parramatta CBD and exposure and access to and from Victoria Road. Local leasing agents observe that it is favourably regarded amongst prospective and existing occupants, with rents achieving between $120/sqm and $170/sqm of lettable area. In comparison, the Central West region reportedly achieves rents ranging $100/sqm to $145/sqm (Savills, 2018).

A major transaction of note is Mirvac's purchase of 274 Victoria Road for $47.5m in April 2016. The large industrial site of 36,500sqm was subject to a long-term lease to a defence technology firm at $3.16m per annum (net), representing a yield of 6.6%. Smaller industrial suites and warehouses have transacted over 2017 at strong sale prices, e.g. 10-12 Pike Street transacted in February 2017 for $27.5m, equating to $4,200/sqm of floor area.

Development pipeline activity in REA includes:

- 42 Bridge Street - construction of a single storey industrial factory (5,588sqm) with mezzanine offices (1,590sqm) for joinery manufacturing. Carparking for 39 vehicles will be provided.
- 2-8 South Street - demolition of existing structures for 5 double-storey warehouses (9,491sqm) and 10 ancillary offices (924sqm). Basement carparking for 175 vehicles provided.

Together, these developments will provide for a total of approximately 18,000sqm of warehouse/office space.

Anecdotal evidence from sales agents notes many transactions are being secured off-market or prior to auction as prospective occupiers seek to secure space immediately. Take-up of space is expected to remain buoyant given limited good quality, well accessible stock and healthy demand.

The Precinct

The Precinct has historically accommodated pharmaceutical businesses, consistent with the employment profile analysed in section 2.2, wherein in a number of cases more than 90% of jobs were in the pharmaceuticals and related sub-sectors.

Despite healthy demand for industrial lands in the region (as evidenced by demand observed at premier industrial areas such as REA and Silverwater), local leasing agents report soft interest from the market for the now vacant Symbion facility at the Precinct.

3.5 IMPLICATIONS FOR THE SITE

Land uses and built form generally respond to market need and requirements, providing accommodation for:

- Activities of those businesses who respond to market need, and/or
- Housing opportunities to address market need.

This section draws together the foregoing analysis to draw implications for the suitability of the Precinct for various uses.

Industrial and Employment Uses

Industrial lands require certain features in order to be competitive and sustainable in the long term, including:

- Location directly off major arterial corridors which facilitate unimpeded road access.
- Ability to operate in a conflict-free environment with sufficient buffer from sensitive uses such as residential.
- Critical mass of lands to enable businesses to cluster and to enable provision of supporting worker amenity and services.

- Diversity of occupiers (by industry) to mitigate against vacancy risk following structural changes in a particular industry. For example, in industrial areas dominated by automotive manufacturers, large scale shutdown and departure by car manufacturers can put these areas at serious risk.
- Generic buildings that can easily be re-purposed following relocation of occupiers.

While the Precinct is centrally located, the Precinct is challenged on a number of fronts. Having to traverse residential roads to and from the Precinct is its key failing as an industrial destination. By necessity, businesses who are heavily reliant on frequent truck movements have to either scale back load or frequency of trips, or both. This is ultimately not a sustainable position as it compromises business efficiency and viability. It is understood this was a major consideration for Symbion who have relocated to premises that allow B-double access directly off the orbital road network.

In its current form, the Precinct is not competitive due to its relative isolated position, lack of worker amenity and unsuitability of many existing buildings for re-purpose. The lack of direct access from major arterial roads and location abutting residential uses (residential on three sides) makes it unattractive to industrial users, putting the Precinct at further risk should the remaining tenant Homart Pharmaceuticals also depart.

Contributing to Housing

The Proposal critically will assist in meeting demand for housing that is close to existing residential areas, transport nodes and employment centres. Soaring and sustained price growth in recent years is reflective of a market that is inadequately supplied.

By way of comparison, population growth in the immediate catchment of the Site averaged 2.1% per annum (2006-2017) and outstripped dwellings growth that averaged 1.6% per annum over the same period. It is unsurprising that occupancy rates (persons per dwelling) has increased, from 2.8 persons in 2006 to nearly 3.0 persons in 2016.

Similar observations can be made in the Parramatta LGA, where population growth over 2006-2016 increased by an average annual rate of 2.7%, whereas dwellings increased by an average annual rate of 2.2%. Similarly, average household occupancy rates increased in the LGA, from 2.7 persons per dwelling (2006) to 2.8 persons per dwelling (2016).

The next chapter investigates the economic impacts of a rezoning and development of the Site as envisaged in the Proposal.

4. ECONOMIC IMPACT ASSESSMENT

4.1 INTRODUCTION

This chapter provides an overview of the economic impacts arising from the Base Case and Proposal Case. The Base Case and Proposal Case are described below:

- **Base Case**: The Base Case assumes a Do-Nothing scenario, that the Site will continue in its existing use, i.e. as a site zoned IN1 General Industrial. Homart Pharmaceuticals currently occupies the Site's north (57-59 Kirby Street). 55 Kirby Street is vacant following former pharmaceutical tenant Symbion's departure.

  Two scenarios are considered, where the first scenario reflects the challenges of re-letting the vacant portion of the Site (in line with market feedback and the observations in the Parramatta Employment Lands Strategy). The second scenario assumes that 55 Kirby Street is re-let and a similar number of workers (as were employed by former tenant Symbion) are accommodated. The scenarios are:

  - **Scenario 1**: Homart Pharmaceuticals continues current operations, accommodating 48 jobs, whilst 55 Kirby Street is not re-let and thereby accommodates no economic activity.
  - **Scenario 2**: Homart Pharmaceuticals continues its business and accommodates 48 jobs. 55 Kirby Street is leased to a mix of businesses, accommodating 60 jobs.

- **Proposal Case:** The Proposal Case assumes the improvements are redeveloped to accommodate residential uses (795 new dwellings) with ancillary retail and commercial, and recreational floorspace.

The economic impacts are assessed at the Parramatta LGA level using AEC's proprietary Input-Output (IO) model. Refer to Appendix A for details of Input-Output modelling methodology and key modelling assumptions).

4.2 DRIVERS OF ECONOMIC IMPACT

The following sections estimate the economic activity supported through the operations of businesses locating to the Site if it was redeveloped under the Proposal Case compared to if it remained in existing use (Base Case).

The economic impacts have been assessed at the Parramatta LGA level. An Input-Output model, including the development of specific regional Input-Output transaction tables, was developed to reflect the economic structure of the Parramatta 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 following 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.

Drivers of Economic Activity

In order to understand the economic impacts likely to result from the Proposal compared to the Base Case, 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.

- **Construction Phase**: Construction activity will draw resources from and thereby generate economic activity in the Parramatta LGA as well as from outside the LGA. Assumptions are made on the proportion sourced from within and from outside the LGA.
- **Operations Phase**: During the operational phase, the Site is expected to generate ongoing economic/ operational activity through the following:
    - Direct turnover generated by the retail/commercial operational activities on-site.
    - Economic activity that would not otherwise occur in the Parramatta LGA as a result of employment activity from 'dispersed jobs', i.e. residents who work from home (only in the Proposal Case).
    - Economic activity that would not otherwise occur in the Parramatta LGA as a result of direct expenditure of new households, i.e. those households who live in the new dwellings (only in the Proposal Case).

Refer to Appendix A for a description of the drivers and assumptions that underpin the assessed economic impacts. The next section describes the impacts on economic activity for the Base Case and Proposal Case.

4.3 ECONOMIC ACTIVITY AND IMPACTS

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

- **Direct impacts,** which are 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 production induced support activity 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 paid within the economic system.

The premise behind Type I and Type II indirect impacts applies across both the construction and operations 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 operations phase may include manufacturing (food and beverage and related) and administrative and support services (e.g. building cleaning, employment services,).

4.3.1 Construction Phase

The economic impacts during the Construction Phase are assessed for the Proposal Case only, as there is no redevelopment or construction activity in the Base Case.

Proposal Case

Economic activity generated by businesses and workers in the Parramatta LGA is expected to be supported direct and flow-on impacts arising during construction:

- $696.3 million in output (including $309.2 million in direct activity).
- $264.6 million contribution to GRP (including $67.2 million in direct activity).

- $138.8 million in incomes and salaries paid to households.
- 1,813 FTE jobs (including 615 directly employed in construction activity).

Table 4.2: Construction Impacts in Parramatta LGA, Proposal Case

Impact	Output ($M)	GRP ($M)	Incomes ($M)	Employment (FTEs)
Direct	$309.2	$67.2	$43.2	615
Type I Flow-On	$207.6	$92.1	$52.9	628
Type II Flow-On	$179.5	$105.3	$42.7	570
Total	**$696.3**	**$264.6**	**$138.8**	**1,813**

Source: ABS(2017c, 2017d), AEC

Major industry beneficiaries of the construction phase include:

- Construction (GRP of $74.3 million).
- Ownership of Dwellings ($29.6 million)
- Financial and Insurance Services ($29.1 million).

4.3.2 Operational Phase

Economic impacts in the Operational Phase are assessed separately for the Base Case and the Proposal Case.

Base Case (Scenario 1)

Scenario 1 is estimated to support the following annual economic activity through direct and flow-on impacts associated with existing employment activity on the Site:

- $43.2 million in output (including $21.4 million in direct activity).
- $20.9 million contribution to GRP (including $8.9 million in direct activity).
- $10.2 million in incomes and salaries paid to households.
- 115 FTE jobs (including 48 directly related to activity on the Site).

Table 4.3: Operational Impacts, Base Case (Scenario 1)

Impact	Output ($M)	GRP ($M)	Incomes ($M)	Employment (FTEs)
Direct	$21.4	$8.9	$4.8	48
Type I Flow-On	$8.9	$4.4	$2.4	27
Type II Flow-On	$12.9	$7.6	$3.1	41
Total	**$43.2**	**$20.9**	**$10.2**	**115**

Source: ABS (2017c, 2017d), AEC

Base Case (Scenario 2)

Scenario 2 is estimated to support the following annual economic activity through direct and flow-on impacts associated with existing employment activity on the Site:

- $87.8 million in output (including $42.4 million in direct activity).
- $41.8 million contribution to GRP (including $17.3 million in direct activity).
- $20.9 million in incomes and salaries paid to households.
- 250 FTE jobs (including 108 directly related to activity on the Site).

Table 4.4: Operational Impacts, Base Case (Scenario 2)

Impact	Output ($M)	GRP ($M)	Incomes ($M)	Employment (FTEs)
Direct	$42.2	$17.3	$9.5	108
Type I Flow-On	$19.4	$9.1	$5.1	58
Type II Flow-On	$26.3	$15.4	$6.3	83
Total	**$87.8**	**$41.8**	**$20.9**	**250**

Source: ABS (2017c, 2017d), AEC

Proposal Case

The activity associated with new business activity and dispersed jobs in new households is estimated to support the following economic impacts through direct and flow-on impacts (per annum):

- $75.4 million in output (including $31 million in direct activity).
- $39.7 million contribution to GRP (including $15.1 million in direct activity).
- $21.7 million in incomes and salaries paid to households.
- 276 FTE jobs (including 133 directly related to activity on the Site).

Table 4.5: Operational Impacts, Proposal Case

Impact	Output ($M)	GRP ($M)	Incomes ($M)	Employment (FTEs)
Direct	$31.0	$15.1	$10.1	133
Type I Flow-On	$17.1	$8.6	$5.1	57
Type II Flow-On	$27.3	$16.0	$6.5	87
Total	**$75.4**	**$39.7**	**$21.7**	**276**

Source: ABS(2017c, 2017d), AEC

4.3.3 Net Operational Impact on Economic Activity

Net Operational Impact on Economic Activity (Scenario 1)

Compared to the Base Case (Scenario 1), the Proposal Case is expected to result in a net increase in annual economic activity through the direct and flow-on impacts (per annum):

- $32.2 million *additional* in output (including $9.6 million in direct activity).
- $18.8 million *additional* in contribution to GRP (including $6.2 million in direct activity).
- $11.5 million *additional* in incomes and salaries paid to households.
- 161 *additional* FTE jobs (including 85 jobs directly related to activity on the Site).

Table 4.6: Estimated Net Operational Impacts in Parramatta LGA (Scenario 1)

Impact	Output ($M)	GRP ($M)	Incomes ($M)	Employment (FTEs)
Direct	$9.6	$6.2	$5.3	85
Type I Flow-On	$8.2	$4.2	$2.7	30
Type II Flow-On	$14.4	$8.4	$3.4	46
Total	**$32.2**	**$18.8**	**$11.5**	**161**

Source: ABS(2017c, 2017d), AEC

Net Operational Impact on Economic Activity (Scenario 2)

Compared to the Base Case (Scenario 2), the Proposal Case is expected to result in a net reduction in output and GRP despite an increase in incomes and FTE jobs:

- $12.4 million *reduction* in output (including $11.22 million reduction in direct activity).
- $2.1 million *reduction* in contribution to GRP (including $2.2 million reduction in direct activity).
- $0.8 million *additional* in incomes and salaries paid to households.
- 26 *additional* FTE jobs (including 25 jobs directly related to activity on the Site).

Table 4.7: Estimated Net Operational Impacts in Parramatta LGA (Scenario 2)

Impact	Output ($M)	GRP ($M)	Incomes ($M)	Employment (FTEs)
Direct	-$11.2	-$2.2	$0.6	25
Type I Flow-On	-$2.3	-$0.5	$0.0	-1
Type II Flow-On	$1.0	$0.6	$0.2	4
Total	-$12.4	-$2.1	$0.8	26

Source: ABS(2017c, 2017d), AEC

4.4 HOUSING IMPACTS

4.4.1 Household Expenditure Supported

The Proposal envisages 795 new dwellings on the Site, therefore a marked increase in household expenditure can be associated with the Proposal Case, as compared to the Base Case which accommodates no dwellings. The household expenditure supported in the Proposal Case is outlined below.

It should be noted that these impacts should be considered independent of the economic impacts in section 4.3.2 to avoid double counting the impacts already captured in the assessment of economic impacts resulting from the Operational phase (e.g. some expenditure on retail and food and beverage by households is likely to be spent at the retail and food/beverage outlets locating to the Site). This section provides insight into the specific economic activity supported in the Parramatta LGA through household expenditure as its own separate analysis.

In addition to patronising businesses located on-site, new residents/households could patronise retail and other establishments in the local area, including those at Ermington, Rydalmere (along Victoria Road). Households wishing to perform higher order shopping could patronise Westfield Parramatta.

Proposal Case

Household expenditure associated with the 795 new residential dwellings is estimated to support the following economic activity through direct and flow-on impacts (per annum):

- $71.4 million in output (including $32.7 million in direct activity).
- $41.8 million contribution to Gross Regional Product (including $20.2 million in direct activity).
- $20.1 million in incomes and salaries paid to households.
- 306 FTE jobs (including 186 direct employees).

Table 4.8: Household Expenditure Impacts in Parramatta LGA, Proposal Case

Impact	Output ($M)	GRP ($M)	Incomes ($M)	Employment (FTEs)
Direct	$32.7	$20.2	$10.6	186
Type I Flow-On	$13.5	$6.8	$3.5	40
Type II Flow-On	$25.3	$14.8	$6.0	80
Total	**$71.4**	**$41.8**	**$20.1**	**306**

Source: ABS (2017e), AEC

4.4.2 Contribution to Housing

The Proposal envisages nearly 800 dwellings.

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

The Greater Sydney Region Plan and Central City District Plan emphasise the importance of ensuring housing supply and choice, and housing affordability which is facilitated close to jobs, services and public transport.

Housing Supply

More specific to Parramatta LGA, the overall rate of population growth over the 2006-2016 period averaged 2.6% per annum. In contrast, the overall rate of dwellings growth over the same period averaged 2.2% per annum. This suggests a dwellings deficit, consistent with Parramatta's number of persons per household increasing from 2.7 to 2.8 persons over the 2006-2016 period.

The provision of almost 800 new dwellings on the Site constitutes a strong positive economic impact.

4.5 CONCLUSION

The Proposal seeks to facilitate a change of land use, redeveloping an industrial precinct that has historically been occupied by pharmaceutical businesses.

In the context of the Precinct, owing to a combination of factors - structural changes at the global level and the less desirable locational characteristics of the Precinct at the local level, the Precinct is now more than half vacant. Its small-scale nature makes it difficult for revitalisation or redevelopment for its originally intended industrial purpose.

The Proposal responds to the District Plan's approach which recognises that sectoral and industry trends have direct implications for demand for industrial lands. This nuanced approach reinforces PELS recommendations for change in the Precinct, recognising the vulnerability of the Precinct to sectoral change in the pharmaceutical sector, particularly as employment and business activity in the Precinct (>90%) is dominated by a single industry.

The following actions detailed in PELS are relevant for assessment of the Proposal from an economic impact perspective:

- Allow for a net reduction of existing employment lands.
- Facilitate renewal of isolated industrial precincts.
- Prepare structure plans for key employment precincts which are undergoing economic change.
- Proposed zoning must be supported by an economic impact study.

In the Do-Nothing scenario, the Base Case scenarios have less direct employment (i.e. employment that is on the Site) than the Proposal Case. Industries of employment in the Base Case however have higher multiplier effects, and therefore in Scenario 2 result in a reduction in output and GRP despite an increase in incomes and jobs in the Proposal Case. Compared to Scenario 1 of the Base Case, the Proposal Case results in a net positive impact in all the economic indicators.

The economic impacts estimated in this chapter demonstrate the Proposal has economic merit, having the ability to contribute significantly to the Parramatta local economy, assisting to ensure the Precinct is not sterilised from an economic perspective.

5. POLICY ASSESSMENT

5.1 EMPLOYMENT AND ECONOMIC IMPACTS

To compare the outcome of the Base Case against the Proposal Case, each of the identified impacts compared to the Base Case are summarised and ranked based on the rating system outlined in Table 5.1.

- **Base Case**: The Base Case assumes a Do-Nothing scenario where the Site remains as IN1 General Industrial lands. Two scenarios are considered:
  - Scenario 1 assumes Homart Pharmaceuticals continues operations on 57-59 Kirby Street. Following Symbion's departure from 55 Kirby Street, it is conceivable the Site will struggle to be re-let in the long term (isolation and small scale, access through residential streets, lack of buffer from residential uses).
  - Scenario 2 makes a theoretical assumption that 55 Kirby Street is re-let a business employing a similar number of workers as former tenant Symbion.
- **Proposal Case:** The Site is redeveloped under the Proposal's amended planning controls to facilitate 795 new dwellings, retail and commercial uses and recreational floorspace.

Table 5.1: Economic Impact Rating Matrix

Severity of Impact	Score	Explanation
Strong Positive Impact	+3	The scenario would make a strong positive contribution towards this impact compared to the Base Case
Slight Positive Impact	+1	The scenario would make a slight positive contribution towards this impact compared to the Base Case
Neutral Impact	0	The scenario would make neither positive or a negative contribution towards this impact compared to the Base Case
Slight Negative Impact	-1	The scenario would make a slight negative contribution towards this impact compared to the Base Case
Strong Negative Impact	-3	The scenario would make a strong negative contribution towards this impact compared to the Base Case

Source: AEC

Table 5.2 identifies the economic impacts and derives a total score for Proposal using the Base Case (Scenario 1) as the starting point of '0'. The higher the positive score the greater the net positive economic impact from a community perspective, the lower the score the greater the adverse economic impact.

Table 5.2: Economic Impact, Base Case v Proposal Case

Impact	Base Case (Scenario 1)	Rating	Base Case (Scenario 2)	Rating	Proposal Case	Rating
Construction Phase						
Output ($M)	n.a.	0	n.a.	0	$696.3	+3
GRP ($M)	n.a.	0	n.a.	0	$264.6	+3
Incomes ($M)	n.a	0	n.a	0	$138.8	+3
Employment (FTE)	n.a	0	n.a	0	1,813	+3
Operational Phase						
Output ($M)	$43.2	0	$87.8	+3	$75.4	+2
GRP ($M)	$20.9	0	$41.8	+3	$39.7	+2
Incomes ($M)	$10.2	0	$20.9	+2	$21.7	+3
Employment (FTE)	115	0	250	+2	276	+3
Household Expenditure						
Output ($M)	n.a.	0	n.a.	0	$71.4	+3
GRP ($M)	n.a.	0	n.a.	0	$41.8	+3
Incomes ($M)	n.a.	0	n.a.	0	$20.1	+3
Employment (FTE)	n.a.	0	n.a.	0	306	+3
Total		**0**		**10**		**34**

Source: AEC

In comparison to the Base Case, the Proposal Case clearly exhibits a positive economic impact. As the Site evolves with economic and demographic trends and needs, the net economic impacts identified in this Assessment would undoubtedly be realised.

5.2 SECTION 117 DIRECTION

The Section 117(2) direction considered relevant in this Assessment is Section 1.1 Business and Industrial Zones. The objectives are identified below together with their consideration in the context of the Proposal.

Table 5.3: Consistency with Section 117(2) Objectives

No.	Objective	Proposal Case
1	Encourage employment growth in suitable locations	The Study Area currently accommodates Homart Pharmaceuticals, distributors of pharmaceutical based goods. Homart Pharmaceuticals currently employs 48 workers on-site. The Proposal envisages development of the Site to accommodate: 102 employees, comprised of a mix of retail and commercial uses (1,360 sqm), a childcare centre (140 sqm) and recreation/fitness floorspace (1,000 sqm). The Proposal Case complies with this objective.
2	Protect employment land in business and industrial zones	The Proposal responds to the District Plan's approach which recognises that sectoral and industry trends have direct implications for demand for industrial lands. The nuanced approach by the District Plan reinforces the Parramatta Employment Lands Strategy (PELS)' recommendations for change in the Precinct, recognising the vulnerability of the Precinct to sectoral change in the pharmaceutical sector, particularly as employment and business activity in the Precinct (>90%) is dominated by a single industry.
3	Support the viability of identified strategic centres	The Proposal would accommodate almost 800 new dwellings (just over 1,500 persons). Household expenditure from new households locating to the Site is expected to support not only the Parramatta metropolitan centre and its local centres but also strategic centres in the Central City district including Sydney Olympic Park and Epping.

Source: AEC

Section 117 Directions set out five requirements for planning authorities to consider when preparing a planning proposal that will affect land within an existing or proposed business or industrial zone. This are considered below in relation to the Proposal.

Table 5.4: Planning Authority Considerations

Consideration	Achieved?	Explanation
Give effect to the objectives of this direction	Yes	Table 5.3 has established that the objectives of the direction would be achieved via the Proposal.
Retain the areas and locations of existing business and industrial zones	No	The Proposal envisages a renewal of an isolated industrial precinct, providing opportunity for businesses that cater to residential need to be located within a new development.
Not reduce the total potential floor space area for employment uses and related public services in business zones	N.A.	n/a
Not reduce the total potential floor space area for industrial uses in industrial zones	No	The Proposal envisages a redevelopment of industrial floorspace to residential and a mix of non-residential uses. The Proposal responds to District Plan's recognition that sectoral and industry trends have direct implications for demand for industrial lands. The Proposal is in accordance with the observations and recommendations of Parramatta Employment Lands Strategy (PELS) that recognises the vulnerability of the Precinct and envisages a net reduction in employment lands. PELS carried out an LGA-wide analysis and concluded sufficiency of industrial lands for future requirements, thereby recommending change of use in the Precinct.
Ensure that proposed new employment areas are in accordance with a strategy that is approved by the Director-General of the Department of Planning		The Proposal proposes a nominal amount of employment floorspace, aligning with the Site's isolated location and reflects its employment role subservient to established employment precincts in nearly Ermington, Rydalmere and Parramatta CBD.

Source: AEC

5.3 CONCLUSION

The Proposal seeks to facilitate a change of land use, redeveloping an industrial precinct that has historically been occupied by pharmaceutical businesses.

In the context of the Precinct, owing to a combination of factors - structural changes at the global level and the less desirable locational characteristics of the Precinct at the local level, the Precinct is now more than half vacant. Its small-scale nature makes it difficult for revitalisation or redevelopment for its originally intended industrial purpose.

The Proposal responds to the District Plan's approach which recognises that sectoral and industry trends have direct implications for demand for industrial lands. This nuanced approach reinforces PELS recommendations for change in the Precinct, recognising the vulnerability of the Precinct to sectoral change in the pharmaceutical sector, particularly as employment and business activity in the Precinct (>90%) is dominated by a single industry.

The following actions detailed in PELS are relevant for assessment of the Proposal from an economic impact perspective:

- Allow for a net reduction of existing employment lands.
- Facilitate renewal of isolated industrial precincts.
- Prepare structure plans for key employment precincts which are undergoing economic change.
- Proposed zoning must be supported by an economic impact study.

Compared to existing operations on the Site, the Proposal results in a net positive impact in all the economic indicators. Given the Site's isolated location, lack of direct arterial road access and buffer from residential/ sensitive uses, its long term sustainability as industrial lands is an issue. Another challenge for its sustainability as industrial lands is the relatively small scale of the Site/Precinct.

The Proposal facilitates residential development and proposes non-residential uses that leverage the Site's adjacency to Upjohn Park and to existing residential uses.

The economic impacts estimated in this study demonstrate the Proposal has economic merit, having the ability to contribute significantly to the Parramatta local economy, assisting to ensure the Precinct is not sterilised from an economic perspective.

REFERENCES

ABS (2012). *Census of Population and Housing*, 2011. Cat. No. 2001.0. ABS, Canberra

ABS (2017a). *Census of Population and Housing*, 2016. Cat. No. 2071.0. ABS, Canberra.

ABS (2017b). *2016 Census of Population and Housing*, Time Series Profile. Cat no. 2003.0. Australian Bureau of Statistics, Canberra

ABS (2017c). *Australian National Accounts: Input-Output Tables, 2014-15*. ABS, Canberra.

ABS (2017d). *Consumer Price Index, Australia*. Cat. No. 6401.0, ABS, Canberra.

ABS (2017e). *Household Expenditure Survey, Australia: Summary of Results, 2015-16*. Cat. No. 6530.0. ABS, Canberra.

ABS (2018). Regional Population Growth, Australia, 2017. Cat no. 3218.0. Australian Bureau of Statistics, Canberra

Bureau of Urban Architecture (2018). *1.5:1 Concept Plan.* Unpublished.

Greater Sydney Commission (2016). *GPOP Vision Document.* Available at: https://gsc-public-1.s3.amazonaws.com/s3fs-public/2016_10_31_gpop_vision.pdf

Greater Sydney Commission (2018a). *Greater Sydney Region Plan*. Available at: https://www.greater.sydney/metropolis-of-three-cities

Greater Sydney Commission (2018b). *Central City District Plan*. Available at: https://www.greater.sydney/central-city-district-plan

IBIS World (2017). *Pharmaceutical Product Manufacturing in Australia.* IBIS World, 2018.

Parramatta City Council. *Parramatta Employment Lands Study.* City of Parramatta Council, 2016. Available at: https://www.cityofparramatta.nsw.gov.au/sites/council/files/inline-files/Employment%20Lands%20Strategy.pdf

Parramatta City Council. *Parramatta Local Environment Plan.* City of Parramatta Council, 2011. Available at: https://legislation.nsw.gov.au/#/view/EPI/2011/540/historical2016-07-08/full

PLR. *PLR Stage 2 Map.* Available at: http://data.parramattalightrail.nsw.gov.au/s3fs-public/PLR_Stage2_map.pdf

PwC (2015). *Challenges and Change A report on the Australian pharmaceutical industry.* PwC. Available at: https://www.pwc.com.au/industry/healthcare/assets/challengesa-and-changes-final.pdf

Savills (2018). Briefing Sydney Industrial. Available from: http://pdf.savills.asia/asia-pacific-research/australian-research/australia-industrial/savillsresearch-briefing-sydney-industrial-q1-2018.pdf

Sydney Metro. *Sydney Metro West Project Overview March 2018.* Available at: https://www.sydneymetro.info/sites/default/files/document-library/Sydney-Metro-West-Project-Overview-March-2018.pdf

Western Sydney University. *Campuses and Services Parramatta Campus.* Available at: https://www.westernsydney.edu.au/campuses_structure/cas/campuses/parramatta

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, 2017b).

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, 2017a), 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, 2017c).

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.

DRIVERS OF ECONOMIC IMPACT

The following sections examine the estimated economic activity supported through the operations of businesses locating to the Site if it was redeveloped under proposal compared to if it remained in its existing use.

- **Base Case**: The Base Case assumes Homart Pharmaceuticals will continue to conduct its businesses in the Site's north (57-59 Kirby Street), accommodating 48 jobs. 55 Kirby Street is vacant and is expected to struggle to sustain employment activity in the long term. This is consistent with market feedback and PELS' findings. Two Base Case Scenarios will be examined in this chapter:
    - **Base Case Scenario 1**: Base Case Scenario 1 assumes Homart Pharmaceuticals continues current operations, accommodating 48 jobs, whilst 55 Kirby Street will remain vacant thereby generating no economic activity.
    - **Base Case Scenario 2**: Base Case Scenario 2 also assumes Homart Pharmaceuticals will continue to conduct its businesses and accommodate 48 jobs. 55 Kirby Street is expected to be leased out in its existing state to mixture of industrial/commercial businesses, accommodating 60 jobs.
- **Proposal Case:** The Proposal Case assumes existing improvements are demolished and redeveloped as per the Proposal to accommodate residential uses (795 new dwellings) ancillary retail and commercial uses and recreational areas.

The economic impacts have been assessed at the Parramatta Local Government Area (LGA) level. An Input-Output model, including the development of specific regional Input-Output transaction tables, was developed to reflect the economic structure of the Parramatta 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 Table A.1.

Table A.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 following 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.

Drivers of Economic Activity

In order to understand the economic impacts likely to result from the Proposal, 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.

- **Construction Phase**: Construction activity will draw resources from and thereby generate economic activity in the Parramatta LGA as well as from outside the LGA. Assumptions are made on the proportion sourced from within and from outside the LGA.
- **Operations Phase**: On completion of development, the Site is expected to generate ongoing economic/ operational activity through the direct turnover generated by the retail commercial operational activities, as well as the dispersed jobs of residents working from home.

Construction Phase

For modelling purposes, construction costs (including contingency) for the Proposal Case were broken down into their respective ANZSIC industries. As the Base Case does not involve any construction activity, drivers of the Construction phase were examined for the Proposal Case only. This breakdown was developed based on assumptions by AEC regarding the most appropriate ANZSIC industries for each activity.

Table A.2: Construction Cost Allocations, Proposal Case

Component	Proposal ($M)	ANZSIC
Demolition	$5.6	Construction Services
Car Parking	$66	Non Residential Building Construction
Residential Construction	$290	Residential Building Construction
Retail, Commercial and Recreation Floorspace	$6.1	Non Residential Building Construction
Site Works and Infrastructure	$7.4	Construction Services
Landscaping	$4.3	Construction Services
Professional Fees	$37.9	Professional, Scientific and Technical Services
Total	**$417.3**	

Source: AEC, Bureau of Urban Architecture

Only the construction activity expected to be undertaken within the Parramatta LGA has been included in the economic impact assessment. For the purposes of this assessment it was assumed:

- Approximately 50% of the direct expenditure on construction-related (i.e. Non-Residential Building Construction and Construction Services) activity would be sourced from local businesses and labour. Of this:
    - Approximately 25% of purchases on goods and services (supply chain related activity) made by construction-related businesses sourced from outside the Parramatta LGA would be spent within the local economy (i.e., 25% of the Type I flow on activity associated with non-local construction companies is assumed to represent additional local activity in Parramatta LGA).
    - Approximately 5% of wages and salaries paid to construction-related workers sourced from outside the region would be spent on local goods and services, such as food and beverages (i.e., 5% of the Type II flow on activity associated with non-local workers is assumed to represent additional local activity in Parramatta LGA).
- Approximately 15% of the direct expenditure on professional, scientific and technical services activity would be sourced from local businesses and labour.

Only flow-on activity of locally sourced professional, scientific and technical services activity is included, as it is not anticipated professional, scientific and technical services businesses located outside of Parramatta LGA would purchase goods/ services from within Parramatta LGA.

Base Case Operational Phase

In order to model the economic impacts, operational employment levels for the economic activity occurring in the two Base Case scenarios were categorised into the ANZSIC industries which AEC considered most appropriate. Employment by industry estimates were converted to an output value using a multiplier based on the national transaction table (ABS, 2017b; ABS, 2017c). The resultant estimates of output were modelled as the direct activity associated with the two Base Case scenarios.

Base Case (Scenario 1)

Scenario 1 assumes existing Homart Pharmaceuticals continues its operations, accommodating 48 onsite jobs. The ANZSIC industry allocations and estimated output drivers generated by the 48 jobs is outlined in Table A.3 and Table A.4.

Table A.3: Operational FTE Allocation, Base Case (Scenario 1)

Activity	ANZSIC Sector Allocation	FTE
Industrial/Commercial	Manufacturing	15
	Wholesale Trade	10
	Retail Trade	10
	Transport, Postal and Warehousing	8
	Administrative and Support Services	5
Total	**-**	**48**

Source: AEC, FIFE Capital

Table A.4: Operational Output Drivers, Base Case (Scenario 1)

ANZSIC Sector	Output ($M)
Manufacturing	$10.39
Wholesale Trade	$3.5
Retail Trade	$1.3
Transport, Postal and Warehousing	$3.9
Administrative and Support Services	$1.9
Total	**$21.4**

Source: AEC

Base Case (Scenario 2)

Scenario 2 assumes Homart Pharmaceuticals continues its operations, accommodating 48 onsite jobs. The scenario additionally assumes the premises vacated by former tenant Symbion will be re-let to accommodate a similar number of workers as was previously. The ANZSIC industry allocations and estimated output drivers generated by the 48 jobs is outlined in Table A.5 and Table A.6.

Table A.5: Operational FTE Allocation, Base Case (Scenario 2)

Activity	ANZSIC Sector Allocation	FTE
Industrial/Commercial	Agriculture, Forestry and Fishing	0
	Mining	0
	Manufacturing	32
	Electricity, Gas, Water and Waste Services	0
	Construction	20
	Wholesale Trade	6

Activity	ANZSIC Sector Allocation	FTE
	Retail Trade	14
	Accommodation and Food Services	1
	Transport, Postal and Warehousing	12
	Information Media and Telecommunications	1
	Financial and Insurance Services	0
	Rental, Hiring and Real Estate Services	1
	Professional, Scientific and Technical Services	3
	Administrative and Support Services	7
	Public Administration and Safety	6
	Education and Training	1
	Health Care and Social Assistance	1
	Arts and Recreation Services	0
	Other Services	3
Total	**-**	**108**

Source: AEC, FIFE Capital

Table A.6: Operational Output Drivers, Base Case (Scenario 2)

ANZSIC Sector	Output ($M)
Agriculture, Forestry and Fishing	$0.00
Mining	$0.02
Manufacturing	$19.13
Electricity, Gas, Water and Waste Services	$0.24
Construction	$4.35
Wholesale Trade	$5.65
Retail Trade	$1.83
Accommodation and Food Services	$0.18
Transport, Postal and Warehousing	$5.03
Information Media and Telecommunications	$0.26
Financial and Insurance Services	$0.19
Rental, Hiring and Real Estate Services	$0.35
Professional, Scientific and Technical Services	$0.66
Administrative and Support Services	$2.59
Public Administration and Safety	$1.05
Education and Training	$0.10
Health Care and Social Assistance	$0.16
Arts and Recreation Services	$0.02
Other Services	$0.43
Total	**$42.22**

Source: AEC

Proposal Case Operational Phase

The mix of land uses as envisaged under the Proposal Case would generate economic activity consisting of:

- Operational employment from retail/commercial activities.
- Dispersed jobs, i.e. people working from home.

Output estimates for the resultant activity operational employment from the proposed retail/commercial activities (non-residential floorspace) was developed using the same assumptions and methodologies as outlined above for the Base Case.

Data provided indicates the Proposal would accommodate approximately 1,513 new residents, of which 31 persons would be working from home. These 31 dispersed jobs are allocated into their relevant ANZSIC industries to calculate estimated output drivers.

These ANZSIC allocations and operational output estimates for the Proposal Case are outlined in Table A..

Table A.7: Operational FTE Allocation of Non-Residential Floorspace, Proposal Case

Activity	ANZSIC Allocation	GFA (sqm)	GFA (sqm)/FTE	FTE
Retail	Retail Trade	100	25	4
Commercial	Professional, Scientific and Technical Services	1260	20	63
Childcare	Health Care and Social Assistance	140	14	10
Gym	Arts and Recreation Services	1000	50	20
Site Management	Administrative and Support Services	-	-	5
Total	**-**	**2,500**	**-**	**119**

Source: AEC

Table A.8: Operational Output Drivers, Proposal Case

ANZSIC Sector	Output ($M) Non-Residential	Output ($M) Dispersed Jobs	Output ($M) Total
Agriculture, Forestry and Fishing	$0.0	$0.2	$0.2
Mining	$0.0	$0.0	$0.0
Manufacturing	$0.0	$0.4	$0.4
Electricity, Gas, Water and Waste services	$0.0	$0.1	$0.1
Construction	$0.0	$1.0	$1.0
Wholesale Trade	$0.0	$0.4	$0.4
Retail Trade	$0.3	$0.2	$0.5
Accommodation and Food Services	$0.0	$0.1	$0.3
Transport, Postal and Warehousing	$0.0	$0.3	$0.3
Information Media and Telecommunications	$0.0	$0.7	$0.7
Financial and Insurance Services	$0.0	$1.3	$1.3
Rental, Hiring and Real Estate Services	$0.0	$0.5	$0.5
Ownership of Dwellings	$0.0	$2.3	$18.0
Professional, Scientific and Technical Services	$15.7	$0.6	$1.1
Administrative and Support Services	$0.5	$0.1	$0.1
Public Administration and Safety	$0.0	$0.2	$0.2
Education and Training	$0.0	$0.3	$1.5
Health Care and Social Assistance	$1.2	$0.2	$4.3
Arts and Recreation Services	$4.1	$0.2	$0.2
Other Services	$0.0	$0.2	$0.2
Total	**$21.8**	**$8.9**	**$31.0**

Source: AEC

HOUSEHOLD EXPENDITURE SUPPORTED

This section outlines the household expenditure that would be associated with the dwellings proposed as part of the Proposal Case, and potential economic activity supported. The household expenditure activity supported **should not be combined** with the impacts in the section above, as some of these impacts are likely to have already been captured in the assessment (e.g. some expenditure on retail and food and beverages by households is likely to spent at the retail and food and beverage outlets locating on-site).

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

Household Expenditure

The ABS Household Expenditure Survey (ABS, 2017e) was 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 Parramatta LGA as outlined in the 2016 Census of Population and Housing (ABS, 2017a), annualised and allocated into their respective ANZSIC industries. The breakdown to ANZSIC industries was developed based on assumptions by AEC regarding the most appropriate ANZSIC industries for each activity.

Table A.Table A.9 shows the household expenditure estimates for the Parramatta LGA should the Site be redeveloped to accommodate 795 new dwellings.

Table A.9: Household Expenditure by Industry, Proposal Case Estimate

Industry	Expenditure Estimate	Proportion Spent in Parramatta LGA	Parramatta LGA Estimate
Retail trade	$20.59	75%	$15.44
Ownership of Dwellings	$4.98	100%	$4.98
Food and Beverage Services	$4.16	50%	$2.08
Finance	$4.59	35%	$1.61
Primary and Secondary Education Services (incl Pre-Schools and Special Schools)	$1.33	85%	$1.13
Health Care Services	$1.36	80%	$1.09
Public Administration	$1.93	50%	$0.97
Construction Services	$1.76	50%	$0.88
Insurance and Superannuation Funds	$3.38	25%	$0.84
Rental and Hiring Services (excl. Real Estate)	$0.73	75%	$0.55
Personal Services	$0.73	75%	$0.55
Residential Care and Social Assistance	$0.91	60%	$0.54
Automotive Repair and Maintenance	$0.67	50%	$0.34
Sports and Recreation	$0.57	50%	$0.29
Road Transport	$0.51	50%	$0.25
Non-residential Property Operators and Real Estate Services	$0.30	75%	$0.23
Professional, Scientific and Technical Services	$0.38	45%	$0.17
Technical, Vocational and Tertiary Education Services (incl undergraduate and postgraduate)	$0.64	20%	$0.13
Heritage, Creative and Performing Arts	$0.25	50%	$0.13
Other Services	$0.17	50%	$0.09
Building Cleaning, Pest Control and Other Support Services	$0.17	50%	$0.08
Gambling	$0.16	50%	$0.08
Motion Picture and Sound Recording	$0.09	75%	$0.06
Other Repair and Maintenance	$0.12	50%	$0.06
Arts, Sports, Adult and Other Education Services (incl community education)	$0.15	25%	$0.04
Rail Transport	$0.07	50%	$0.03
Postal and Courier Pick-Up and Delivery Services	$0.03	50%	$0.01
Auxiliary Insurance Services	$0.03	25%	$0.01
Accommodation	$0.02	10%	$0.00
Electricity Transmission, Distribution, On Selling and Electricity Market Operation	$1.05	0%	$0.00
Gas Supply	$0.3	0%	$0.0
Water Supply, Sewerage and Drainage Services	$0.0	0%	$0.0
Telecommunications Services	$1.3	0%	$0.0
Internet Service Providers, Internet Publishing and	$0.2	0%	$0.0

Industry	Expenditure Estimate	Proportion Spent in Parramatta LGA	Parramatta LGA Estimate
Broadcasting, Websearch Portals and Data Processing			
Broadcasting (except Internet)	$0.2	0%	$0.0
Water, Pipeline and Other Transport	$0.0	0%	$0.0
Air and Space Transport	$0.3	0%	$0.0
Total	**$54.17**		**$32.65**

Source: ABS (2017e), AEC

BRISBANE
Level 5, 131 Leichhardt Street
Spring Hill QLD 4000
Australia
T: +61 (0)7 3831 0577

MELBOURNE
Level 13, 200 Queen Street
Melbourne VIC 3000
Australia
T: +61 (0)3 8648 6586

SYDNEY
Level 14, 25 Bligh Street,
Sydney NSW 2000
Australia
T: +61 (0) 2 9283 8400

BANGKOK
2024/129-130 Sukhumvit 50
Prakanong Klongtoey,
Bangkok, Thailand 10260
T: +66 2 107 0189

DARWIN
Level 1, 48-50 Smith Street
Darwin NT 0800
Australia
T: 1300 799 343

PERTH
Level 2, 580 Hay Street
Perth WA 6000
Australia
T: +61 (0) 8 6555 4940

TOWNSVILLE
233 Flinders Street East
Townsville QLD 4810
Australia
T: +61 (0)7 4771 5550

SHANGHAI
46F Hongkong New World Tower
300 Huahai Road Central
200021 China
T: +8621 6135 2310

aecgroupltd.com

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