

# CHERRYBROOK STATION STATE SIGNIFICANT PRECINCT

LANDCOM  
MARCH 2022



[aecgrouppltd.com](http://aecgrouppltd.com)

## DOCUMENT CONTROL

---

Job ID: J001413  
Job Name: Cherrybrook Economic and Land Use Assessment  
Client: Landcom  
Client Contact: Samantha Mitchell  
Project Manager: Christine Yang  
Email: [christine.yang@aecgrouppltd.com](mailto:christine.yang@aecgrouppltd.com)  
Telephone: 02 9283 8400  
Document Name: Cherrybrook Economic and Land Use Assessment  
Last Saved: 31/3/2022 12:07 PM

Version	Date	Reviewed	Approved
Draft v1.0	11/11/20	CY	BS
Draft v1.1	13/11/20	CY	BS
Final	30/11/20	CY	BS
Revised Draft	18/03/22	CY, KI	CY
Revised Final	31/03/22	CY, KI	CY

Disclaimer:

Whilst all care and diligence have been exercised in the preparation of this report, AEC Group Pty Ltd does not warrant the accuracy of the information contained within and accepts no liability for any loss or damage that may be suffered as a result of reliance on this information, whether or not there has been any error, omission or negligence on the part of AEC Group Pty Ltd or their employees. Any forecasts or projections used in the analysis can be affected by a number of unforeseen variables, and as such no warranty is given that a particular set of results will in fact be achieved.

# EXECUTIVE SUMMARY

---

## BACKGROUND

As a State Significant Precinct, the Minister for Planning and Public Spaces (the Minister) has determined that it is of State planning significance and should be investigated for rezoning. This investigation will be carried out in accordance with study requirements issued by the NSW Department of Planning, Industry and Environment (now Department of Planning and Environment (DPE)) in May 2020. These study requirements were prepared in collaboration with Hornsby Shire Council and The Hills Shire Council.

The outcome of the State Significant Precinct process will be new planning controls. This will enable the making of development applications to create a new mixed-use local centre to support Cherrybrook Station and the needs of the local community.

## PURPOSE & APPROACH

The Study's findings will assist in achieving the following objectives for the precinct:

- facilitate a mixed-use local centre at Cherrybrook Station that supports the function of the station and the needs of the local community
- deliver public benefit through a mixed-use local centre
- deliver transport and movement initiatives and benefits
- demonstrate the suitability of the site for the proposed land uses
- prepare a new planning framework for the site to achieve the above objectives.

AEC have been engaged by Landcom to carry out an Economic Assessment. The scope of works includes:

- An analysis of the market demand for the commercial/retail components (by category and size) of the proposal based on trade area of the proposed local centre and also the impacts on the existing nearby shopping centres.
- Economic assessment of the proposal, including the wider economic benefits in relation to employment, commercial and retail impacts.

In meeting with the requirements of the brief, this Study:

- Reviews the strategic context of the Site, including location, resident trade area and projected population growth.
- Analyses the potential land uses which would be viable on the Site, considering existing and future market factors and influences.
- Identifies the impact of the Proposal on nearby shopping centres;
- Considers and quantifies the economic benefits associated with the selected land uses which could eventuate from the Proposal, including employment generation, construction multiplier impacts, etc.
- Assesses the net economic impact of the Proposal.

## MARKET DEMAND ASSESSMENT

Key findings on the potential for retail and complementary uses as part of the Cherrybrook Station Precinct are as follows:

- The defined main trade area resident population is estimated at 45,177 (2020) and is projected to increase to 50,975 persons by 2041, representing an average annual growth rate of 0.6%.
- The existing provision of supermarkets within the main trade area comprises only one full-line supermarket at Cherrybrook Village (3,923 sqm) along with three other smaller format stores (less than 2,000 sqm).

- Castle Towers Regional Shopping Centre is located immediately beyond the trade area. Although this centre contains supermarkets, its size limits the convenience of the centre for supermarket shopping.
- Given the location, size, market demand and surrounding facilities, the Cherrybrook Station Precinct is suited for a convenience offering (supermarket-anchored) of approximately 3,000 sqm – 5,000 sqm.
- A small provision of non-retail shopfronts could also be provided to complement the convenience offer of the Precinct. This includes banks, Australia Post etc.
- Analysis of comparable transit-oriented developments indicates that food catering, food retail and retail services form essential components of supermarket-based centres, and provision of other retail such as apparel, leisure and household goods are limited.
- There are several competitive retail facilities within the defined main trade area, however, these are of limited competitive relevance to the planned retail floorspace as part of the mixed-use development site at the Precinct which will primarily be convenience-based retail serving immediate residents and commuters.

Table ES. 1 summarises the recommended floorspace and tenant mix based on the retail provision indicated the masterplan, as well as a higher floorspace option that can also be supportable in the Precinct.

**Table ES. 1: Indicative Floorspace Recommendations and Tenant Mix**

Category	Examples	GLA (sqm)	
		Low	High
<b>Supermarket</b>		1,650	3,000
<b>Food Catering</b>	<i>Cafes, restaurants, takeaway shops</i>	500	500
<b>Food Retail</b>	<i>Fresh produce, liquor stores</i>	375	500
<b>General Retail</b>	<i>Pharmacy, newsagency</i>	150	200
<b>Retail Services</b>	<i>Hairdresser, beauty salon</i>	125	300
<b>Non-Retail Uses</b>	<i>Australia Post, banks</i>	100	200
<b>Medical</b>	<i>Medical centre, Health services</i>	-	300
<b>Commercial</b>	<i>Offices</i>	-	500
<b>Total Retail</b>		<b>2,800</b>	<b>4,500</b>
<b>Total Non-Retail</b>		<b>100</b>	<b>1,000</b>
<b>Total</b>		<b>2,900</b>	<b>5,500</b>

Source: AEC

## ECONOMIC IMPACT ASSESSMENT

### Drivers of Economic Activity

Economic impacts during the construction phase are temporary in nature whereas economic impacts following construction completion and operations commencement are more permanent in nature.

- **Construction Phase:** Construction activity will draw resources from and thereby generate economic activity in Hornsby 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 following:
  - Direct turnover generated by the retail, food and beverage, and commercial operational activities.
  - Direct turnover generated by community facility operational activities.
  - The direct turnover generated by residents working from home.
- **Household Expenditure:** The additional household expenditure circulated through the Hornsby LGA resulting from both the residential and commercial developments.

### Economic Activity and Economic Impact

Once fully developed and operational, the Proposal could provide significant economic benefits to the Hornsby LGA each year.

- Economic activity from businesses locating to the site, as well as employees working from home and through induced household spend in the Hornsby LGA economy, is estimated to support 125 direct jobs and 45 indirect jobs elsewhere in the Hornsby LGA.
- The economic activity is estimated to support approximately \$33.3 million in output and \$18.5 million in contribution to Gross Regional Product (GRP) with circa \$12.1 million in incomes and salaries paid to households.

The Proposal would deliver a clear, strong positive economic impact comparative to the Base Case. Delivery of the Proposal contributes to supporting growth of both the North region and the broader Northern City District and results in a strong net positive economic impact.

# TABLE OF CONTENTS

---

<b>DOCUMENT CONTROL.....</b>	<b>I</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>II</b>
<b>TABLE OF CONTENTS .....</b>	<b>V</b>
<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1 BACKGROUND & CONTEXT .....	1
1.2 SCOPE AND APPROACH.....	2
1.3 THE PROPOSAL .....	2
1.4 ASSUMPTIONS AND LIMITATIONS .....	4
<b>2. MARKET DEMAND ASSESSMENT .....</b>	<b>5</b>
2.1 REGIONAL AND LOCAL CONTEXT .....	5
2.2 TRADE AREA POPULATION.....	6
2.3 RETAIL MARKET ANALYSIS .....	8
2.4 COMMERCIAL MARKET ANALYSIS .....	11
2.5 IMPACT ON EXISTING NEARBY CENTRES .....	12
2.6 IMPLICATIONS FOR THE PRECINCT .....	13
<b>3. ECONOMIC IMPACT ASSESSMENT .....</b>	<b>15</b>
3.1 MODELLING DRIVERS .....	15
3.2 ECONOMIC ACTIVITY AND IMPACTS.....	19
<b>REFERENCES.....</b>	<b>24</b>
<b>APPENDIX A: INPUT-OUTPUT METHODOLOGY .....</b>	<b>25</b>
<b>APPENDIX B: MODEL RESULTS .....</b>	<b>28</b>



# 1. INTRODUCTION

## 1.1 BACKGROUND & CONTEXT

This study relates to a proposal to develop land called the 'Cherrybrook Station Government Land State Significant Precinct' (the State Significant Precinct) by Landcom on behalf of the landowner, Sydney Metro. The State Significant Precinct is centred around Cherrybrook Station on the Metro North West Line. The Metro North West Line delivers a direct connection with the strategic centres of Castle Hill, Norwest, Macquarie Park and Chatswood. It covers 7.7 hectares of government-owned land that comprises the Cherrybrook Station, commuter carpark and station access road (Bradfield Parade) and vacant land to the east of the station (referred to as the Developable Government Land) (DGL). It is bound by Castle Hill Road (south), Franklin Road (south east) and Robert Road (north west).

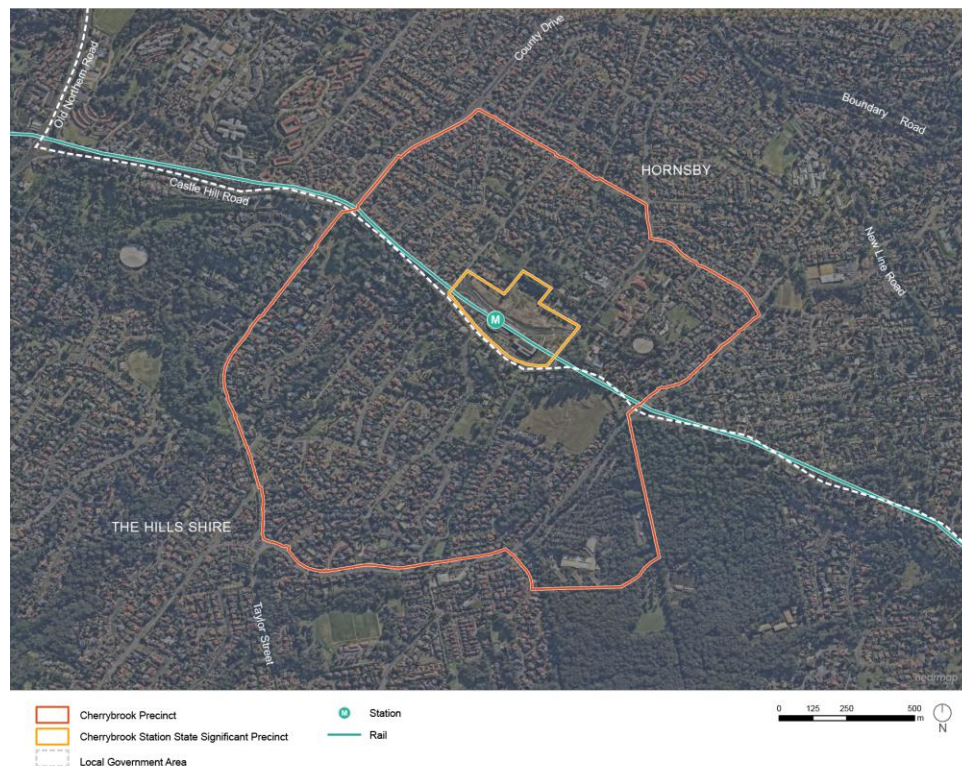
As a State Significant Precinct, the Minister for Planning and Public Spaces (the Minister) has determined that it is of State planning significance and should be investigated for rezoning. This investigation will be carried out in accordance with study requirements issued by the NSW Department of Planning, Industry and Environment (now Department of Planning and Environment (DPE)) in May 2020. These study requirements were prepared in collaboration with Hornsby Shire Council and The Hills Shire Council.

The outcome of the State Significant Precinct process will be new planning controls. This will enable the making of development applications to create a new mixed-use local centre to support Cherrybrook Station and the needs of the local community.

At the same time, DPE is also working with Hornsby Shire and The Hills Shire Councils, as well as other agencies such as Transport for NSW, to undertake a separate planning process for a broader area called the Cherrybrook Precinct. Unlike the State Significant Precinct, the outcome of this process will not be a rezoning. Instead, it will create a Place Strategy that will help set the longer term future for this broader area. Landcom will be consulted as part of this process.

Figure 1.1 illustrates the site boundaries of the State Significant Precinct and the Cherrybrook Precinct.

**Figure 1.1: Cherrybrook Precinct and Cherrybrook Station State Significant Precinct.**



Source: NSW Department of Planning, Industry & Environment

## 1.2 SCOPE AND APPROACH

The purpose of this study is to address the relevant study requirements for the State Significant Precinct, as issued by DPE. It is part of a larger, overall State Significant Precinct Study. This State Significant Precinct Study undertakes planning investigations for the precinct in order to achieve a number of objectives that are summarised as follows (refer to the State Significant Precinct Study Planning Report for a full list of the study requirements):

- facilitate a mixed-use local centre at Cherrybrook Station that supports the function of the station and the needs of the local community
- deliver public benefit through a mixed use local centre
- deliver transport and movement initiatives and benefits
- demonstrate the suitability of the site for the proposed land uses
- prepare a new planning framework for the site to achieve the above objectives.

AEC Group (AEC) has been commissioned by Landcom to undertake an Economic Analysis of the Proposal under the State Significant Precinct study requirements (SR 14). Table 1.1 lists the study requirements under SR 14 and which section of the report the study requirement is addressed.

**Table 1.1: State Significant Precinct Study Requirements**

SR	Description	Reference
14.1	Provide an analysis of the market demand for the commercial/retail components (by category and size) of the proposal based on trade area of the proposed local centre and also the impacts on the existing nearby shopping centres.	Chapter 2 of this report
14.2	Provide an economic assessment of the proposal, including the likely wider economic benefits in relation to employment, commercial and retail impacts.	Chapter 3 of this report
14.3	Undertake a feasibility analysis of future development to contribute towards local, State and regional infrastructure.	Addressed in the Infrastructure Delivery Strategy

Source: AEC/Landcom.

In meeting with the requirements of the brief, this Study:

- Reviews the strategic context of the Site, including location, resident trade area and projected population growth.
- Analyses the potential land uses which would be viable on the Site, considering existing and future market factors and influences.
- Identifies the impact of the Proposal on nearby shopping centres;
- Considers and quantifies the economic benefits associated with the selected land uses which could eventuate from the Proposal, including employment generation, construction multiplier impacts, etc.
- Assesses the net economic impact of the Proposal.

## 1.3 THE PROPOSAL

The proposed new planning controls for the State Significant Precinct are based on the investigations undertaken as part of the State Significant Precinct Study process. A Reference Scheme has also been prepared to illustrate one way in which the State Significant Precinct may be developed in the future under the proposed new planning controls.

The proposed planning controls comprise amendments to the Hornsby LEP 2013 to accommodate:

- Rezoning of the site for a combination of R4 High Density Residential, B4 Mixed Use and RE1 Public Recreation zoned land;



- Heights of between 18.5m – 22m;
- FSR controls of 1:1 – 1.25:1;
- Inclusion of residential flat buildings as an additional permitted use on the site in the B4 Mixed Use zone;
- Site specific LEP provisions requiring the delivery of a minimum quantity of public open space and a maximum amount of commercial floor space; and
- New site-specific Design Guide addressing matters such as open space, landscaping, land use, built form, sustainability and heritage.

The Reference Scheme (refer to Figure 1.2) seeks to create a vibrant, transit-oriented local centre, which will improve housing choice and affordability and seeks to integrate with Hornsby's bushland character. The Reference Scheme includes the following key components:

- Approximately 33,350m<sup>2</sup> of residential GFA, with a yield of approximately 390 dwellings across 12 buildings ranging in height from 2 to 5 storeys (when viewed from Bradfield Parade).
- A multi-purpose community hub with a GFA of approximately 1,300m<sup>2</sup>.
- Approximately 3,200m<sup>2</sup> of retail GFA.
- Over 1 hectare of public open space, comprising:
  - A village square with an area of approximately 1,250m<sup>2</sup>, flanked by active retail and community uses.
  - A community gathering space with an area of approximately 3,250m<sup>2</sup>.
  - An environmental space around the pond and Blue Gum High Forest with an area of approximately 8,450m<sup>2</sup>.
- Green corridors and pedestrian through site links, providing opportunities for potential future precinct-wide integration and linkages to the north.

**Figure 1.2: Reference Scheme**



Source: SJB.

## 1.4 ASSUMPTIONS AND LIMITATIONS

The Study is predicated on a number of assumptions and is subject to a number of limitations.

- Input-Output modelling has been used in assessing the economic impacts of the Proposal, and this methodology is subject to a range of assumptions and limitations. An overview of the broad assumptions and limitations of Input-Output modelling is presented in Appendix A.
- In addition to the general assumptions and limitations inherent in Input-Output modelling, assumptions have been made regarding where goods and services are likely to be sourced during construction of The Proposal. The accuracy of the estimated economic impacts is limited by the accuracy of the assumptions used for construction and ongoing enabled activity.
- This Study was first prepared by AEC Group for Landcom in 2020, and has been updated to reflect a revision in the Reference Scheme. The market demand assessment in this Study (Section 2) has not been updated in the latest version of the report, however, it is not likely that there are any significant changes that will result in a material impact to the findings and recommendations of this Study.

This Study is prepared on the instructions for the party to whom it is addressed and is not suitable for use other than by that party.

## 2. MARKET DEMAND ASSESSMENT

This chapter assesses the market demand for retail and commercial floorspace provision in the Precinct and the impacts on the existing nearby shopping centres.

### 2.1 REGIONAL AND LOCAL CONTEXT

The subject site is located in Cherrybrook, 27km north-west of the Sydney Central Business District (CBD) in the local government area of Hornsby Shire. The site was acquired by Transport for NSW (TfNSW) for the Sydney Metro Northwest project.

The site is approximately 7.7ha of government-owned land that comprises the Cherrybrook Station, commuter carpark and station access road (Bradfield Parade) and vacant land to the east of the station (referred to as the Developable Government Land) (DGL). It is generally based on an 800m radius or 10-minute walk from the Cherrybrook Station which is the eastern-most station on the Metro North West which opened in May 2019.

Figure 2.1 illustrates the total Sydney Metro owned land, and the developable government land (DGL). The figure shows the local context of the new Cherrybrook Station, situated beside Castle Hill Road between Franklin Road and Robert Road.

**Figure 2.1: Map of Cherrybrook Metro Station**



Source: Landcom

**Table 2.1: Cherrybrook Station Precinct**

Land	Size
Sydney Metro Total Land	7.7 ha
Developable area incl. public domain	3.5 ha
Net area for property development	1.8 ha

Source: Landcom.

Overall, the Precinct enjoys a relatively high profile within the immediate locality, being positioned with frontage onto Castle Hill Road, a main east-west route through Cherrybrook, joining with Old Northern Road.



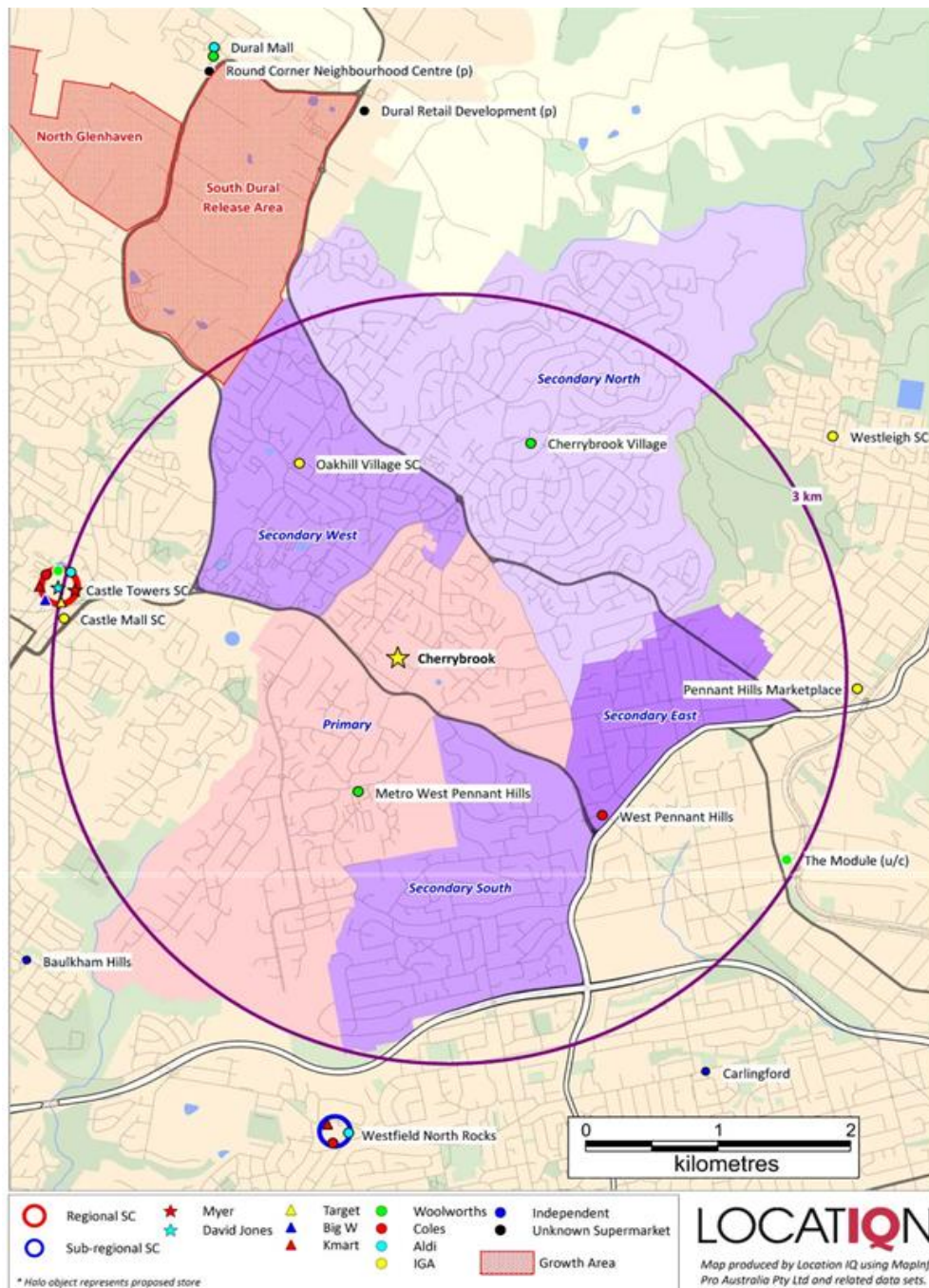
## 2.2 TRADE AREA POPULATION

The trade area that is served by any retail facility or centre is influenced by a number of factors, including:

- Regional and local accessibility.
- The pattern of urban development.
- Man-made and physical barriers such as roads, rivers and railways.
- The provision of competitive facilities throughout the surrounding area.

Figure 2.2 illustrates the defined resident trade area for proposed retail facilities at the Precinct.

**Figure 2.2: Resident Main Trade Area and Retail Competition**



Source: Location IQ.

The main trade area is defined as follows:

- The **primary sector** incorporates parts of the suburbs of Cherrybrook and West Pennant Hills, bounded in the north by New Line Road and Excelsior Creek in the west.
- The **secondary north sector** encompasses the northern part of the suburb of Cherrybrook as well as parts of Dural, bounded in the south by New Line Road.
- The **secondary east sector** contains parts of the suburb of Pennant Hills and West Pennant Hills, bounded in the west by the Cumberland Highway.
- The **secondary south sector** comprises parts of the suburb of West Pennant Hills and is bounded in the east and south by the Cumberland Highway and M2 Hills Motorway.
- The **secondary west sector** generally encompasses the suburbs of Castle Hill and is bounded by New Line Road in the north, Country Drive to the east, Castle Hill Road to the south and Old Northern Road in the west.

The trade area served by the development extends by 1-3 km around the Precinct, typical of any supermarket facility. It is restricted by retail facilities at Castle Hill to the west and Westfield North Rocks to the south.

## 2.2.1 Population

The main trade area resident population is currently estimated at 45,177 (2020) and is projected to increase to 50,975 persons by 2041, representing an average annual growth rate of 0.6%.

The rate of population growth within the main trade area, particularly the primary sector, would depend on sales of the proposed developments such as those listed above. If developments take longer to occur as compared with projections, the rate of population growth will be slower but ultimately there will still be a significant population level within the region over time.

**Table 2.2: Cherrybrook Resident Main Trade Area Population, 2016 – 2041**

Trade Area Sector	ERP <sup>1</sup>		Forecast Population				
	2016	2020	2021	2026	2031	2036	2041
Primary Sector	13,044	12,894	12,857	13,159	13,465	13,588	14,397
<b>Secondary Sectors</b>							
• North	14,834	14,711	14,681	15,268	15,445	15,493	15,727
• East	3,971	4,017	4,029	4,029	4,037	4,077	4,175
• South	5,641	5,552	5,529	5,556	5,611	5,662	6,012
• West	7,825	8,002	8,047	8,411	9,229	9,779	10,664
Total Secondary	32,271	32,283	32,285	33,264	34,322	35,010	36,578
<b>Main Trade Area</b>	<b>45,315</b>	<b>45,177</b>	<b>45,142</b>	<b>46,423</b>	<b>47,787</b>	<b>48,598</b>	<b>50,975</b>
<b>Average Annual Change (No.)</b>							
	<b>2016-20</b>	<b>2020-21</b>	<b>2021-2026</b>	<b>2026-31</b>	<b>2031-36</b>	<b>2036-41</b>	<b>2020-41</b>
Primary Sector	-37	-37	61	61	25	162	72
<b>Secondary Sectors</b>							
North	-31	-31	117	35	10	47	48
East	12	12	0	2	8	20	7
South	-22	-22	5	11	10	70	22
West	44	44	73	164	110	177	127
Total Secondary	3	3	196	212	138	314	205
<b>Main Trade Area</b>	<b>-35</b>	<b>-35</b>	<b>256</b>	<b>273</b>	<b>162</b>	<b>475</b>	<b>276</b>
<b>Average Annual Change (%)</b>							
Primary Sector	-0.3%	-0.3%	0.5%	0.5%	0.2%	1.2%	0.6%
<b>Secondary Sectors</b>							
• North	-0.2%	-0.2%	0.8%	0.2%	0.1%	0.3%	0.3%



Trade Area Sector	ERP <sup>1</sup>		Forecast Population				
	2016	2020	2021	2026	2031	2036	2041
• East	0.3%	0.3%	0.0%	0.0%	0.2%	0.5%	0.2%
• South	-0.4%	-0.4%	0.1%	0.2%	0.2%	1.2%	0.4%
• West	0.6%	0.6%	0.9%	1.9%	1.2%	1.8%	1.6%
Total Secondary	0.0%	0.0%	0.6%	0.6%	0.4%	0.9%	0.6%
<b>Main Trade Area</b>	<b>-0.1%</b>	<b>-0.1%</b>	<b>0.6%</b>	<b>0.6%</b>	<b>0.3%</b>	<b>1.0%</b>	<b>0.6%</b>

<sup>1</sup> ERP = Estimated Resident Population

All figures are based on 2019 Travel Zones or TZ level as defined by Transport for NSW.

Source: TfNSW (2019), AEC.

### 2.2.2 Socio-economic Profile

The socio-economic profile of the Cherrybrook main trade area resident population is compared with the Sydney metropolitan benchmarks (based on the 2016 Census of Population and Housing):

- Main trade area residents earn income levels that are higher than the Sydney metropolitan benchmark on both a per capita and a household basis.
- The average age of main trade area residents at 40.2 years is older than the Sydney benchmark (37 years).
- Very high home ownership levels within all the sectors.
- A larger average household size (3.1 persons) compared with the benchmark (2.8 persons).
- A higher proportion of couples with children, particularly within the primary sector and secondary west sector as compared to the Sydney metropolitan average.

**Table 2.3: Socio-Economic Indicators, Main Trade Area**

Indicators	Main Trade Area	Metropolitan Sydney
<b>Household Income (weekly)</b>	\$2,768	\$2,161
<b>Personal Income (weekly)</b>	\$1,173	\$1,330
<b>Average Age</b>	40.23	37.13
<b>Home Ownership</b>	83.0%	63.3%
<b>Average Household Size</b>	3.10	2.79

Source: ABS (2017a, 2020d).

Overall, the main trade area population is characterised by a high proportion of traditional families who earn income levels higher than the Sydney metropolitan benchmark.

The shift in land uses from low density residential to multi-dwelling residential indicates that the future socio-economic profile of trade area residents will likely shift significantly over the next decade, to reflect younger, professional couples and families and potentially smaller households.

## 2.3 RETAIL MARKET ANALYSIS

The Australian retail environment has been labelled as the 'perfect storm' of conditions, where the already struggling retail sector has been rocked by several unexpected and devastating events in recent times. Since the beginning of 2020, a raft of Australian businesses has collapsed into administration and over 200 brick-and-mortar retail stores earmarked for closure. This follows a number of Australian retailers announcing administration in 2019.

Economic factors that contribute to the weak retail economy include:

- **Weak wage growth** – whilst there were tax offsets and lower interest rates in 2019, this provided limited support to spend to date. Australia's wage growth continues to flatline at an annual pace of 2.2% (ABS, 2020), with the public sector recording the lowest change since the start of the series since December 1997.
- **High debt levels** - The level of household debt to income has exceeded 190% for the first time (RBA, 2019). The data shows Australians have nearly twice as many debt as income, with Australia's level of household

debt second only to Switzerland. High household debt levels mean consumers are more cautious and generally tend to spend less.

- **Change in consumer preferences** – Commonwealth Bank's household spending intentions survey indicated a reluctance by consumers to spend on goods and a trend towards spending on experiences such as travel and entertainment.

Other major factors which has taken its toll on the recent retail environment include the local bushfire crisis and global COVID-19 outbreak, which has disrupted supply chains across the world as well as consumer foot traffic. Panic caused by the outbreak has also seen a boost in spending towards necessities such as cleaning supplies and food staples. The bushfire crisis resulted in many Australian households and businesses losing their possessions, with more than \$238 million in claims for losses being lodged in aggregate since the bushfire season in September 2019 (according to the Insurance Council of Australia). These events are expected to further weaken consumer confidence and thus resulting in less discretionary retail spend.

Online sales are estimated to represent 9.7% of all retail (12 months to March 2020). This is about 11.9% higher than the same period in the previous year. Even prior to the current environment, Australia's retailers were primed for ecommerce to grow rapidly in 2020. It is likely that the current circumstances will lead to a permanent change in consumer shopping behaviours. Previously, Australian consumers largely purchased discretionary items online, however now they are also shopping online for essential items such as groceries, pharmacy products and alcohol.

#### **Implications for the Precinct**

The effects of COVID-19 are a reminder that essential goods and services will continue to remain in demand throughout cycles and crises.

### **2.3.1 Retail Demand Analysis and Opportunities**

The retail component of the Cherrybrook Station Precinct is ideally located for convenience-based retailing to serve the needs of the immediate residents and commuters. Retail uses such as supermarkets, liquor stores, food catering (cafes and takeaway food shops) as well as general retail (newsagencies, pharmacies) will be most suited to this type of transit-oriented development.

Typically, one major full-line supermarket (i.e. 3,000 sqm or larger) that is most commonly operated by Woolworths and Coles, requires a catchment population of approximately 8,000 – 10,000 persons in order to be sustainable. The Cherrybrook main trade area currently has a population of 45,177 persons, which indicates an immediate demand for 4 full-line supermarkets.

Table 2.4 outlines the existing supermarket floorspace provision within the main trade area.

**Table 2.4: Existing Supermarket Floorspace Provision**

Trade Area	No. of Supermarkets*	GLA (sqm)	2020 Population	GLA per 1,000 persons
Primary Sector	1	1,204	12,894	93
<b>Secondary Sectors</b>				
• North	1	3,923	14,711	267
• East	1	1,924	4,017	479
• South	0	0	5,552	0
• West	1	700	8,002	87
Total Secondary	3	6,547	32,283	203
<b>Main Trade Area</b>	<b>4</b>	<b>7,751</b>	<b>45,177</b>	<b>172</b>
Australian Average				275

\*Defined as 500 sqm of larger  
Source: Location IQ, AEC.

The existing provision of supermarket floorspace within the main trade area is 172 sqm per 1,000 persons. This is lower than the average provision across Sydney metropolitan of 263 sqm per 1,000 sqm.

In terms of brand representation within the main trade area, Coles has one supermarket, Woolworths has two supermarkets, and IGA has one supermarket. Currently there is only one full-line supermarket provided in the main trade area (Woolworths supermarket at Cherrybrook Village). The remainder are smaller format stores, with the closest facilities outside the main trade area located at Castle Towers Shopping Centre.

Given the above, there is significant potential for a full-line supermarket in the Precinct, and potential for an additional supermarket in the future as the population continues to increase.

To complement the supermarket offering, a number of retail specialities can also be provided including food retail (butcher, bakery etc), food catering (takeaway restaurants and cafes), general retail (pharmacy, newsagency etc) and retail services (hairdresser, beauty salons, optometrists etc). These goods and services are likely to cater to the surrounding residents and commuters of the Cherrybrook Station.

A small provision of non-retail shopfronts could also be provided to complement the convenience offer of the Precinct. This includes banks, Australia Post etc.

Higher order retail facilities (department stores, discount department stores and large format/bulky goods) are unlikely to be supportable in the Precinct as these facilities require larger floorplates. These facilities are also provided in the regional centre of Castle Towers Shopping Centre.

### 2.3.2 Comparable Transit-Oriented Mixed-Use Developments (TODs)

In metropolitan Sydney, there are a number of examples of supermarket-based shopping in mixed-use developments locating in close proximity to train stations. These centres include:

- Chatswood Transport Interchange;
- The Forum, St Leonards;
- The Pottery, Kingsgrove;
- Lachlan's Line, Macquarie Park; and
- Lindfield Village, Lindfield.

Table 2.5 details the tenant mix of the comparable TODs in Sydney. Each centre is described below.

#### **Chatswood Transport Interchange**

The Chatswood Transport Interchange is above the Chatswood train station and is anchored by a Woolworths supermarket of 2,500sqm. There is no dedicated car parking for the supermarket which relies solely on patronage from the Chatswood train/bus station. Specialty retail near Woolworths is limited with the majority provided on the lower level adjacent to the train station entrance. These are predominantly convenience-based shops focussed around food catering, services and general retail such as newsagencies, dry cleaning, Priceline Pharmacy and McDonalds.

On the upper level directly above the train station there is a food catering precinct known as The District which predominantly includes sit-down restaurants and a food hall style arrangement with individual seating areas for each restaurant (i.e. not shared seating traditionally seen in a food court).

#### **The Forum, St Leonards**

Located above the St Leonards train station, the Forum comprises of 5,000sqm of retail floorspace anchored by a IGA supermarket of 800 sqm and some 34 specialty stores. The retail is accessed directly from the station ticket gates and at ground level (Pacific Highway). Included in the upper levels are three commercial office buildings and two residential towers containing nearly 800 apartments.

#### **The Pottery, Kingsgrove**

Located adjacent to the Kingsgrove train station, The Pottery is a four-storey mixed-use development within four blocks, containing 96 units, 2,905 sqm supermarket, 980 sqm of specialty retail and 150 sqm of ancillary commercial.

### Lachlan's Line, Macquarie Park

Nbh at Lachlan's Line in Macquarie Park is adjacent to the North Ryde Metro Station and comprises 592 apartments across six buildings. The development also includes a 5,000 sqm village, known as Lachlan's Square Village, which features a retail High Street, outdoor dining and restaurants, plus a range of health, fitness and retail service providers. The development is anchored by a 2,756 sqm Coles, which opened in September 2020 and services the development's residents and provide everyday shopping convenience for a trade population of over 19,000 people. A medical centre is also planned for the village, with expressions of interest for providers currently advertised.

### Lindfield Village, Lindfield

Lindfield Village is a mixed-use development adjacent to Lindfield train station, and features ground-level shops with 122 residential apartments across two towers. The Village comprises 2,750 sqm of GFA retail floorspace, including an IGA supermarket within a single storey retail podium.

**Table 2.5: Review of Centres**

Categories	Chatswood Interchange	The Forum St Leonards	The Pottery Kingsgrove	Lachlan's Line Macquarie Park	Lindfield Village
<b>Total Retail (sqm)</b>	<b>10,000</b>	<b>5,000</b>	<b>3,885</b>	<b>5,000</b>	<b>2,750</b>
Supermarket					
• Brand	Woolworths	IGA	Woolworths	Coles	Supamart IGA
• GLA (sqm)	2,500	800	2,905	2,756	1,237
<b>Retail Specialty Stores</b>					
Food and Liquor	7	2	2	2	3
Food Catering	38	16	2	5	2
Apparel	0	1	0	0	0
Household Goods	2	1	0	0	0
Leisure	0	2	0	0	0
General Retail	4	4	0	1	0
Retail Services	7	4	3	3	2
Non-retail	4	3	1	2	2
Vacancy	0	1	0	4	0
<b>Total</b>	<b>62</b>	<b>34</b>	<b>7</b>	<b>17</b>	<b>9</b>

Source: AEC(2020).

A review of comparable transit-oriented centres indicates a number of key elements critical to their success:

- A number of the centres provide an anchor tenant such as a supermarket serving the convenience needs of passing commuters.
- Food catering forms an important part of each of the centres, providing in most instances at least 2-3 food catering traders in precincts of a similar size.
- Food retail stores such as butchers, bakers and the like also form essential components of centres which include supermarkets serving commuters on their key run home through the train stations.
- The provision of apparel, leisure and household goods stores are limited.
- There is a strong provision of retail services (i.e. hairdressers, beauty, gyms etc.) as well as non-retail stores (banks, medical, travel agents, post office, real estate agents, etc.).

The foregoing observations on tenant mix would apply to retail facilities in the Cherrybrook Station Precinct.

## 2.4 COMMERCIAL MARKET ANALYSIS

Business clusters require critical mass to be viable, not just from a development standpoint but also from an operational perspective. Large swathes of land able that are able to be developed into a business park, office park and large format industrial will be attractive for commercial occupiers to locate therein. Particularly for business

park and office park users where tenant amenity is important, a critical mass of occupiers will facilitate provision of retail and other support services.

Major commercial tenancies generally benefit from co-location of facilities at major business parks and office precincts, which is not provided in Cherrybrook. Current locational and ownership dynamics of the Precinct makes it a poor development proposition for business park and office park uses. Large scale office development at the Precinct would also be difficult to achieve due to the designated competitive locations at Macquarie Park and Norwest. Of the key precincts surrounding the Precinct including Macquarie Park and Norwest, these facilities are primarily business parks providing:

- Good accessibility.
- Flexible floorspace.
- Affordable rents.
- Availability of on-site car parking.
- Access to a skilled workforce.

The market appeal of commercial floorspace within mixed use residential buildings is less likely to convey a corporate image or identity that is typically sought in larger business parks. Accordingly, large corporate occupiers are unlikely to seek space within a mixed-use residential building unless the space is innovative in design and finish.

In addition, the current climate (COVID-19) has seen a large proportion of offices move to remote work. These office trends are expected to permanently change the way companies use/require office spaces. As such, only serviced-based local firms who service a local customer catchment are likely to be supportable in the Precinct. The types of commercial floorspace that could be sustained in the Station Precinct would include smaller tenancies such as lawyers, accountants, financial services etc. Other non-retail uses include post offices, medical centre, real estate and gym/health facilities. A total of 500 sqm as a maximum could be supportable.

## 2.5 IMPACT ON EXISTING NEARBY CENTRES

Table 2.6 summarises existing competitive retail facilities provided within the defined total trade area.

Retail facilities within the locality form a typical retail hierarchy, including:

- **Regional Centre**

Castle Towers Shopping Centre is the closest regional shopping centre, situated some 3 km to the west. The centre is based on David Jones (16,992sqm) and Myer (14,454sqm) department stores (one of only seven shopping centres in Sydney with both department store tenants), Kmart and Target discount department stores and Coles and Aldi supermarkets.

Castle Towers also includes some 300 specialty shops over three levels as well as a cinema complex. According to Big Guns 2016, total centre sales for Castle Towers are some \$759 million. Stage 1 of the Castle Towers redevelopment was recently completed, with over 40 new retailers opened in December 2019 and early 2020 (mainly food retail and dining). The masterplan also includes two hotels, three residential towers and an office building atop the centre.

- **Sub-regional Centre**

North Rocks Shopping Centre is a small, solidly performing single discount department store based shopping centre, serving the convenience needs of the North Rocks region. The centre is anchored by Kmart (7,070sqm), Coles (2,072sqm) and Aldi, in addition to First Choice Liquor mini- major (1,010sqm) and retail specialty floorspace totalling 5,772sqm.

- **Supermarket Centres**

Key competing supermarket-based centres of relevance to the future retail facilities at the Precinct are:

- In the primary sector, a small Woolworths supermarket is located along Coonara Drive in West Pennant Hills.



- A small Coles supermarket is located along the Cumberland Highway at West Pennant Hills (secondary east sector).
- Cherrybrook Village (secondary north sector), located some 2.7km to the north, is anchored by a Woolworths supermarket (3,923sqm).
- An IGA of 700sqm is the main anchor of Oakhill Village Shopping Centre located within the secondary west sector.
- Beyond the trade area are a range of supermarket-based centres, more than 3km away at Dural, Pennant Hills, and Beecroft.

**Table 2.6: Existing Nearby Retail Centres**

Centre	Shopfront GLA (sqm)	Anchor Tenants	Distance from Precinct (km)
<b>Regional Shopping Centres</b>			
Castle Towers shopping centre	193,400	Myer (21,295sqm), David Jones (16,070sqm), Kmart (7,437sqm), Target (7,276sqm), Coles (4,366sqm), Aldi (1,350sqm)	2.6
Castle Mall shopping centre	9,700	Supa IGA (1,820sqm)	2.6
<b>Sub-regional Shopping Centres</b>			
North Rocks Shopping Centre	22,600	Kmart (7,305sqm), Coles (2,272sqm), Aldi (1,307sqm)	6.1
<b>Supermarket Based Shopping Centres</b>			
Metro West Pennant Hills	1,500	Woolworths (1,204sqm)	1.5
West Pennant Hills	2,000	Coles (1,924sqm)	2.0
Oakhill Village SC	1,600	IGA (700sqm)	2.5
Cherrybrook Village	9,500	Woolworths (3,923sqm)	2.7
Beecroft Place	3,000	Woolworths (2,740)	3.4
Pennant Hills Marketplace	4,300	IGA (1,619sqm)	4.7
Dural Mall	7,700	Woolworths (3,872), Aldi (1,300)	5.0
Westleigh SC	3,700	IGA (1,574sqm)	7.6

Source: Australian Shopping Centre Council Database.

In summary, the majority of these developments are of limited competitive relevance to the planned retail floorspace as part of the mixed-use development site at the Precinct which will primarily be convenience-based retail serving immediate residents and commuters (although residents and commuters are not mutually exclusive), as the proposed centre provides a convenience offer and therefore lacks 'destinational' appeal to attract visitors from other catchments.

## 2.6 IMPLICATIONS FOR THE PRECINCT

Whilst an average provision of approx. 1.65 sqm per capita of traditional retail floorspace is provided within Australia (which equates to approx. 77,500 sqm for the main trade area), the Cherrybrook Station Precinct is only suited for a convenience offering (supermarket-anchored) mainly due to the following:

- Provision of higher-order facilities are approx. 3km away at Castle Towers Shopping Centre. The Cherrybrook Station Precinct does not envisage to compete with the Castle Towers centre, and therefore the recommended retail offering mainly caters to neighbouring residents and commuters.
- Cherrybrook Village is identified as a Local Centre per the GSC North District Plan. The recommended retail provision in the Cherrybrook Station Precinct is not expected to significantly impact the centres hierarchy within the North District.
- The proposal seeks to reduce car reliance and prioritise pedestrian and cycle movements. This can be achieved with a smaller, convenience retail offering for nearby residents and commuters.

As such, approx. 3,000 – 5,000 sqm of retail floorspace is considered a more appropriate offering for the Precinct. Approx. 500 sqm of commercial floorspace is supportable for the Precinct. The Reference Scheme indicates that approximately 3,200 sqm is dedicated retail floorspace.

The below summarises the recommended floorspace and tenant mix based on the retail provision indicated in the masterplan, as well as a higher floorspace option that can also be supportable in the Precinct.

**Table 2.7: Indicative Recommended Floorspace and Tenant Mix**

Category	Examples	GLA (sqm)	
		Low	High
<b>Supermarket</b>		1,650	3,000
<b>Food Catering</b>	<i>Cafes, restaurants, takeaway shops</i>	500	500
<b>Food Retail</b>	<i>Fresh produce, liquor stores</i>	375	500
<b>General Retail</b>	<i>Pharmacy, newsagency</i>	150	200
<b>Retail Services</b>	<i>Hairdresser, beauty salon</i>	125	300
<b>Non-Retail Uses</b>	<i>Australia Post, banks</i>	100	200
<b>Medical</b>	<i>Medical centre, Health services</i>	-	300
<b>Commercial</b>	<i>Offices</i>	-	500
<b>Total Retail</b>		<b>2,800</b>	<b>4,500</b>
<b>Total Non-Retail</b>		<b>100</b>	<b>1,000</b>
<b>Total</b>		<b>2,900</b>	<b>5,500</b>

Source: AEC

### 3. ECONOMIC IMPACT ASSESSMENT

#### 3.1 MODELLING DRIVERS

This chapter examines the economic activity that could be captured within Hornsby LGA and assesses the economic impacts delivered by this activity.

The examination of economic activity supported by the Proposal (both during the construction phase and operational phase) has regard to residential and commercial development, the indicative gross floor area (GFA) delivered for these developments, and the potential land uses carried out. For the purposes of modelling, the following was assumed regarding building footprint by type of use, based on the potential uses:

- 33,350 sqm for residential development (indicative 391 apartments).
- 3,200 sqm for retail and commercial facilities.
- 1,300 sqm for community facilities.

In addition to the above, it has been assumed approximately 12,950 sqm of recreation public open space/ garden areas will be developed, as well as a total of 376 car spaces and 177 bicycle spaces across the site.

An Input-Output model, including the development of a series of specific regional Input-Output transaction tables, was developed to reflect the economic structure of Hornsby LGA (refer to **Appendix A**). Input-Output modelling describes economic activity through the examination of four types of impacts, defined and described in Table 3.1.

**Table 3.1. 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).

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 Hornsby 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 following:
  - Direct turnover generated by the retail, food and beverage, and commercial operational activities.
  - Direct turnover generated by community facility operational activities.

- The direct turnover generated by residents working from home.
- **Household Expenditure:** The additional household expenditure circulated through the Hornsby LGA resulting from both the residential and commercial developments.

### 3.1.1 Construction Phase

Construction costs for the Proposal were developed based on Gross Floor Area (GFA) estimates and a respective rate per square metre from a cost report developed by *Napier & Blakeley* for the Proposal (Napier & Blakeley, 2020), indexed by 8.5% to provide 2022 cost estimates (per guidance from *Napier & Blakeley*), delivering a total cost for each project component (inclusive of contingencies and GST). In addition to these construction costs, an assumed estimate of 7.5% was applied to each project component to reflect costs associated with professional, scientific, and technical services (Napier & Blakeley, 2020). For modelling purposes, construction costs were allocated to their respective Input-Output industries. This breakdown was developed based on assumptions by AEC regarding the most appropriate industries for each activity. Based on these assumptions, a total cost estimate of \$196.62 million is anticipated for the construction phase of the Proposal (see Table 3.2 below).

**Table 3.2. Construction Costs Allocation (Incl. Contingency and GST)**

Component	Rate per Sqm (\$ excl. GST)	Sqm	Total Cost (\$M incl. GST)	Input-Output Industry
Residential	\$3,470	33,350	\$127.29	<ul style="list-style-type: none"> <li>Residential Building Construction (90%)</li> <li>Construction Services (10%)</li> </ul>
Retail	\$2,594	3,200	\$9.13	<ul style="list-style-type: none"> <li>Non-Residential Building Construction (90%)</li> <li>Construction Services (10%)</li> </ul>
Community Facility	\$4,416	1,300	\$6.31	<ul style="list-style-type: none"> <li>Non-Residential Building Construction (90%)</li> <li>Construction Services (10%)</li> </ul>
Basement Parking <sup>(a)</sup>	\$1,496	15,760	\$25.93	<ul style="list-style-type: none"> <li>Non-Residential Building Construction (90%)</li> <li>Construction Services (10%)</li> </ul>
Open Space Area	\$999	12,950	\$14.23	<ul style="list-style-type: none"> <li>Heavy and Civil Engineering Construction (25%)</li> <li>Construction Services (75%)</li> </ul>
Professional Fees	7.5%	-	\$13.72	<ul style="list-style-type: none"> <li>Professional, Scientific &amp; Technical Services (100%)</li> </ul>
<b>Total</b>	<b>-</b>	<b>66,560</b>	<b>\$196.62</b>	<b>-</b>

Note: Components may not sum to total due to rounding. (a) Based on an assumed area requirement (inclusive of common and traffic areas) of approximately 40 sqm per car space and 4 sqm per bicycle space.

Source: Landcom/ AEC, Napier & Blakeley (2020, 2022).

Only the construction activity expected to be undertaken *within the Hornsby 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 activity would be sourced from local businesses and labour (including construction and professional services activity).
- Approximately 25% of purchases on goods and services (supply chain related activity) made by construction-related businesses sourced from outside the Hornsby 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 Hornsby 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 the LGA).

### 3.1.2 Operational Phase

Several aspects of operational activity of the Proposal were examined:

- **Precinct Operational Activity:** The value of economic activity associated with the retail, food and beverage and commercial components of the Proposal.
- **Employees Working from Home:** Direct output delivered by residents working from home in the region.

#### Precinct Operational Activity

Employment estimates for each activity were developed based on standard benchmarks of GFA per employee from previous AEC research. For modelling purposes, estimated operational employment levels for the Proposal were allocated to their respective Input-Output industries. This breakdown was developed based on assumptions on the most appropriate industries for each activity.

**Table 3.3. Operational Employment Allocation**

Category of Use	Sqm	SQM per FTE	Employment	Input-Output Industry
<b>Retail Centre</b>				
Supermarket	1,650	80	21	• Retail Trade (100%)
Food Catering	600	20	30	• Food and Beverage Services (100%)
Food Retail	450	20	23	• Retail Trade (100%)
General Retail	200	20	10	• Retail Trade (100%)
Retail Services	150	20	8	• Personal Services (100%)
Non-Retail Uses	150	20	8	• Postal and Courier Pick-up and Delivery Service (60%)
				• Finance (40%)
<b>Total</b>	<b>3,200</b>	<b>-</b>	<b>100</b>	<b>-</b>
<b>Community Facility</b>				
Community Centre	1,300	200	7	• Public Administration and Regulatory Services (67%)
				• Other Services (33%)
<b>Total</b>	<b>1,300</b>	<b>-</b>	<b>7</b>	<b>-</b>

Source: Landcom/ AEC.

Employment by industry estimates were converted to an output value using a multiplier based on the national transaction table (ABS, 2021a; ABS, 2021c). The resultant estimates of output were modelled as the direct activity associated with the Proposal.

**Table 3.4. Operational Output Drivers**

Input-Output Industry	Employment (FTE)	Output (\$M)
<b>Retail Centre</b>		
Retail Trade	54	\$7.02
Food and Beverage Services	30	\$3.31
Personal Services	8	\$1.30
Postal and Courier Pick-up and Delivery Service	5	\$1.22
Finance	3	\$2.26
<b>Total</b>	<b>100</b>	<b>\$15.10</b>
<b>Community Facility</b>		
Public Administration and Regulatory Services	5	\$1.08
Other Services	2	\$0.22
<b>Total</b>	<b>7</b>	<b>\$1.30</b>

Source: Landcom/ AEC.



### **Working from Home**

The residential development with 391 apartments is expected to house approximately 899 new residents (using an average household size of 2.3 based on similar density areas in the Hornsby LGA) once completed. Of these residents, it is anticipated that approximately 2.0% will be employed and choose to work from home, in line with averages for Greater Sydney in 2016 (ABS, 2017a), equating to approximately 18.4 full time equivalent (FTE) jobs. These FTEs were then allocated across industry based on the share of industries of people working from home in 2016 (ABS, 2017a).

Estimates of output were developed based on employment multipliers per million dollars of output for each industry using AEC's Input-Output model. This equates to \$5.47 million in output. A breakdown of economic activity delivered by new employees in the LGA is provided below.

**Table 3.5. Output by Employees Working from Home**

Input-Output Industry	Employment (FTE)	Output (\$M)
Agriculture, Forestry and Fishing	0.4	\$0.09
Mining	0.0	\$0.05
Manufacturing	0.7	\$0.29
Electricity, Gas, Water and Waste Services	0.1	\$0.07
Construction	1.4	\$0.68
Wholesale Trade	0.7	\$0.18
Retail Trade	0.9	\$0.12
Accommodation and Food Services	0.3	\$0.05
Transport, Postal and Warehousing	0.5	\$0.15
Information Media and Telecommunications	0.8	\$0.49
Financial and Insurance Services	1.4	\$0.87
Rental, Hiring and Real Estate Services	0.6	\$0.27
Ownership of Dwellings	0.0	\$0.00
Professional, Scientific and Technical Services	5.2	\$1.27
Administrative and Support Services	1.0	\$0.15
Public Administration and Safety	0.3	\$0.06
Education and Training	1.1	\$0.17
Health Care and Social Assistance	1.6	\$0.23
Arts and Recreation Services	0.6	\$0.13
Other Services	0.8	\$0.13
<b>Total</b>	<b>18.4</b>	<b>\$5.47</b>

Source: ABS (2017a; 2021a), AEC.

### **3.1.3 Additional Household Expenditure**

In addition to the economic activity supported by the operations of the Proposal, new residents to Hornsby LGA attracted by development of new dwellings under the Proposal are expected to support economic activity in the region through household expenditure. With up to 391 new households in the region as a result of residential development, and an average weekly household income of \$2,445 per week in the Hornsby LGA (ABS, 2017a), this equates to approximately \$32.39 million in annual incomes for households within the dwellings developed.

A portion of these incomes will be spent within the Hornsby LGA. Estimates for household expenditure circulated by new residents in the region were developed based on data from the Household Expenditure Survey (ABS, 2017b) regarding the proportion of household incomes that are then spent on goods and services, as well as assumptions regarding the proportion of this expenditure captured within the Hornsby LGA based on demand and supply of goods and services by industry in the LGA as estimated in the Input-Output transaction table for the Hornsby LGA (see Appendix A for details regarding the Input-Output transaction table used) as well as AEC experience and consideration of potential leakage of expenditure to neighbouring areas. Based on the above approach, the household expenditure captured within the Hornsby LGA is estimated to be \$21.49 million annually for the dwellings developed (approximately 66.3% of spend of residents captured within the Hornsby LGA).

**Table 3.6. Household Expenditure of New Residents**

Input-Output Industry	Output (\$M)
Agriculture, forestry and fishing	\$0.00
Mining	\$0.00
Manufacturing	\$0.00
Electricity, gas, water and waste services	\$0.55
Construction	\$1.71
Wholesale trade	\$0.00
Retail trade	\$8.57
Accommodation and food services	\$1.80
Transport, postal and warehousing	\$0.20
Information media and telecommunications	\$0.68
Financial and insurance services	\$0.91
Rental, hiring and real estate services	\$0.24
Professional, scientific and technical services	\$0.11
Administrative and support services	\$0.09
Public administration and safety	\$0.68
Education and training	\$0.98
Health care and social assistance	\$1.17
Arts and recreation services	\$0.37
Other services	\$0.71
Ownership of Dwellings	\$2.70
<b>Total</b>	<b>\$21.49</b>

Source: ABS (2017a; 2017b), AEC.

This activity has been modelled separately from the operational phase impacts as some of this household expenditure is likely to be captured within the commercial components of the proposed development (e.g. the supermarket and other retail offerings), and some of the residents within the 391 dwellings may be employed and earn incomes within the commercial precinct. To include this activity in addition to the operational impacts would therefore likely double count some impacts and thereby overstate the economic activity supported by the project.

## 3.2 ECONOMIC ACTIVITY AND IMPACTS

The economic activity supported can be traced through the economic system via:

- **Direct impacts**, which represent the economic activity of the industry or industries directly experiencing the stimulus.
- **Indirect Impacts (Flow-on impacts)**, which are disaggregated to:
  - **Indirect Impact (Type I)**, which comprise the effects from:
    - Direct expenditure on goods and services by the industry experiencing the stimulus (direct suppliers to the industry), known as the first round or direct requirements effects.
    - The second and subsequent round effects of increased purchases by suppliers in response to increased sales, known as the industry support effects.
  - **Indirect Impact (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.

The premise behind Type I and Type II indirect impacts applies across both the construction and operational phase, except the impacts on industry will be different. For example, Type I impacts during the construction phase may include professional services (e.g. architects, engineers), manufacturing (steel, construction materials) while examples of Type I impacts during the operational phase may include manufacturing (food and beverage, food related), administrative and support services (e.g. building cleaning, employment services, travel agencies, etc.).

The following sections outline the economic activity attributed to all future land uses on the Site, including accommodation.

### 3.2.1 Construction Phase

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

- \$161.8 million in output (including \$98.3 million in direct activity).
- \$53.2 million contribution to Gross Regional Product (GRP) (including \$24.9 million in direct activity).
- \$37.1 million in incomes and salaries paid to households (including \$18.0 million in direct wages).
- 402 FTE jobs (including 183 directly employed in the construction activity).

**Table 3.7. Construction Activity Supported (\$M)**

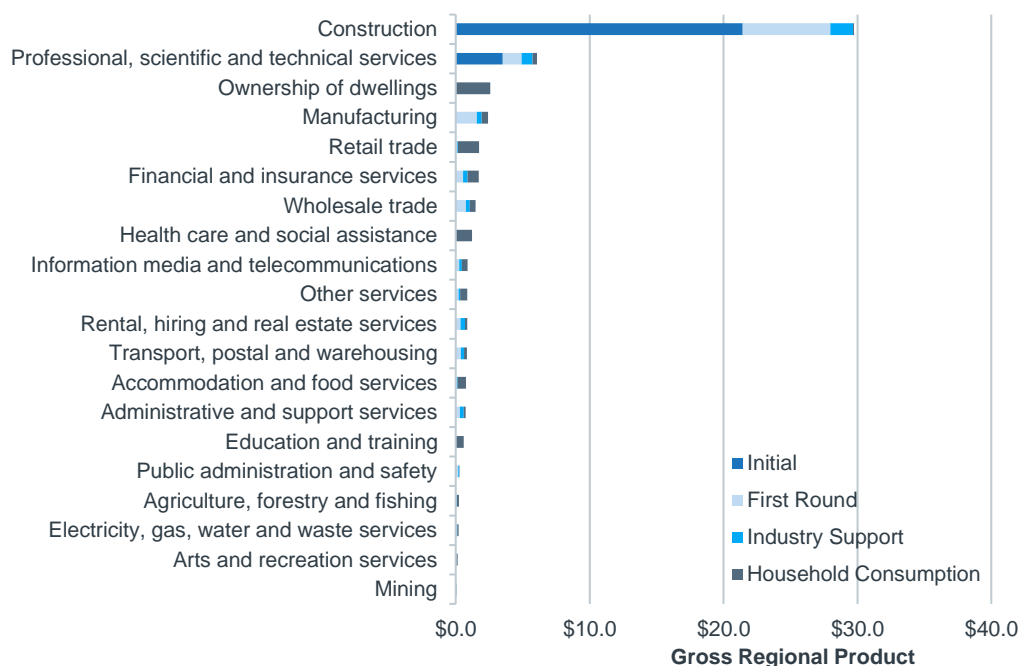
Impact	Output (\$M)	Gross Regional Product (\$M)	Incomes (\$M)	Employment (FTEs)
Direct	\$98.3	\$24.9	\$18.0	183
Type I Flow-On	\$45.3	\$17.8	\$13.5	142
Type II Flow-On	\$18.1	\$10.5	\$5.7	77
<b>Total</b>	<b>\$161.8</b>	<b>\$53.2</b>	<b>\$37.1</b>	<b>402</b>

Source: AEC.

Major industry beneficiaries of construction activity include:

- Construction (GRP of \$29.7 million).
- Professional, Scientific, and Technical Services (\$6.1 million).
- Ownership of Dwellings (\$2.6 million).

**Figure 3.1. Gross Regional Product (GRP) Impacts by Industry, Construction**



Source: AEC.

### 3.2.2 Operational Phase

Once fully developed and operational, the commercial and community components of the development as well as jobs associated with people working from home is estimated to support the following annual economic activity within the Hornsby LGA through the direct and flow-on impacts (per annum):

- \$33.3 million in output (including \$21.9 million in direct activity).
- \$18.5 million contribution to GRP (including \$12.2 million in direct activity).
- \$12.1 million in incomes and salaries paid to households (including \$8.4 million in direct wages).
- 170 FTE jobs (including 125 FTE jobs from direct activity, comprised of 100 jobs related to retail development, 7 FTE jobs with community establishment and 18 FTE jobs delivered by working from home).

A breakdown of economic impacts by operations type is presented in Table B. 1 in Appendix B.

**Table 3.8. Annual Activity Supported (\$M)**

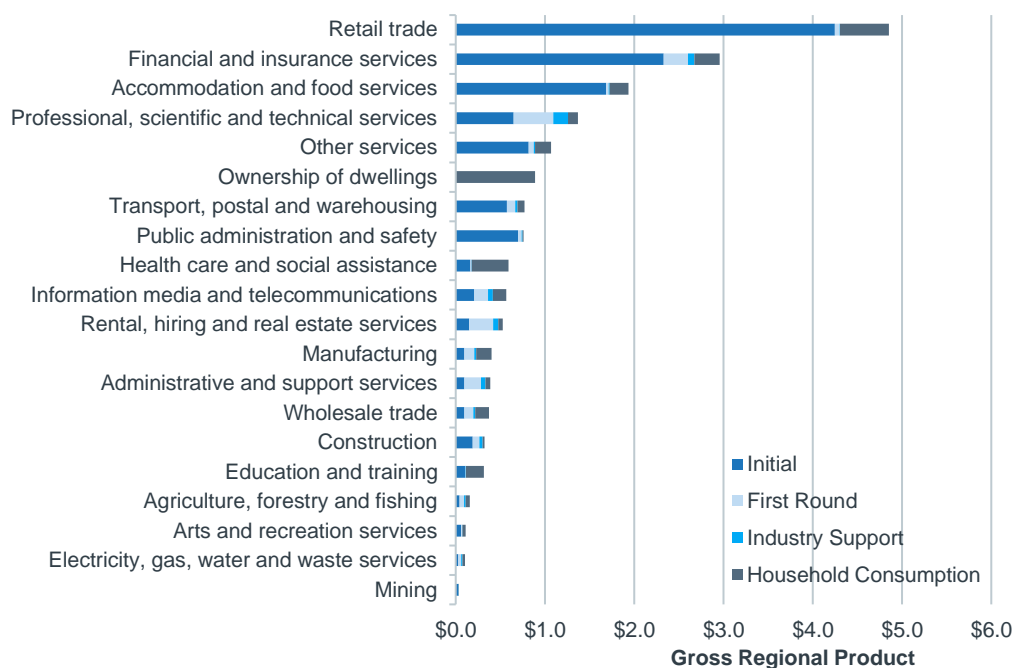
Impact	Output (\$M)	Gross Regional Product (\$M)	Incomes (\$M)	Employment (FTEs)
Direct	\$21.9	\$12.2	\$8.4	125
Type I Flow-On	\$5.2	\$2.6	\$1.8	18
Type II Flow-On	\$6.3	\$3.6	\$2.0	27
<b>Total</b>	<b>\$33.3</b>	<b>\$18.5</b>	<b>\$12.1</b>	<b>170</b>

Source: AEC.

Major industry beneficiaries of the Proposal include:

- Retail Trade (GRP \$4.9 million per annum).
- Financial and Insurance Services (GRP \$3.0 million per annum).
- Accommodation and Food Services (GRP \$1.9 million per annum).

**Figure 3.2. Gross Regional Product (GRP) Impact by Industry, Operations**



Source: AEC.

### 3.2.3 Additional Household Expenditure

Once completed, the residential component of the development and households attracted will deliver household expenditure within the local economy and support the following annual economic activity within the Hornsby LGA through the direct and flow-on impacts (per annum):

- \$32.2 million in output (including \$21.5 million in direct activity).
- \$17.8 million contribution to GRP (including \$12.0 million in direct activity).
- \$11.2 million in incomes and salaries paid to households (including \$7.7 million in direct wages).
- 156 FTE jobs (including 115 FTE jobs in the broader Hornsby LGA economy directly arising from household spend due to the Proposal).

These economic impacts have been modelled separately from the operational phase to eliminate the double counting of benefits, as a proportion of this household expenditure is expected to be consumed at the retail centre planned in the development of the Proposal.

**Table 3.9. Household Expenditure Impacts, Annual (\$M)**

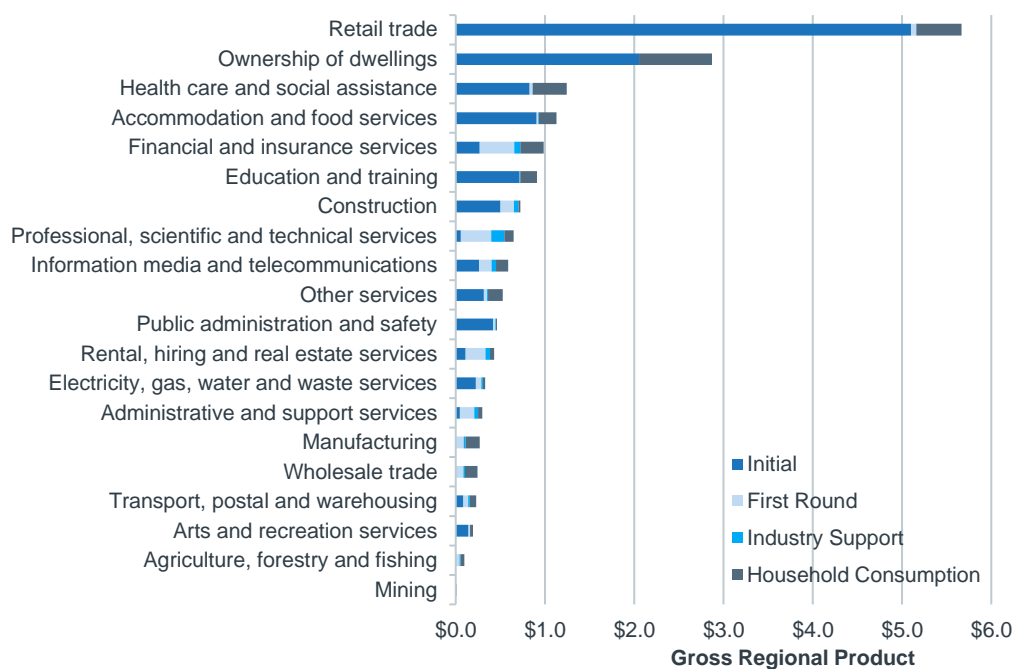
Impact	Output (\$M)	Gross Regional Product (\$M)	Incomes (\$M)	Employment (FTEs)
Direct	\$21.5	\$12.0	\$7.7	115
Type I Flow-On	\$4.9	\$2.4	\$1.6	16
Type II Flow-On	\$5.8	\$3.4	\$1.8	24
<b>Total</b>	<b>\$32.2</b>	<b>\$17.8</b>	<b>\$11.2</b>	<b>156</b>

Source: AEC.

Major industry beneficiaries of the Proposal include:

- Retail Trade (GRP \$5.7 million per annum).
- Ownership of Dwellings (GRP \$2.9 million per annum).
- Financial and Insurance Services (GRP \$1.2 million per annum).

**Figure 3.3. Gross Regional Product (GRP) Impact by Industry, Household Expenditure**



Source: AEC.



### 3.2.4 Summary of Economic Impacts

Once fully developed and operational, the Proposal could provide significant economic benefits to the Hornsby LGA each year.

- Economic activity from businesses locating to the site, as well as employees working from home in the Hornsby LGA economy, is estimated to support 125 direct jobs and 45 indirect jobs elsewhere in the Hornsby LGA.
- The economic activity is estimated to support approximately \$33.3 million in output and roughly \$18.5 million in contribution to GRP with circa \$12.1 million in incomes and salaries paid to households.

Each of the identified impacts is compared to a base case (where the Site remains undeveloped), summarised and ranked based on the rating system outlined in Table 3.10.

**Table 3.10. Economic Impact Rating Matrix**

Severity of Impact	Score	Explanation
Strong Positive Impact	+3	The scenario would deliver a substantial enhancement of human, social, financial or built capital/wellbeing compared to the Base Case
Slight Positive Impact	+1	The scenario would deliver a small enhancement of human, social, financial or built capital/wellbeing compared to the Base Case
Neutral Impact	0	The scenario would deliver neither positive or a negative contribution to human, social, financial or built capital/wellbeing compared to the Base Case
Slight Negative Impact	-1	The scenario would deliver a small loss of human, social, financial or built capital/wellbeing compared to the Base Case
Strong Negative Impact	-3	The scenario would deliver a negligible loss of human, social, financial or built capital/wellbeing compared to the Base Case

Source: AEC.

Based on the impact framework in Table 3.10, it can be assumed that the Proposal will deliver substantial benefits to the Hornsby LGA. These benefits have been quantified in Table 3.11, which derives a total score for the Proposal against the Base Case (the Site in its undeveloped state), using a 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.

With the Proposal to substantially enhance the financial and human capital in the region through by supporting 170 jobs that pay \$12.1 million to households, as well as delivering \$18.5 million to local businesses through GRP, it can be assumed that the proposal will deliver a *Strong Positive Impact* across all economic impact measures.

**Table 3.11. Total Economic Impact of Base Case versus Proposal Case**

Impact	Base Case (undeveloped)	Rating	Proposal	Rating
Output (\$M)	-	0	\$33.3 million	+3
GRP (\$M)	-	0	\$18.5 million	+3
Income (\$M)	-	0	\$12.1 million	+3
Employment (FTE)	-	0	170 jobs	+3
<b>Total</b>		<b>0</b>		<b>12</b>

Source: AEC.

## REFERENCES

---

- ABS (2012). *Census of Population and Housing 2011 – Employment by Place of Work*. Cat. No. 2068.0. Australian Bureau of Statistics, Canberra.
- ABS (2017a). *Census of Population and Housing 2016*. TableBuilder. Australian Bureau of Statistics, Canberra.
- ABS (2017b). *Household Expenditure Survey, 2015-16*. Cat. No. 6503.0, Australian Bureau of Statistics, Canberra.
- ABS (2021a). *Australian National Accounts: Input-Output Tables – Electronic Publication, 2018-19 tables*. Cat. No. 5209.0.55.001, Australian Bureau of Statistics, Canberra.
- ABS (2021b). *Labour Force, Australia, Detailed, Quarterly*. Cat. No. 6291.0.55.003, Australian Bureau of Statistics, Canberra.
- ABS (2021c). *Wage Price Index, Australia*. Cat. No. 6345.0, Australian Bureau of Statistics, Canberra.
- ABS (2020d). *Population by Age and Sex, Regions of Australia, 2018*. Cat no. 3235.0. Australian Bureau of Statistics, Canberra
- Australian Government (2013). *State of Australian Cities 2013*. Department of Infrastructure and Transport, Australian Government, Canberra.
- DoESE (2021). *Small Area Labour Market Data*. Department of Education, Skills and Employment, Canberra.
- Flegg, A.T., Lamonica, G.R., Chelli, F.M., Recchioni, M.C. and Tohmo, T. (2021). *A new approach to modelling the input-output structure of regional economies using non-survey methods*. Journal of Economic Structures, 2021, 10:12.
- TfNSW (2019). *TZP19 Population and Dwelling Summary*. Transport for NSW, Sydney.
- Napier & Blakeley (2020). *Cherrybrook Station State Significant Precinct High Level Elemental Estimate - Square Metre Rates – R2*. Napier & Blakeley, Sydney.
- Napier & Blakeley (2022). *Advice to update 2020 construction costs*. Email received 22 February 2022.

## 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:

- **Initial stimulus (direct) impacts**, which represent the economic activity of the industry directly experiencing the stimulus.
- **Flow-on impacts**, which are disaggregated to:
  - **Production induced effects (type I flow-on)**, which comprise the effects from:
    - Direct expenditure on goods and services by the industry experiencing the stimulus (direct suppliers to the industry), known as the first round or direct requirements effects.
    - The second and subsequent round effects of increased purchases by suppliers in response to increased sales, known as the industry support effects.
  - **Household consumption effects (type II flow-on)**, 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 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 2018-19 Australian transaction table (ABS, 2021a).

Estimates of gross production (by industry) in the study areas were developed based on the percent contribution to employment (by place of work) of the study areas to the Australian economy (ABS, 2012; ABS, 2017a; ABS, 2021b; DoESE, 2021), and applied to Australian gross output identified in the 2018-19 Australian table.

Industry purchasing patterns within the study area were estimated using a Flegg Location Quotient approach, as described in Flegg *et al.* (2021), with a fixed degree of convexity applied to the regional size scalar. Regional final demand estimates (except exports) developed based on the regional inter-industry sales estimated using the Flegg Location Quotient relative to national inter-industry sales and final demand estimates for each industry (noting regional exports are assumed to reflect the remainder of total uses).

Employment estimates were rebased from 2018-19 (as used in the Australian national Input-Output transaction tables) to current year values using the Wage Price Index (ABS, 2021c).

## 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 the above 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.
- The size of the regional economy is assumed to have an inverse relationship with the requirement to import goods/ services to meet its needs (i.e. the smaller the economy, in general the greater the reliance on imports).

## APPENDIX B: MODEL RESULTS

Once fully developed and operational, the Proposal is estimated to support total annual economic output of \$33.3 million within the Hornsby LGA through the direct and flow-on impacts associated (per annum). Table B. 1 below highlights the economic activity delivered by each operational component within the Proposal.

**Table B. 1. Annual Activity Supported per Operational Component (\$M)**

Impact	Output (\$M)	Gross Regional Product (\$M)	Incomes (\$M)	Employment (FTEs)
<b>Retail Centre</b>				
Direct	\$15.1	\$8.7	\$5.8	100
Type I Flow-On	\$3.0	\$1.5	\$1.0	11
Type II Flow-On	\$4.2	\$2.5	\$1.3	18
<b>Total</b>	<b>\$22.4</b>	<b>\$12.7</b>	<b>\$8.2</b>	<b>129</b>
<b>Community Facility</b>				
Direct	\$1.3	\$0.9	\$0.7	7
Type I Flow-On	\$0.4	\$0.2	\$0.1	1
Type II Flow-On	\$0.5	\$0.3	\$0.2	2
<b>Total</b>	<b>\$2.2</b>	<b>\$1.4</b>	<b>\$1.0</b>	<b>11</b>
<b>Employees Working from Home</b>				
Direct	\$5.5	\$2.7	\$1.8	18
Type I Flow-On	\$1.8	\$0.9	\$0.6	6
Type II Flow-On	\$1.5	\$0.9	\$0.5	6
<b>Total</b>	<b>\$8.7</b>	<b>\$4.4</b>	<b>\$2.9</b>	<b>31</b>
<b>Total Operations</b>				
Direct	\$21.9	\$12.2	\$8.4	125
Type I Flow-On	\$5.2	\$2.6	\$1.8	18
Type II Flow-On	\$6.3	\$3.6	\$2.0	27
<b>Total</b>	<b>\$33.3</b>	<b>\$18.5</b>	<b>\$12.1</b>	<b>170</b>

Source: AEC



THIS PAGE INTENTIONALLY LEFT BLANK

**BRISBANE**

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

**TOWNSVILLE**

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

**SYDNEY**

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

**DARWIN**

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

**MELBOURNE**

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

**PERTH**

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

**AFFILIATED OFFICES:****BANGKOK**

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

**SHANGHAI**

Level 35, 1st Building,  
700 Lique Road, Putuo District,  
Shanghai, China 200333  
T: +8618 516293312

[aecgrouppltd.com](http://aecgrouppltd.com)

OUTCOME DRIVEN

