The background image shows a bright, modern hospital interior. Large windows on the right side offer a view of green trees outside. In the foreground, two women are walking towards the camera. The woman on the left is wearing a white lab coat over a patterned dress and a blue lanyard. The woman on the right is wearing a white short-sleeved top and a black skirt. In the background, another person in a white lab coat is visible near the windows.

# Liverpool Private Hospital

## Socio-economic Impact Assessment

Prepared for  
Sacco Building Group

**HiIPDA**  
CONSULTING

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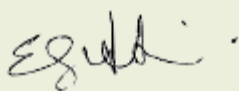
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This document is for discussion purposes only unless signed and dated by a Principal of HillPDA.

## Reviewer

Signature



Dated

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# INTRODUCTION

# 1.0 INTRODUCTION

HillPDA has been engaged by Sacco building Group to prepare a Social and Economic Impact Assessment (SEIA) to accompany a Planning Proposal to enable a State Significant Development Application for consideration by NSW Department of Planning, Industry and Environment for a proposed new private hospital. The subject site is located at 61-71 Goulburn Street, Liverpool.

**Figure 1: Concept rendering of the proposal**



Source: Team2 Architects (2021)

The Planning Secretary's Environmental Assessment Requirements (SEARs) issued for the application (SSD-10430) require the Environmental Impact Assessment (EIS) to include:

*"...a social impact assessment which:*

- *identifies and analyses the potential social impacts of the development, from the points of view of the affected community/ies and other relevant stakeholders, i.e. how they expect to experience the project.*
- *considers how potential environmental changes in the locality may affect people's: way of life; community; access to and use of infrastructure, services, and facilities; culture; health and wellbeing; surroundings; personal and property rights; decision-making systems; and fears and*

*aspirations, as relevant, and considering how different groups may be disproportionately affected.*

- *assesses the significance of positive, negative, and cumulative social impacts considering likelihood, extent, duration, severity/scale, sensitivity/importance, and level of concern/interest.*
- *includes mitigation measures for likely negative social impacts, and any proposed enhancement measures.*
- *details how social impacts will be adaptively monitored and managed over time.”*

This report has been prepared to satisfy these requirements. It provides background to the development application, a description of the existing social and economic environment and an analysis of potential social and economic impacts from the proposed development. The methodology used to identify potential social impacts for the proposed development is consistent with the NSW Department of Planning Industry and Environment (DPIE) *Social Impact Assessment Guideline*. This report also suggests mitigation measures which will help to maximise social benefits and minimise negative impacts, to the community.

The proposal seeks to integrate a new private hospital with the existing public hospital and health services in the Liverpool centre. The proposed hospital is envisioned to provide additional services in a variety of specialist sectors providing additional employment and increasing the health service offering in the region. The structures are proposed to be sympathetic to the local character. The site currently accommodates several apartment buildings with the northern most lots accessible via the Goulburn Service Way at the rear that is proposed to be retained, with potential for it to be used as a through road for loading dock deliveries.

The methodology used to assess the potential social and economic impacts for the proposed development is consistent with current best practice and NSW state planning policy. This report also suggests mitigation measures which will help to maximise social and economic benefits and minimise negative impacts to the community.



# THE PROPOSAL

## 2.0 THE PROPOSAL

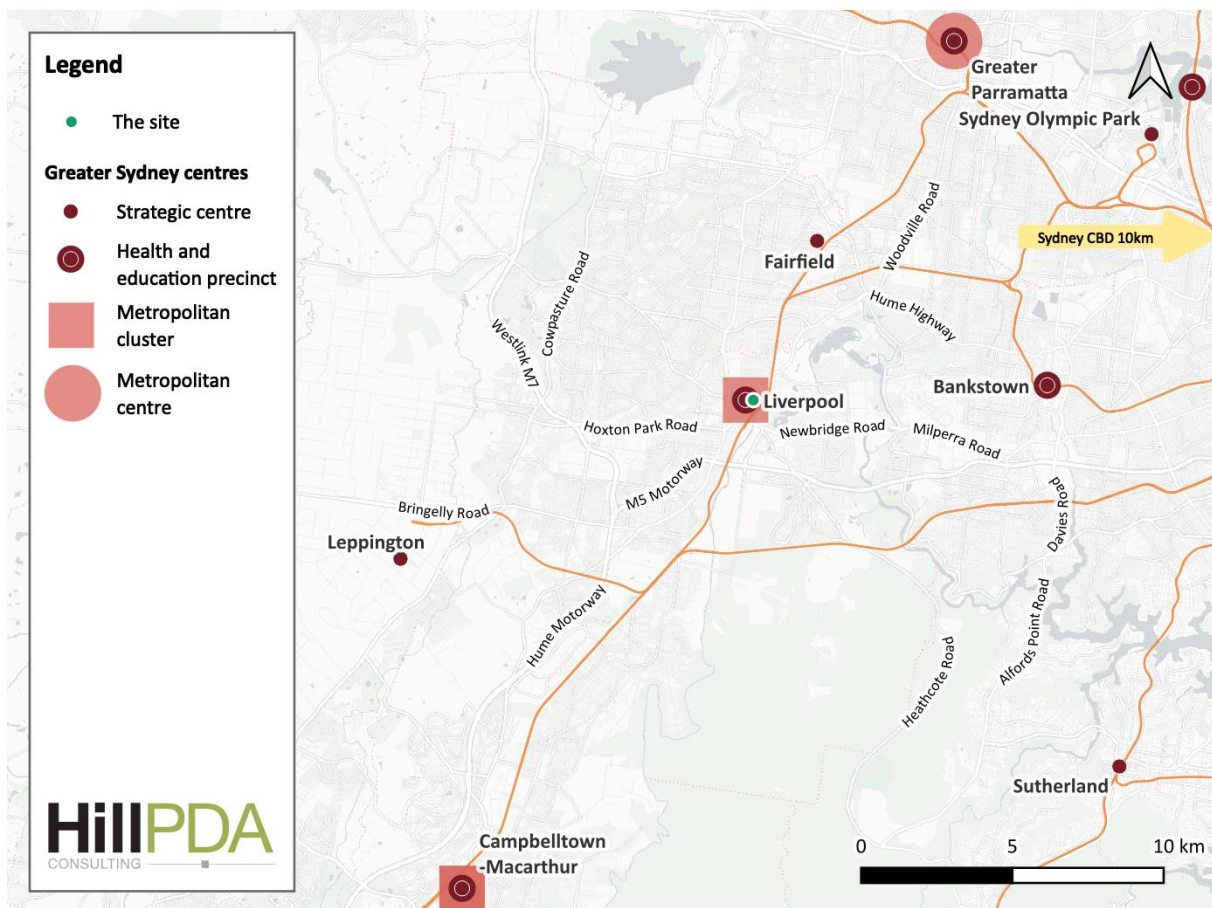
### 2.1 The site

The subject site is located at 61-71 Goulburn Street, Liverpool approximately 30 kilometres from Sydney CBD and directly between the Liverpool hospital campus and the Liverpool Westfield shopping centre. the site and the general context of the proposal is shown in Figure 2.

The site is legally designated as Lots 1 and 2 of DP610334 and Lot 1 of DP 25642, within the Liverpool LGA. The subject site has an area of 4,685 square metres. It fronts Goulburn Street to the east and Goulburn Serviceway connects to the northern most lot on the western boundary (Figure 3).

When considering the existing community demographics and the potential impacts, a study area has been determined, as shown below in Figure 13, to be the Liverpool Statistical Area 3 from the Australian Bureau of Statistics.

Figure 2: Site context



**Figure 3: The site**



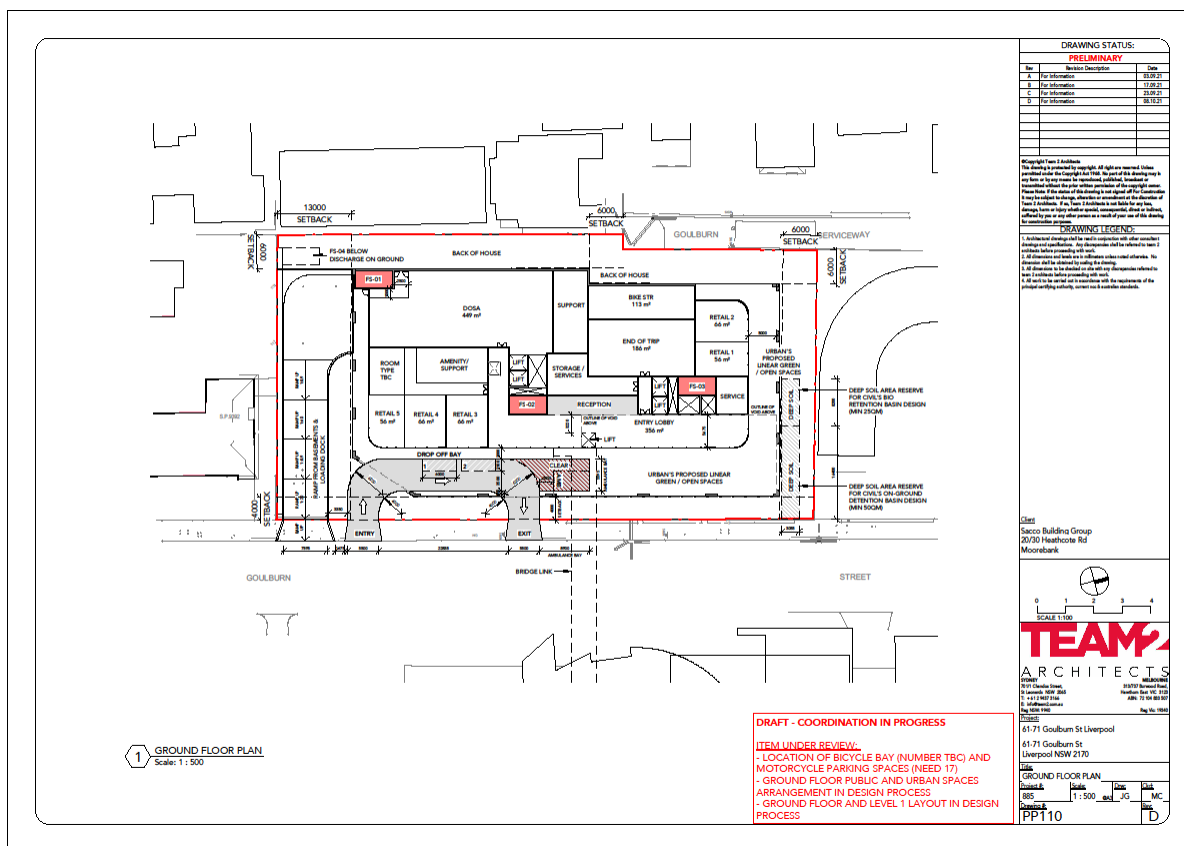
## 2.2 The surrounds

The site is immediately surrounded by medium density residential zoned lands with several walk up apartment buildings fronting Goulburn Street and Bigge Street. Directly adjacent to the site across Goulburn Street is the existing Liverpool Hospital and UNSW Ingham Institute Clinical Skills and Simulation Centre. Goulburn Street has high pedestrian activity as the key pedestrian access between Liverpool Station and the hospital, services to the north of the site and Liverpool Girls and Boys High Schools to the north east of the site. Street parking is limited with 1 hour timed spaces most common on both sides of Goulburn Street between Campbell Street (northern cross road) and Elizabeth Street (southern cross road)

Across Bigge Street to the west is the All Saints Catholic College and beyond that, the Liverpool Westfield Shopping centre. To the north of Campbell Street are additional medium and high density apartment buildings and several medical services including a medical centre, imaging centre, oral and facial implant surgery and a pathology collection centre. To the south of Elizabeth Street Bigge Park dominates the block with TAFE Liverpool to the south east and additional medical services and Liverpool Courthouse to the southern west. The railway line runs generally north-south around Liverpool hospital. Liverpool Station is the nearest railway station, less than 500 metres south of the site, serviced by the Cumberland Line, Inner West and South Line and the Bankstown Line.



**Figure 5: Ground floor layout**



Source: Team2 Architects (2021)

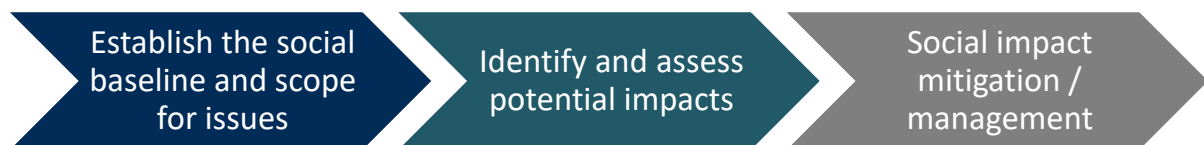
# METHOD

## 3.0 METHOD

Liverpool Council has a guideline for preparation of Social Impact Assessments which applies to Development Applications. Owing to this proposal being a Planning Proposal intended for assessment as an SSDA, HillPDA has developed its SIA approach to align with industry best practice including the NSW Department of Planning, Industry and Environment's (DPIE) *Social Impact Assessment Guideline*. The DPIE Guideline and Liverpool Council Guideline are both derived from international best practice on SIA as put forward by the IAIA and Vanclay et al. as cited and detailed in the method statement below.

The SIA aims to scope, assess, and enhance or mitigate potential positive and negative impacts that may arise from the proposed development. The method for this SIA into three phases as shown below.

**Figure 6: SIA Process**



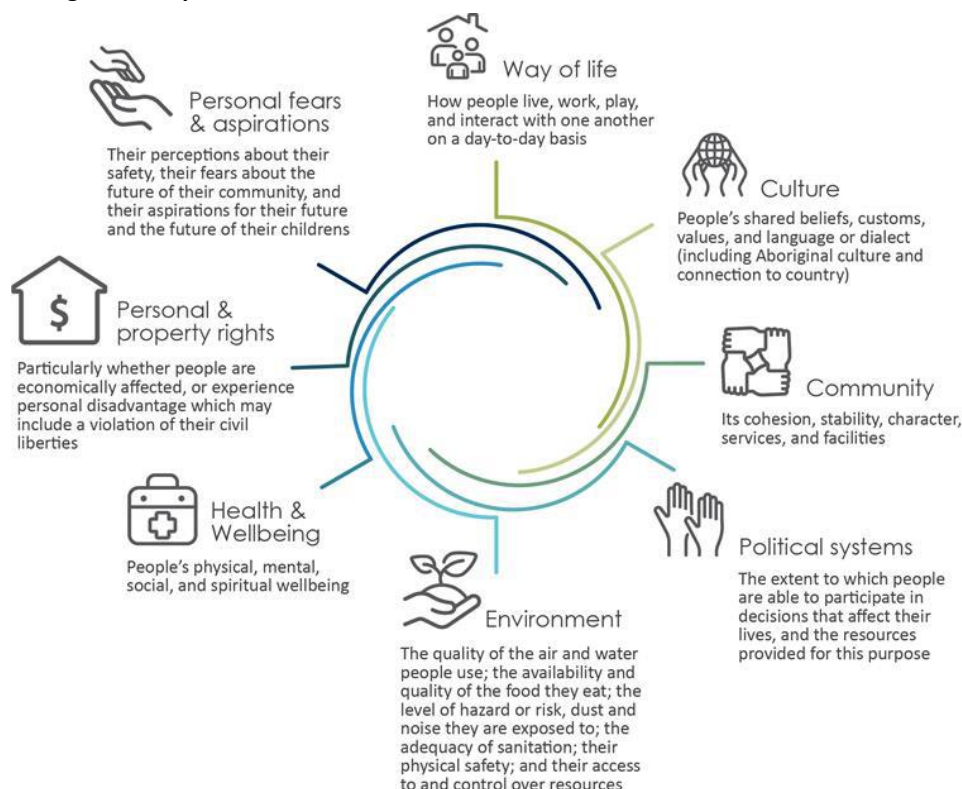
Source: HillPDA, DPIE (2021)

### 3.1 Defining social impacts

A social impact can be defined as the net effect of an activity on a community and the wellbeing of individuals and families. Social impacts may occur across a range of aspects of an individual's and a community's life, as shown in Figure 7



**Figure 7: Defining social impacts**



Source: Adapted from Vanclay, F. (2003). International Principles for Social Impact Assessment. Impact Assessment & Project Appraisal 21(1), 5-11

Social impacts arising from a development may be positive, negative and cumulative as indicated in Table 1.

**Table 1: Types of social impacts**

Type of impact	Overview
Negative social impacts	<p>Negative social impacts result from changes to the physical or social fabric that make it worse (in any of the impact categories) than before the project took place. These may include:</p> <ul style="list-style-type: none"> <li>Increased dust or noise levels affecting health</li> <li>Decreased amenity during construction</li> <li>Alterations to community character through land use changes.</li> </ul>
Positive social impacts	<p>Positive social impacts result from changes to the physical or social fabric that make it better (in any of the impact categories) than before the project took place. These may include:</p> <ul style="list-style-type: none"> <li>Increased access to jobs in the local area</li> <li>Improved amenity through provision of open space</li> </ul>



	<ul style="list-style-type: none"> <li>• Stronger sense of community through provision of community space.</li> </ul>
Cumulative social impacts	<p>Cumulative social impacts result from changes to the physical or social fabric that occur from multiple projects or activities that need similar resources or affect similar impact categories. These may include:</p> <ul style="list-style-type: none"> <li>• Increased traffic level from construction vehicles for multiple projects in one area</li> <li>• A shortage of workers in an area due to multiple similar projects</li> <li>• Health impacts from persistent noise or dust levels due to ongoing projects.</li> </ul>

Source: HillPDA, DPIE (2021)

### 3.2 Evidence base

In order to assess the social impacts accurately, an SIA must also provide an accurate assessment of the social baseline of the project surrounds. This means that the existing surrounds of the proposal must be considered through the collection of data to establish benchmarks against which the impacts of the proposal can be assessed.

To establish this social baseline, HillPDA has conducted a desktop review of the available information provided by the proponent, as well as research conducted with a high degree of impartiality using trusted, industry-standard sources to inform our understanding of relevant demographic and social trends.

The evidence base for this SIA includes data from sources such as:

- Australian Bureau of Statistics
- NSW Bureau of Crime Statistics and Research
- NSW Department of Planning, Industry and Environment
- Relevant information provided by Council and/or the proponent
- Profile .id.

The findings of this work is outlined in Chapter 5.0.

### 3.3 Predicting, analysing and evaluating impacts

The impact assessment framework presented in this report identifies and evaluates changes to the social baseline due to the proposal. This includes the assessment of positive, negative, and cumulative impacts as outlined in section 3.1. Changes can be tangible or intangible; qualitative or quantitative; direct or indirect; and subjectively experienced.

The likelihood of social impacts arising from each matter is assessed as part of the scoping process. Matters which are identified as having potential social impacts are then assessed. Professional judgement and experience is applied on a case-by-case basis to identify the significance of impact on the social environment.

The likelihood of a potential impact is a primary element of considering each social impact and its risk rating. The criteria used to determine the likelihood of any potential impact are described in Table 2.

**Table 2: Likelihood of impact**

Likelihood	Description	Indicative Probability
Almost certain	Definite or almost definitely expected	Greater than 90 per cent
Likely	High probability	70 per cent
Possible	Medium probability	50 per cent
Unlikely	Low probability	30 per cent
Very unlikely	Improbable or remote possibility	Less than 10 per cent

Source: DPIE (2020), *Social Impact Assessment Guideline*. Adapted from Esteves A.M.et. al. (2017)

The magnitude of a potential impact is a key consideration to determine a risk rating. In determining the magnitude of a potential impact there are five key characteristics that must be considered, these are shown below in Table 3.

**Table 3: Magnitude of social impacts**

Characteristic	Details needed to enable assessment
Extent	Who is expected to be affected? Will any vulnerable groups be impacted? Which locations and people are affected?
Duration	When is the impact expected to occur? Will it be temporary or permanent?
Severity or scale	What is the likely scale or degree of change?
Sensitivity or importance	How sensitive/vulnerable or adaptable/resilient are affected people to the impact, or (for positive impacts) how important is it to them?
Level of concern/interest	How concerned or interested are people?

Source: DPIE (2020), *Social Impact Assessment Guideline*. Adapted from Esteves A.M.et. al. (2017)

Table 4 below identifies the overall magnitude level of impact rating.

**Table 4: Magnitude of impact**

Magnitude	Description
Minimal	No noticeable change experienced by people in locality.
Minor	Mild deterioration/improvement, for a reasonably short time, for a small number of people who are generally adaptable and not vulnerable.

Magnitude	Description
Moderate	Noticeable deterioration/improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people.
Major	Substantial deterioration/improvement to something that people value highly, either lasting for an indefinite time or affecting many people in a widespread area.
Transformational	Substantial change experienced in community wellbeing, livelihood, amenity, infrastructure, services, health and/or heritage values; permanent displacement or addition of at least 20% to a community.

Source: DPIE (2020), *Social Impact Assessment Guideline*. Adapted from Esteves A.M.et. al. (2017)

Potential impacts identified in the scoping process are analysed based on the nature of the impact and its predicted severity, and based on this, are assigned a level of significance in line with Table 5.

**Table 5: Social impact significance matrix**

		Magnitude				
		Minimal	Minor	Moderate	Major	Transformational
Likelihood	Almost certain	Medium	Medium	High	Very high	Very high
	Likely	Low	Medium	High	High	Very high
	Possible	Low	Medium	Medium	High	High
	Unlikely	Low	Low	Medium	Medium	High
	Very unlikely	Low	Low	Low	Medium	Medium

Source: DPIE (2020), *Social Impact Assessment Guideline*. Adapted from Esteves A.M.et. al. (2017)

### 3.4 Social impact management

Where impacts are identified, the SIA provides mitigation and/or enhancement measures. For potential negative impacts, measures are identified to avoid or minimise impacts by amending the project or its delivery. For potential positive social impacts, the SIA identifies measures to enhance the benefit of that impact. Social impact management is an ongoing process.

# POLICY CONTEXT

## 4.0 POLICY CONTEXT

### 4.1 Greater Sydney Regional Plan

The Greater Sydney Region Plan was developed by the Greater Sydney Commission and released in April 2018. The Plan sets out a vision, objectives, strategies and actions for a metropolis of three cities across Greater Sydney over the next 40 years.

The Plan identifies the South West Growth Area as a key location for the delivery of future housing and jobs. The South West Growth Area is a southern component of a proposed Western Economic Corridor which is to attract globally significant defence and aerospace activities and contribute to a strong trade, freight, logistics, advanced manufacturing, health, education and science economy. This will produce knowledge-intensive jobs close to areas of high population growth and drive the development of the corridor and the metropolitan cluster.

Land release in the South West Growth Area is to be supported by investment in transport infrastructure connecting the Western Economic Corridor the Western Sydney Airport Growth Area will include new communities. Housing diversity is being encouraged around centres and transit nodes. A future investigation area from Greater Penrith to Eastern Creek will link existing areas and major infrastructure. The Greater Sydney Green Grid will be a core element of the amenity of the Western Parkland City.

The subject site is located within the South West Growth area and consequently, is located in an area expected to experience considerable population and jobs growth, suggesting a future need for increased childcare provision.

### 4.2 Western City District Plan

The site is located within the Western City District Plan which encompasses the local government areas of the Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly. The Plan identifies Liverpool as a Metropolitan Cluster and Collaboration Area and notes a 0-5 year housing supply target for the Liverpool LGA of 8,250 new homes and a baseline target for 7,000 new jobs by 2036. Some other considerations for the Liverpool Collaboration Area relevant to the site are:

- University of Wollongong will build a 7,000 student campus and will set up a training facility for 700 nurses to work with Liverpool hospital
- Western Sydney University campus opened in 2018 in the City Centre
- Strong developer interest in rezoning land for additional housing, including the currently industrial waterfront.

The Western City District Plan highlights the Liverpool centre as a diverse and distinctive urban centre that should continue to provide a mixture of uses and infrastructure.

The Western Sydney Aerotropolis is a key area of growth for the Western Parkland City, it is highlighted as a catalyst for the city to grow a strong trade, logistics, advanced manufacturing, health, education and science economy. The Plan acknowledges the need to sequence infrastructure delivery to align with growth in jobs and population.

Potential new city shaping transport corridors and other city-serving infrastructure including:

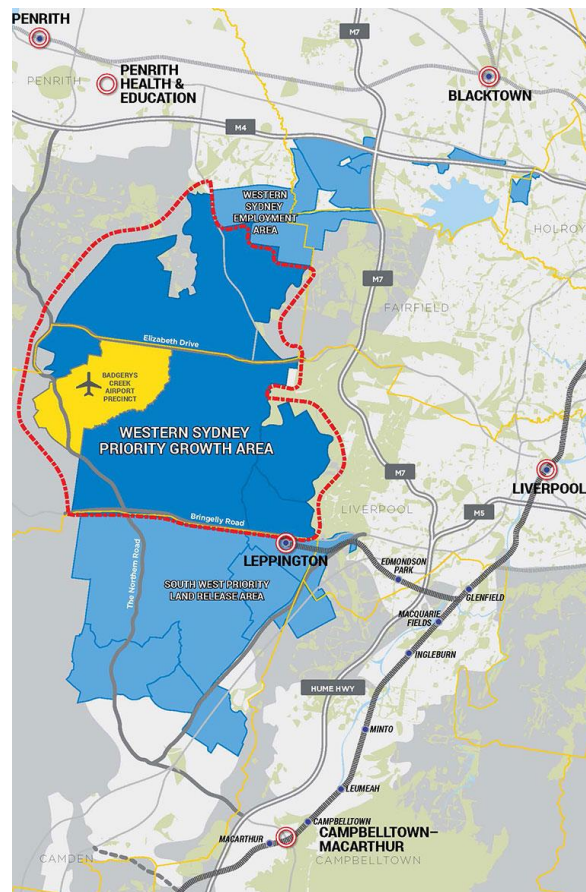
- North South Rail Link between St Marys, the Aerotropolis and Macarthur
- Western Sydney Airport – Badgerys Creek Aerotropolis to Parramatta train link
- Leppington to Western Sydney Airport – Badgerys Creek Aerotropolis train link
- Outer Sydney Orbital road and freight rail
- Sydney Metro City and Southwest extension between Bankstown and Liverpool
- M5 extension between Liverpool and the Outer Sydney Orbital.

Significant housing delivery is planned in the South West Growth Area (approximately 8 kilometres west from the site) including Leppington town centre, Oran Park, Catherine Field and areas being investigated at Lowes Creek, Merrylands and South Creek West. To align with this, the Plan promotes strategies to align social infrastructure with future need.

The Western Sydney Growth Area (shown in the map right) will guide new infrastructure

investment, identify new homes and jobs close to transport, and coordinate services in the area.

**Figure 8: Liverpool (the site) shown with the WSEA**



Source: DPIE (2020)

### 4.3 Western Sydney Aerotropolis Plan

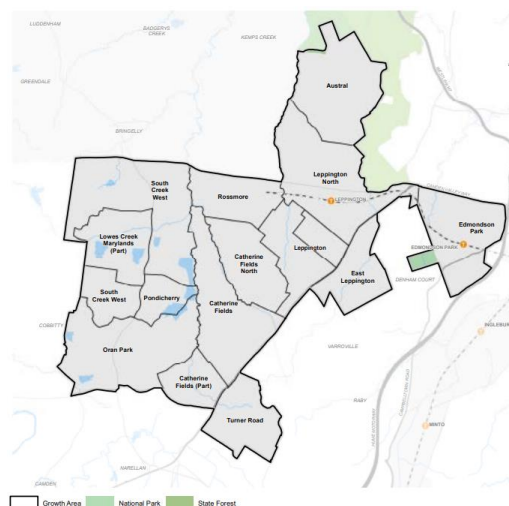
The proposed Western Sydney Airport and Aerotropolis is located to the west of the subject site and will be a catalyst for the economic growth in the Western City District. This area is located in the Western Sydney Economic Corridor.

Planning for the Aerotropolis is advancing. The Aerotropolis is envisioned to support international competitive health education, research and innovation jobs and services including the upgrades to Liverpool Hospital, Nepean Hospital and Campbelltown Hospital. The Aerotropolis is very focused on being connected to the existing centres and boosting the services in the Western City District. The plan highlights the opportunities for new transit-oriented developments including retail centres and rapid transit connections between the airport and major centres across the Sydney region.

#### 4.4 SEPP (Sydney Region Growth Centre) 2006

State Environmental Planning Policy (Sydney Region Growth Centre) 2006 sets out the planning framework for the South West Growth Area to the west of the site. The SEPP aims to co-ordinate the release of land for residential, employment and other urban development in designated growth areas across Greater Sydney. The SEPP provides controls that enable the establishment of vibrant, sustainable and liveable neighbourhoods that provide for community wellbeing and high quality local amenity. This is important for sequencing of residential growth in the region, the community of which will contribute significantly to the demand for the new hospital in Liverpool.

**Figure 9: South West Growth Area**



Source: DPIE (2020)

#### 4.5 Connected Liverpool 2040 (Local Strategic Planning Statement)

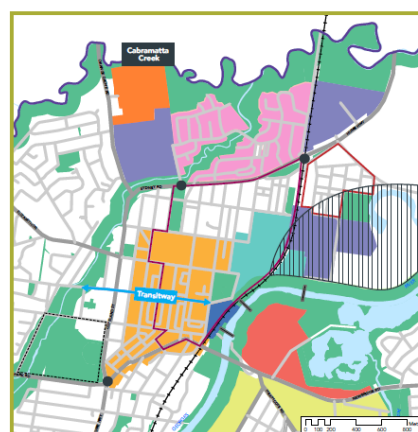
The Local Strategic Planning Statement (LSPS) provides a long term vision for the community and highlights a range of priorities and actions that align with the wider Greater Sydney plan and Western City district plan. The 2040 vision statement is:

*A vibrant place for people that is community focused, walkable, public transport-oriented, sustainable, resilient and connected to its landscape. A place that celebrates local diversity and history and is connected to other Sydney centres. A jobs-rich city that harnesses health, research, education, innovation and growth opportunities to establish an inclusive and fair place for all.*

The LSPS reiterates that Liverpool is the metropolitan cluster and health and education with significant infrastructure in the Liverpool hospital as the largest stand along hospital in NSW and the education facilities with three major universities and two TAFE campuses as well as the Whitlam Leisure Centre and St Lukes Anglican Church. The LGA is also highlighted to

be home to a significant manufacturing and logistics sector.

**Figure 10: Liverpool City Centre Structure Plan**



#### LEGEND

- Investigate grade separated pedestrian crossing
- Investigate linking open space & green corridor
- Retain Industrial Zonings
- Bulky Goods and Retail
- Investigate flexible employment
- Investigate cross river links
- Investigate railway station redevelopment
- Masterplan Woodward Place (including REZ zone)
- Liverpool Innovation Precinct
- Work with State Government to investigate residential development at Hargrave Park precinct
- Investigate residential/mixed use at Moore Point to support CBD and Innovation precinct (River Precinct)
- Health and Education
- Commercial Core/Mixed Use
- Prepare structure plan and planning proposal to rezone the Warwick Farm racing precinct to a mix of uses, including B4
- Review residential development in odour buffer to Water Recycling Plant

Source: Liverpool City Council (2020)



## 4.6 Liverpool centres and corridors

The Liverpool LGA centre and corridors strategy highlights the role of centres as important focal points for the local community with corridors providing concentrated areas of like uses that connect the community. A key focus of the strategy is to enable centres to respond to growth and emerging commercial and retail trends. The strategy was developed in response to the Council's Local Strategic Planning Statement (Connected Liverpool 2040).

The strategy details the plans for the growth in commercial and retail floor space across the LGA. The vision for the centres in Liverpool in 2040 highlights the community having convenient access to a variety of vibrant retail and business spaces that are collocated with social infrastructure that brings people together. Retail centres will provide a concentration of local jobs and services that are well connected with public and active transport.

The site's location adjacent to the existing Liverpool Hospital and the Liverpool shopping centre aligns with the vision for this area with the clustering of health, education, retail and employment services.

## 4.7 Liverpool industrial and employment lands

The Liverpool LGA industrial and employment lands strategy builds on the LSPS with a vision and strategies for the future of industrial and employment lands in the region. The notable strategies relevant to this proposal are:

1. Review and manage employment land within the eastern portion of the Liverpool LGA
2. Prioritise public domain improvements and landscaping within industrial precincts
3. Improve connectivity to industrial precincts
4. Introduce innovation precincts within suitable locations in the Liverpool LGA
5. Clarify the intended role and function of industrial precincts

The strategy highlights the role of the business zoned area, in which the site sits, to support the role and function of the Liverpool City Centre as a health and education precinct.

## 4.8 Liverpool SIA policy

The Liverpool Social Impact Assessment (SIA) Policy aims to apply the (SIA) process as a means of comprehensively and consistently considering social issues and impacts in its planning, policy and decision making; and to ensure a proactive stance to generate better outcomes for the Liverpool community. The policy is grounded in the principles of sustainability, access, equity, participation, and human rights, and is governed by Council's Social Justice Policy. The Policy seeks to promote a more socio-culturally, economically and ecologically sustainable and equitable environment while building capacity and social capital in the community. Key requirements of an SIA according to the Policy are:

- The SIA must address all potential negative social consequences as well as positive social benefits and mitigation and/or management plans including
  - Direct and indirect impacts
  - Temporary and permanent impacts



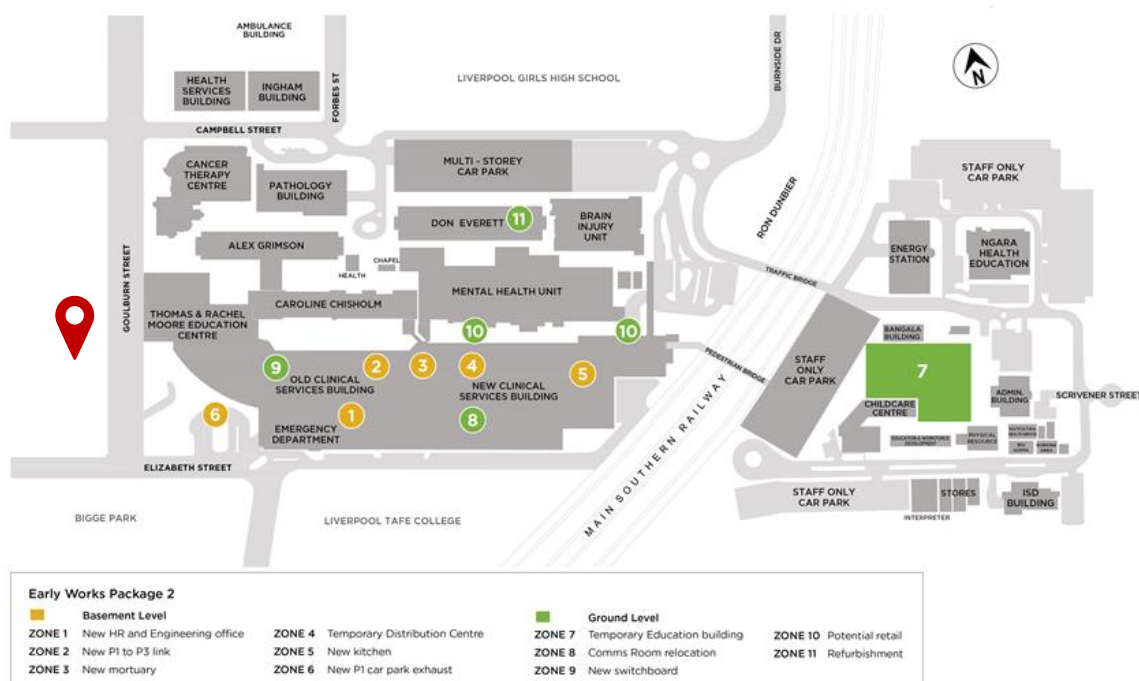
- The potential cumulative and distributional impacts
- The significance of potential impacts and mitigation measures relating to these.
- SIA should consider distributional equity, identifying who the likely beneficiaries of the proposal are and what these benefits are, as well as who is likely to suffer detriments
  - SIA should demonstrate the strategic fit of the development, plan or policy proposal and how it relates to city, population projections, addressing key factors such as impacts on child care, schools, affordable housing, open space, libraries and to transport/walkability
  - The importance of community engagement that must be adequate, meaningful and take place over a reasonable period of time.

#### 4.9 Liverpool Health and Academic Precinct

The Liverpool Health and Academic Precinct is a \$740 million redevelopment of Liverpool Hospital and a new education and research hub. The redevelopment will provide Liverpool Hospital with expanded clinical services, public spaces and car parking, integrated with research and teaching. Additionally, the redevelopment will include a \$50 million multi-storey car park will provide more parking spaces and replace the smaller existing multi-storey car park.

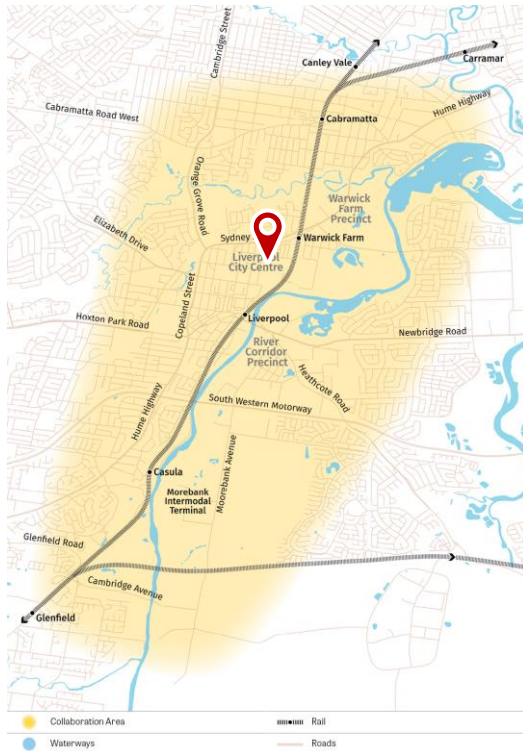
The hospital redevelopment is being delivered by Health Infrastructure in partnership with South Western Sydney Local Health District construction commenced in early 2020.

**Figure 11: Location of early works on hospital campus for Liverpool Health and Academic Precinct (subject site marked with red)**



#### 4.10 Liverpool Collaboration Area – Place Strategy

**Figure 12: Liverpool Collaboration area with site marked** The Liverpool Collaboration Area includes:



Source: GSC (2020)

- Orange Grove Road
- Liverpool's City Centre – Core
- Liverpool City Centre – Frame
- Hargrave Park
- Sapho Road
- Equine Precinct
- Munday Street
- Scrivener Street
- Georges River North
- Georges River South

The Liverpool Collaboration Area Place Strategy sets out a vision, priorities and actions that will improve the quality of life as Liverpool grows and changes. Through recognising complex, place specific issues, the strategy will be used to inform public and private policy and investment decisions.

Specifically, the strategy:

- Establishes a vision for the Liverpool Collaboration Area, based on the community's vision expressed in Liverpool City Council's Our Home Liverpool 2027 – Community Strategic Plan and the Greater Sydney Commission's Western City District Plan;
- Identifies constraints and opportunities.
- Sets priorities for the Collaboration Area, and
- Identifies actions to deliver the strategy and the vision.

The vision established within the Strategy is:

*By 2036, Liverpool is a rejuvenated river city, offering diverse and growing residential and employment opportunities. Major health, education and retail precincts, and a network of open spaces and parklands alongside the Georges River, create a rich mix of jobs and workplaces, public spaces, shops and entertainment.*

Liverpool health and education precinct is highlighted as a key opportunity for employment in the area.

#### **4.11 Our Home, Liverpool 2027 – Community Strategic Plan**

Our Home, Liverpool 2027 - Community Strategic Plan in conjunction with the LSPS details Liverpool City Council's long term vision for the future of the LGA. It is a plan to develop Liverpool as a high quality, attractive regional city for South Western Sydney. The Plan defines the vision and priorities of the community and is the overarching plan that sets the direction not only for Council but for all stakeholders, including government, business, the not-for-profit sector and residents.

The Plan sets several key strategic directions and notes Council is an organisation that embraces innovation, excellence, sustainability and equity in delivering the most efficient and effective services to the community. The key directions from the plan are:

- Direction 1 – Creating Connection (Social Priorities);
- Direction 2 – Strengthening and Protecting our Environment (Environmental Priorities);
- Direction 3 – Generating Opportunity (Economic Priorities), and
- Direction 4 – Leading through Collaboration (Civic Leadership Priorities).

For each of these directions, the Plan outlines the wishes of the community, how the community and Council can facilitate the execution of these wishes, and measurement criteria. The Master Plan supports these directions with specific actions that work to deliver on the Plan.

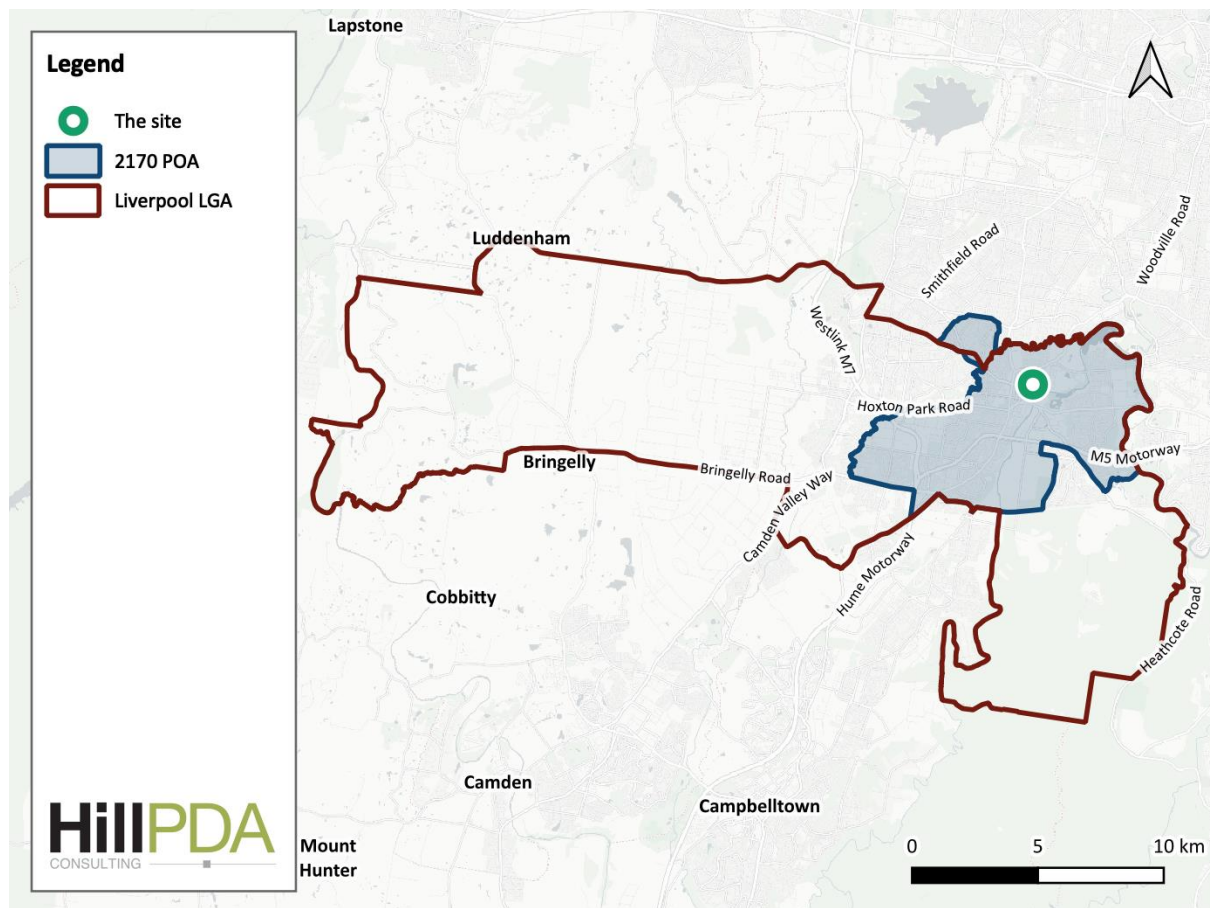
# SOCIAL BASELINE

## 5.0 SOCIAL BASELINE

### 5.1 The study area

The Liverpool Postal Area (POA) 2170 has been selected as the primary study area, with Liverpool LGA selected as a secondary study area for this report. The LGA reflects the wide catchment which would experience the effects of the introduction of additional health services on the scale proposed. Data from NSW health is also provided to the LGA level. As previously described, the Liverpool CBD and Health Precinct provide a range of services over a wide catchment, consequently a wider secondary study area comprising Liverpool LGA has also been included.

**Figure 13: The study areas**



Imagery: Carto DB (2021)

### 5.2 Health and the social environment

The Liverpool Hospital and associated medical and education hub provide health services for the wider community of the south west of Sydney. The proposed private hospital is expected to address specific health needs of this growing community. Using the Social Determinants of Health approach a review of socio-economic and health trends in the area has been carried out to gain an understanding of the potential demand for health and wellbeing services in the local community.

The Social Determinants of Health approach notes that health is linked to age, gender, education, employment, housing, social networks and relationships, social infrastructure, air quality, food access and access to health services (WHO, 2003). This section explores some of the challenges in addressing these issues and how the new hospital is intended to assist in meeting the demand.













NSW Health (2009) asserts that social determinants of health and the key elements of modern society are interrelated with pressure from external forces (see Figure 1). The health map shows how people must be at the centre of all planning and decision making as they are the recipients of any resultant impact. The health map also shows how the natural and built environments are interconnected and impact on economics, community and lifestyle of society.

**Figure 14: Health map**



Source: NSW Health (2009)

### 5.3 Demographic snapshot

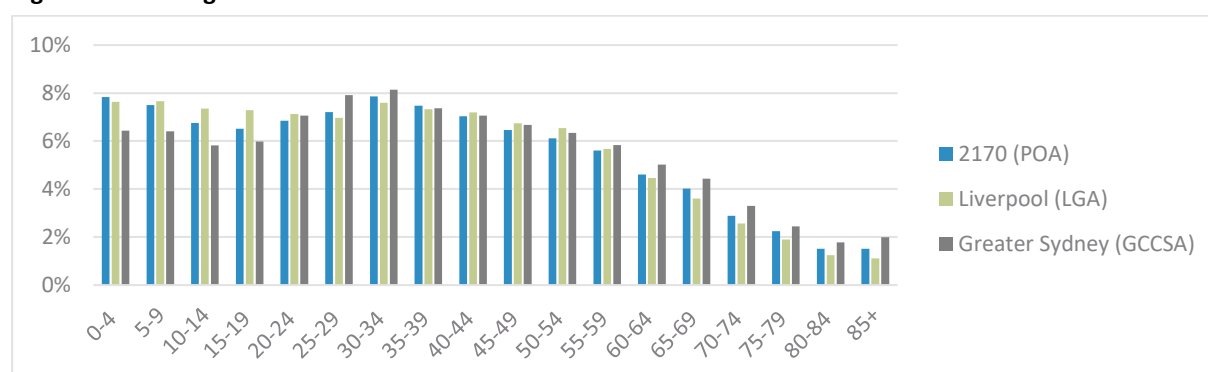
		2170 (POA)	Liverpool LGA	Greater Sydney
	Median age	34	33	36
	Projected growth to 2041	<i>Data not available</i>	76%	24%
	Weekly household income less than \$650	20.3%	18%	17%
	Median weekly income	Personal	\$545	\$584
		Family	\$1,511	\$1,663
		Household	\$1,378	\$1,550
	Family structure	Couple family without children	24.7%	23.2%
		Couple family with children	54.2%	57.0%
		One parent family	19.4%	18.2%
		Other family	1.7%	1.5%
	Socio-economic advantage and disadvantage (SEIFA)	34 <sup>th</sup> percentile (national)	47 <sup>th</sup> percentile (national)	-
	Highest level of education	Year 12	19.7%	20.1%
		Certificate III-IV	13.5%	13.9%
		Adv. Dip or Dip	9.0%	9.0%
		Bachelor's degree	15.8%	15.7%
	Unemployment	8.4%	7.5%	6.0%
	Need for assistance with core activities	4.6%	6.7%	5.2%
	Aboriginal and Torres Strait islander residents	0.8%	1.5%	1.5%
	Residents with Australia as their country of birth	47.8%	51.7%	57.1%
	Households where a non-English language is spoken	58.4%	57.2%	38.2%



## 5.4 Age

Some age groups require health services more than others, particularly the very young and those over 65. The age distribution of the community is shown in Figure 15. The primary and secondary study areas both have a younger population, with more babies and children and significantly fewer older and elderly residents. The median age for the primary study area is 34, compared to 36 across Greater Sydney. This indicates the area is attracting younger families, with a likely higher demand for maternity care, early childhood care with less demand for aged care services than other areas of Greater Sydney.

**Figure 15: 2016 Age distribution**

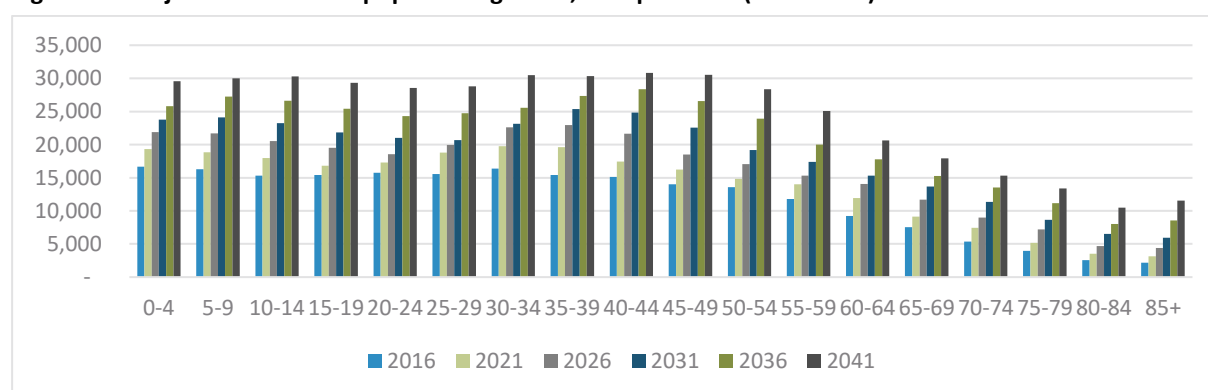


Source: ABS (2016), *Australian Census of Population and Housing*

## 5.5 Population growth

The Liverpool LGA population is forecast to grow significantly in coming years. DPIE projections suggest that the LGA population will grow by 76% between 2021 and 2041, when it is projected to reach 441,426 residents, an increase of 190,105 residents on 2021. Over the same period (2021-2041), Greater Sydney's population is set to increase by 24%, which is significantly lower. The significantly higher population increase in Liverpool LGA, can partially be attributed to the greenfield development likely to take place in the western area of the LGA.

**Figure 16: Projected residential population growth, Liverpool LGA (2016-2041)**



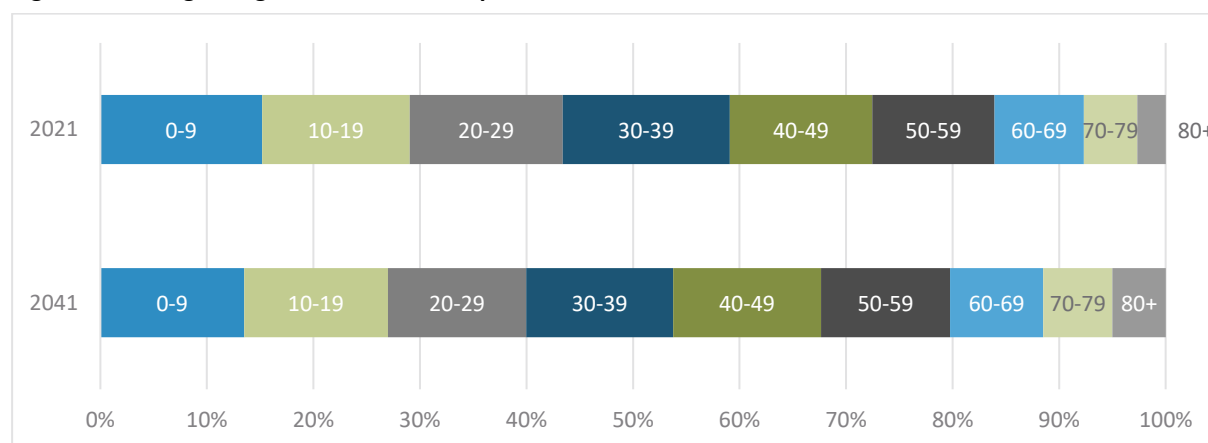
Source: DPIE (2019), *NSW 2019 Population Projections*

The projected change in LGA age breakdown is shown below in Figure 17. The DPIE projections indicate that there will be a significant increase in the proportion of residents over the age of 60, who are estimated to make up over 20 per cent of the LGA population by 2041. While the proportion of school



age children will decrease slightly, that demographic will still represent over a quarter of the LGA population, with the most significant proportionate decreases in the working age population. As such, DPIE projections indicate the age dependency ratio (the proportion of residents aged younger than 15 years or 65 years and older, versus those aged in between) is set to increase from 50.8 per cent in 2021 to 56 per cent in 2041.

**Figure 17: Change in age breakdown, Liverpool LGA 2021-2041**



Source: DPIE (2019), NSW 2019 Population Projections

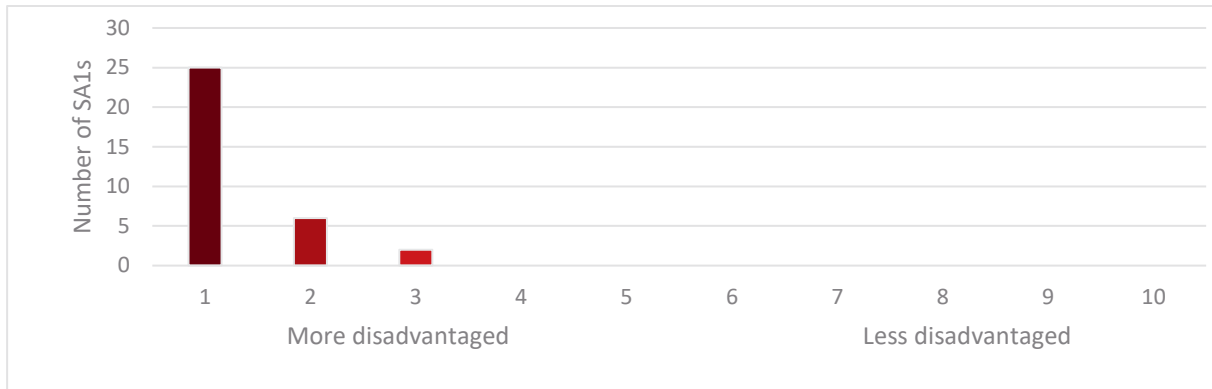
## 5.6 Socio-economic advantage and disadvantage

The Socio-Economic Indexes for Areas (SEIFA) are rankings of relative socio-economic status (advantage and disadvantage) for different geographic areas, within each state and nationally. The indexes rank areas against others of the same geographic type (e.g. Local Government Area or Statistical Area Level 1) based on specific socio-economic metrics, selected based on the particular SEIFA index.

### 5.6.1 Relative socio-economic disadvantage

The Index of Relative Socio-economic Disadvantage (IRSD) examines factors like unemployment, proportion of lower income households, lower education levels or lack of internet access to compare overall levels of disadvantage in areas. Figure 18 shows the distribution of IRSD rankings for SA1s within the study area. The IRSD in SA2 amongst other SA2 has the decile of 2 and percentile of 15. The SA1s surrounding the site are generally more disadvantaged, with most being concentrated within the three most disadvantaged deciles (21 per cent most disadvantaged).

**Figure 18: Distribution of SA1s within the 1 kilometre of the site on the IRSD (national)**

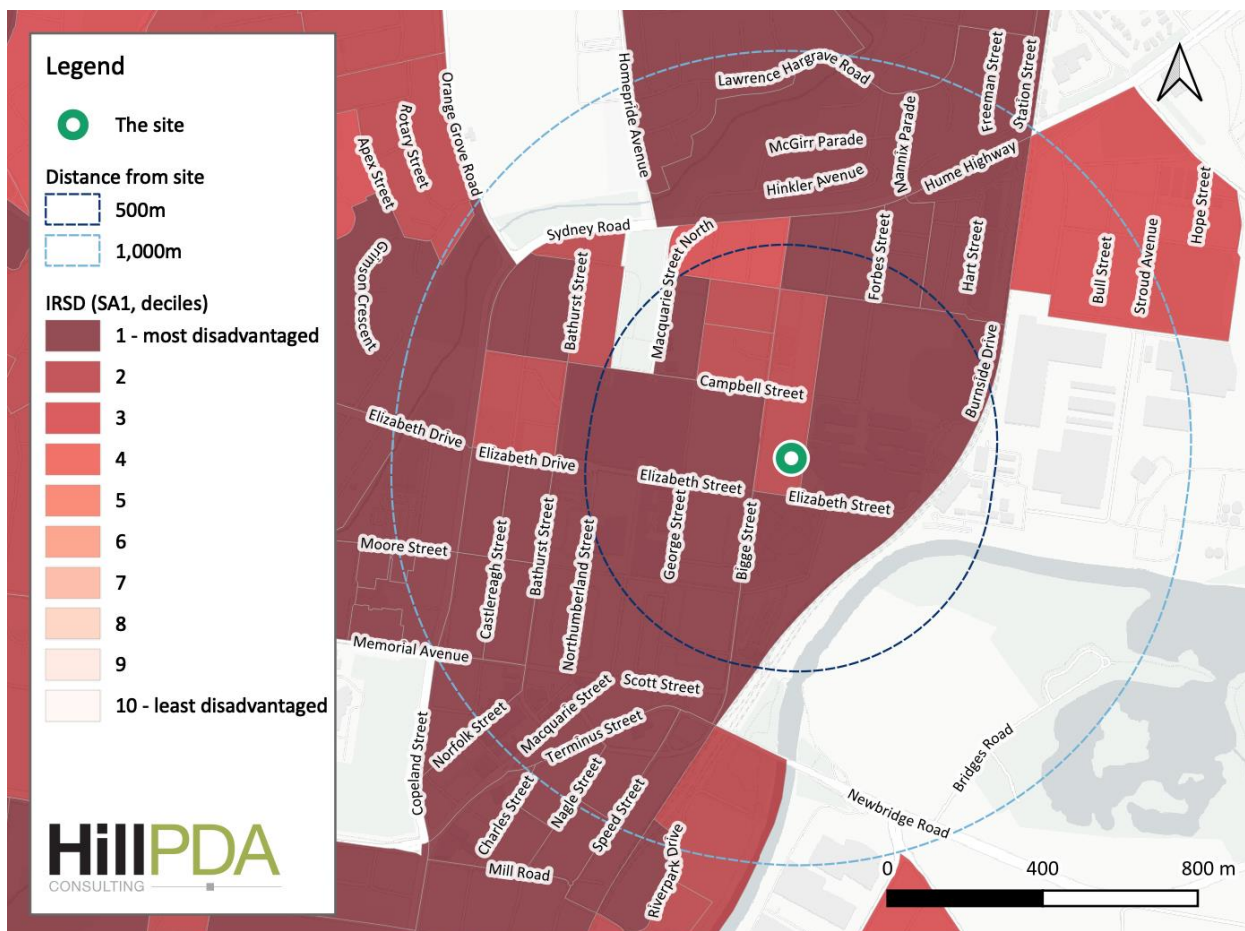


Source: ABS (2016). SA1s for which no score is recorded (low population) have been excluded.

This data has been mapped spatially in Figure 19. The SA1s surrounding the subject site have greater levels of disadvantage, potentially indicating:

- More households with lower incomes
- More residents with no qualifications
- More residents in low skilled occupations.

**Figure 19: IRSD deciles for SA1s near the site (national index)**

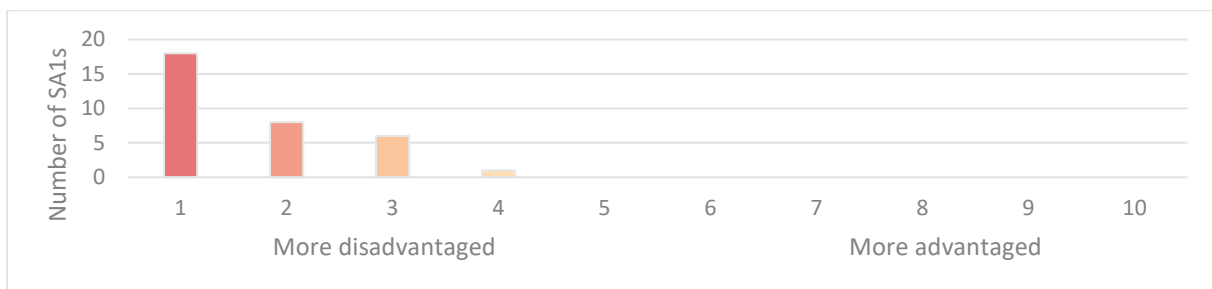


Source: ABS (2016). SA1s for which no score is recorded (low population) have been excluded.

### 5.6.2 Relative socio-economic advantage and disadvantage

The Index of Relative Socio-economic Advantage and Disadvantage (IRSAD), in addition to the indicators of disadvantage above, examines factors like professional occupations, high income, higher education levels, larger houses to compare overall levels of advantage and disadvantage in areas. Figure 20 shows the distribution of IRSAD rankings for SA1s within 1km of the site. All SA1s are below the fifth decile, indicating with no advantage in upper half. There is a significant proportion of SA1s with rankings between 2 and 4, indicating a greater concentration of more disadvantage socio-economic disadvantage.

**Figure 20: Distribution of SA1s within 1 kilometre of the site on the IRSAD (national)**

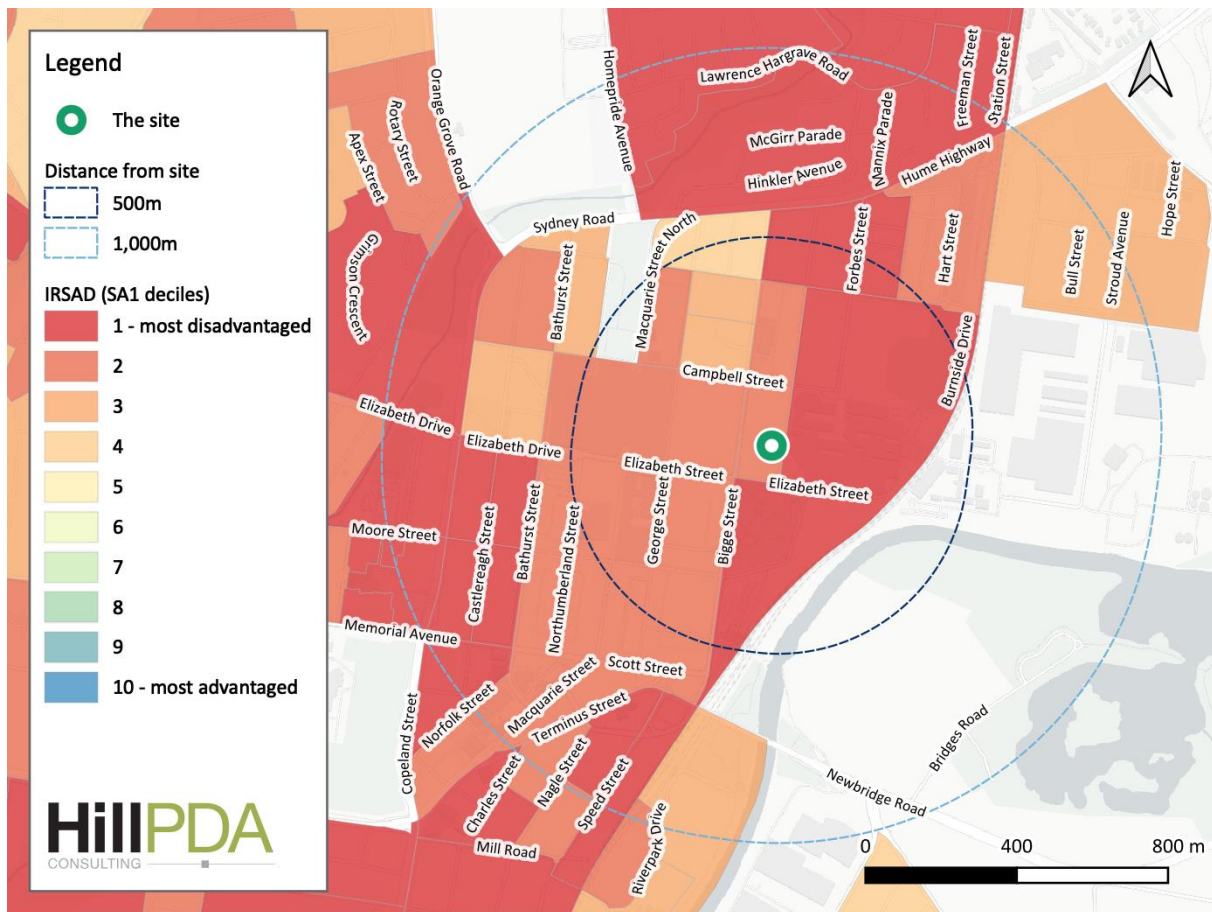


Source: ABS (2016). SA1s for which no score is recorded (low population) have been excluded.

This data has been mapped spatially in Figure 21. The SA1s immediately surrounding the subject site has moderate to high levels of disadvantage, potentially indicating:

- Fewer households with high incomes
- More people in unskilled occupations.

Figure 21: SA1s near to the subject site ranked on the IRSAD using deciles



Source: ABS (2016). SA1s for which no score is recorded (low population) have been excluded.

## 5.7 Crime

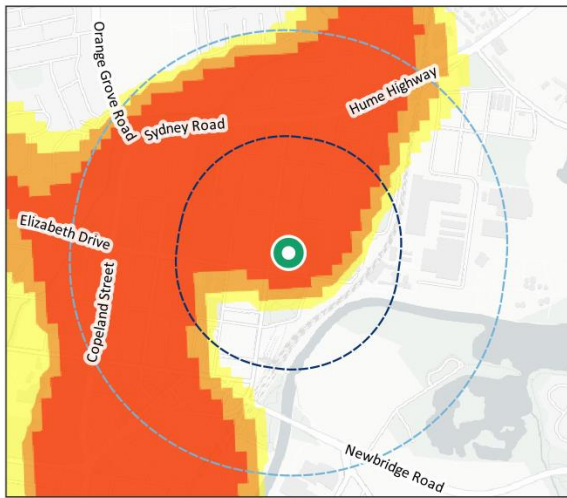
Data from the NSW Bureau of Crime Statistics and Research (BOCSAR) has been mapped below in Figure 22 to show crime density near the site, highlighting areas of greater density, or “hotspots”. The maps identify hotspots over the Liverpool CBD for theft, assault, robbery and malicious damage to property over that period. However, it should be noted that hotspot mapping shows weighted crime density score for a grid encompassing the entire state. Using this method, most of NSW returns either no crime or very low crime. Approximately one percent of grid cells, those which have the highest crime density, are considered crime hotspots and assigned a colour (red, orange or yellow) to reflect the strength of the hotspot. As such, the hotspot covering the Liverpool CBD is not weighted against its significantly higher local population and number of visitors (e.g. shoppers and workers), just the rate of incidents themselves weighted against the state average.<sup>1</sup>

<sup>1</sup> NSW BOCSAR (2020), *Glossary: Hotspot maps* [[https://www.bocsar.nsw.gov.au/Pages/bocsar\\_crime\\_stats/bocsar\\_glossary.aspx](https://www.bocsar.nsw.gov.au/Pages/bocsar_crime_stats/bocsar_glossary.aspx)]

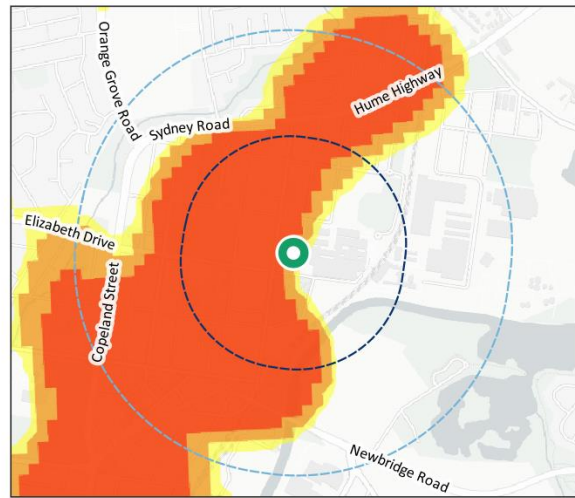


**Figure 22: BOCSAR crime density maps of the site and surrounds**

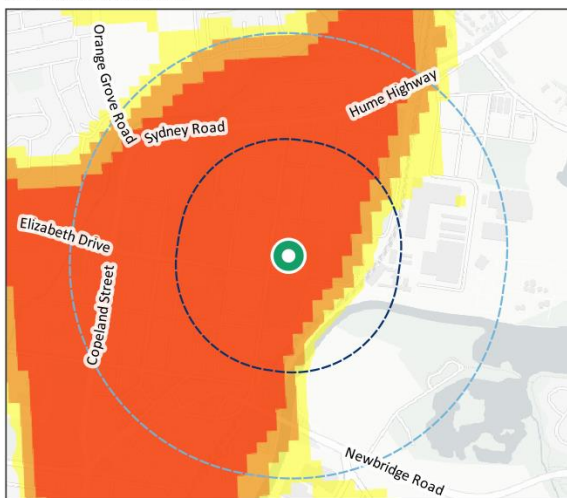
Theft (break and enter dwelling)



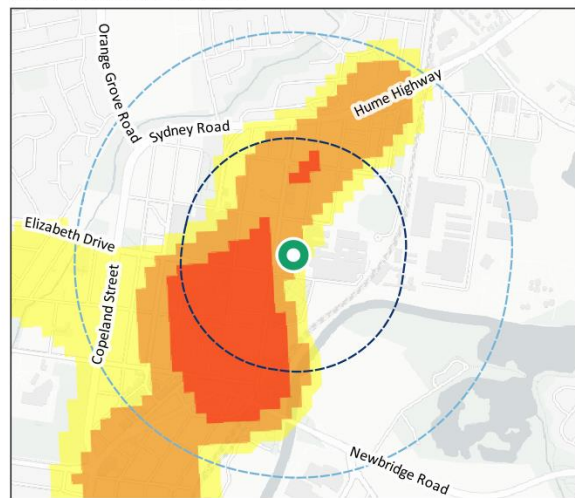
Theft (break and enter non-dwelling)



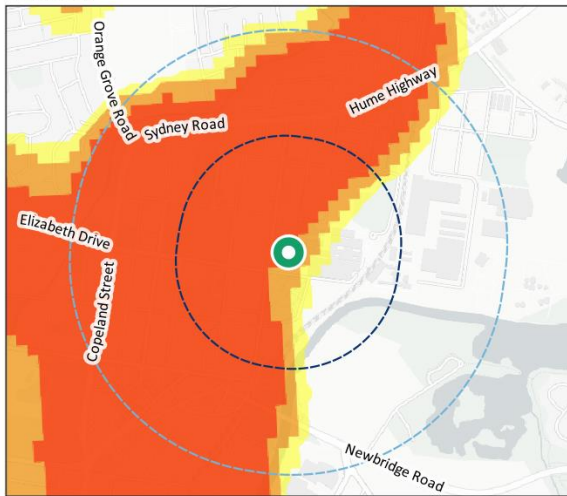
Domestic assault



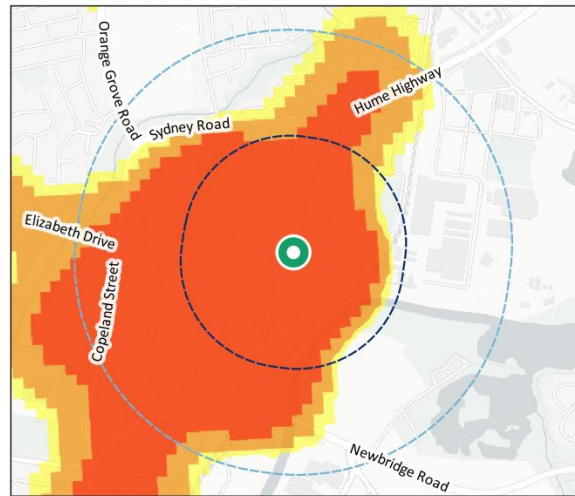
Non-domestic assault



Robbery



Malicious damage to property



**Legend**

The site

Distance from subject site

500m 1,000m

Crime density (July 2020 – June 2021)

High Medium Low

Source: BOCSAR (2021)

Detailed data for each crime type mapped is shown in Table 6 below. The table provides comparisons with Liverpool LGA and the NSW state-wide trends and rates per 100,000 population. Based on the rates of incidence in the year to June 2021, the study area has similar rates of crime to the LGA and state rates, with assault being slightly higher. All rates have trended down or remained stable over the 2 years to June 2021.

**Table 6: Incidents from April 2019 to March 2021 (rate per 100,000 people)**

Year to	March 2021	Year to June 2020		Year to June 2021	
Area	Trend (2 year)	Count	Rate	Count	Rate
<b>Break and enter dwelling</b>					
<b>2170 (POA)</b>	Down 17.0% per year	382	324.1	317	268.9
<b>Liverpool LGA</b>	Down 11.0% per year	629	276.4	560	246.1
<b>New South Wales</b>	Down 16.6% per year	23,054	285.0	19,224	237.6
<b>Break and enter non-dwelling</b>					
<b>2170 (POA)</b>	Down 16.1% per year	118	100.1	99	84.0
<b>Liverpool LGA</b>	Down 21.8% per year	174	76.5	136	59.8
<b>New South Wales</b>	Stable	9,013	111.4	7,070	87.4
<b>Domestic assault</b>					
<b>2170 (POA)</b>	Stable	570	483.6	582	493
<b>Liverpool LGA</b>	Up 11.7% per year	975	428.4	1089	478.5
<b>New South Wales</b>	Stable	31,871	394.0	32,797	405.4
<b>Non-domestic assault</b>					
<b>2170 (POA)</b>	Stable	489	414.9	486	412.3
<b>Liverpool LGA</b>	Stable	734	322.5	757	332.6
<b>New South Wales</b>	Stable	30,204	373.4	30,822	381.0
<b>Robbery</b>					
<b>2170 (POA)</b>	Down 29.9% per year	77	65.3	54	45.8
<b>Liverpool LGA</b>	Stable	101	44.4	87	38.2
<b>New South Wales</b>	Stable	2,322	28.7	2,116	26.2
<b>Malicious damage to property</b>					

Year to	March 2021	Year to June 2020		Year to June 2021	
<b>2170 (POA)</b>	Stable	760	644.8	773	655.8
<b>Liverpool LGA</b>	Stable	1,317	578.7	1,293	568.1
<b>New South Wales</b>	Stable	54,647	675.5	53,308	659.0

Source: NSW BOCSAR (2021)

## 5.8 Health indicators

This section details available data for health in Liverpool LGA and the South West Sydney Local Health District (SWSLHD). In Liverpool LGA, NSW Health determined that life expectancy for a 65 year old resident in 2018 was approximately 86.2 years (84.5 amongst men, 87.9 amongst women), largely matching the wider NSW average of 87 years (85 amongst men and 88 years amongst women).

Looking at broader health care needs, the below data from NSW Health identifies trends within the broader LGA population:

**Table 7: Key health indicators and trends, Liverpool LGA and NSW**

Indicator	Spatially adjusted rate per 100,000 population (2017-19) LGA	LGA Trend	Spatially adjusted rate per 100,000 population (2017-19) NSW	NSW Trend
Potentially preventable hospitalisations	2,495.1	↓	2,160.7	↑
Potentially avoidable deaths	79.3	↓	99.4	↓
Chronic obstructive pulmonary disease hospitalisations	250.5	↑	230.0	↓
Coronary heart disease hospitalisations	499.6	—	492.5	—
Asthma hospitalisations	203.3	↑	142.1	↓
Overweight and obesity attributable hospitalisations	1,089.0	↑	752.2	↑
Overweight and obesity attributable deaths	45.4	↓	41.9	↓
Smoking attributable hospitalisations	602.9	↓	658.9	—

Smoking attributable deaths	62.7	↓	67.0	↓
Alcohol attributable hospitalisations	316.4	↓	514.0	↑
Alcohol attributable deaths	18.8	↓	20.0	↓

Source: HealthStats NSW (2020), Data by Local Government Area, trend

The data above suggests that Liverpool LGA has generally higher incidence of cardiovascular and pulmonary health issues, as well as hospitalisation arising from overweight and obese-related health conditions compared to the state average. The LGA has a lower occurrence of smoking and alcohol related hospitalisations and deaths. The higher rate of potentially preventable hospitalisations is trending down toward the state average, suggesting that there is demand for additional preventive care and early disease management in the area.

## 5.9 Key insights

The above sections have yielded the following key insights:

- The primary and secondary study areas both show greater representation of couple family with children and one parent families compared to Greater Sydney. This is indicative of the community having significantly more young people and children proportionally compared to other ages. Young people and families may increase demand for paediatric medical and allied health services rather than geriatric health services
- Incomes in the primary and secondary study areas were both lower than the Greater Sydney average and they were both in the lower half of all areas on measures of socio-economic advantage and disadvantage, indicating that generally lower incomes and access to lower skilled jobs. Lower socio-economic households may have poorer access to services including health care
- The primary and secondary study areas have a significantly higher proportion of residents born in a country other than Australia and households where a non-English language is spoken. This suggests that any services to be provided within the area should include allowances for a more diverse user base, for example with cultural training and interpreter services for patients and visitors for whom English is a second language
- The population of Liverpool LGA is projected to grow by 190,105 residents between 2021 and 2041 (it is noted that DPIE projections are yet to be updated to account for the significant decrease in immigration due to the COVID-19 Pandemic), suggesting an overall increase in need for health services in the region. The projected age breakdown will see the most significant proportionate increase in the older age brackets, with residents aged over 60 years projected to make up over 20 per cent of the LGA population by 2040. A significant increase in elderly residents will increase the need for health care services more acutely due to the special needs of this demographic. An ageing population most notably is likely to produce an increased demand for palliative care



- The Liverpool LGA, as a strategic centre for South West Sydney, has higher crime rates compared with the state average. However, when incidents are averaged per resident rates are comparable, with no significant upward trend
- The LGA has a rate of potentially preventable hospitalisations that is above the state average, while this has been in long term decline and the rate statewide has been increasing, it indicates that there may be demand for additional preventive care and early disease management in the area. The higher rate of hospitalisations and deaths stemming from conditions relating to overweight, obesity and heart disease, all longer-term chronic conditions that may require management, further suggests a need for preventative health facilities.

# ECONOMIC IMPACTS

## 6.0 ECONOMIC IMPACTS

This Chapter assesses and where possible quantifies the potential economic impacts that would eventuate from the development of the Liverpool Private Hospital. Economic metrics estimates include employment, wages, gross value added (GVA) and construction impacts (direct and indirect economic outputs and employment).

### 6.1 Economic impact - during construction

This section assesses the potential economic benefits during construction. The economic impacts of the design and construction stage are based on the estimated capital investment value of around \$305 million. This estimate is based on a construction cost estimates of \$282m (using sources from Rawlinson Construction Handbook and RLB Digest) plus 8% of construction cost for design and other professional services.

The construction industry is a significant component of the economy, accounting for 5.96 per cent of Gross Domestic Product (GDP) and employing just over one million workers across Australia.<sup>2</sup> The industry has strong linkages with other sectors, so the impacts on the economy go further than the direct contribution of construction. This is known as the multiplier effect. Multipliers refer to the level of additional economic activity generated by a source industry.

There are two types of effects captured by multipliers:

**Production Induced Effects:** which is made up of:

- *Direct effects:* which constitutes all outputs and employment required to produce the inputs for construction, and
- *Indirect effects:* which is the induced extra output and employment from all industries to support the increased production of the construction sector.

**Consumption Induced Effects:** which relates to the demand for additional goods and services due to increased spending by the wage and salary earners across all industries arising from employment.

The modelling for this report is based on HillPDA's calculation of direct, indirect, and induced effects of construction expenditure as well as industry output and employment job creation based on ABS Australian National Input Output tables.

#### 6.1.1 Construction – gross output

The Proposal will have a direct impact on output as well as indirectly stimulating other industries which assist in production and cater to increased consumption.

The table below details the output multipliers and shows the impact of the change in demand generated by the development (design and construction) and the impact on the economy. The forecast increase in total output is approximately \$972 million, as shown in the table below.

<sup>2</sup> Source: IBIS World Construction Industry Report 2020

**Table 8: Design and construction - impact on gross output (\$m)**

	Direct effects	Production induced effect	Consumption induced effect	Total
Output multipliers	1	1.281	0.905	3.186
<b>Output (\$million)</b>	<b>305.0</b>	<b>390.7</b>	<b>276.0</b>	<b>971.6</b>

Source: HillPDA Estimate using data from ABS Australian National Accounts: Input-Output Tables 2018-19 (ABS Pub: 5209.0), ABS Census 2016 Data

### 6.1.2 Gross Value Added (GVA) impact

The Gross Value Added (GVA) of an industry refers to the value of outputs less the costs of inputs. It also measures the contribution that the industry makes to the regions' wealth or gross regional product (GRP).

Development (design and construction) would directly contribute around \$92 million to the national economy. Including the multiplier impacts, a total of \$391 million would be contributed to gross regional product (measured in 2021 dollars) based on the national multipliers in the table below.

**Table 9: Construction – impact on gross value added (GVA)**

	Direct effects	Production induced effect	Consumption induced effect	Total
GVA multipliers	0.300	0.520	0.462	1.282
<b>GVA (\$million)</b>	<b>91.5</b>	<b>158.6</b>	<b>140.9</b>	<b>391.0</b>

Source: Hill PDA Estimate using data from ABS Australian National Accounts: Input-Output Tables 2018-19 (ABS Pub: 5209.0), ABS Census 2016 Data

### 6.1.3 Job creation

Every million dollars of design and construction work undertaken generates 2.37 job years directly.<sup>3</sup> Based on the estimated design and construction cost, 722 on-site job years<sup>4</sup> would be directly generated by the proposed development as shown in the table below.

**Table 10: Construction impact on employment (job years)**

	Direct effects	Production induced effect	Consumption induced effect	Total
Multipliers	1	1.486	1.336	3.823
Employment No. per \$million	2.368	3.520	3.164	9.052
<b>Total Job Years Generated</b>	<b>722</b>	<b>1,073</b>	<b>965</b>	<b>2,761</b>

Source: Hill PDA Estimate using data from ABS Australian National Accounts: Input-Output Tables 2018-19 (ABS Pub: 5209.0), ABS Census 2016 Data

A further 2,038 job years would be generated and/or supported due to multiplier impacts making it a total of 2,761 job years being generated and supported by development.

<sup>3</sup> Source: ABS Australian National Accounts: Input – Output Tables 2018-19 (ABS Pub: 5209.0) adjusted to 2021 dollars

<sup>4</sup> Note: One job year equals one full-time job over one year

### 6.1.4 Other construction impacts

The construction process may lead to short-term negative impacts in the locality, such as increased traffic, noise, dust and so on. We have assumed that the development would take the necessary steps to mitigate the extent of these impacts.

## 6.2 Economic impact - post-construction

### 6.2.1 Employment

The proposed development would support permanent employment post-construction through the operation of the hospital and professional suites / consulting rooms. We understand that of the 11 levels of consulting rooms the hospital is likely to absorb five levels as part of hospital operations. The table below provides an estimate of the number of jobs that would be supported on site.

**Table 11: Employment from development**

Land Use	Employment Density*	No.	Units	Jobs
General Retail	1 / 28 sqm	353	sqm	13
Hospital	2.75 / bed	155	beds	426
Speculative Professional suites / Consulting rooms*	1 / 26 sqm	6,020*	sqm GLA	232
<b>Total</b>				<b>670</b>

\* Assumed efficiency (GLA/GFA) of 88%

Sources: ABS Retail Survey 1998-99, Sydney City Employment & Floorspace Survey 2017, Northern Beaches Hospital and HillPDA Research

Based on the table above, the proposed development is estimated to accommodate 670 jobs on site. The marginal increase is 670 jobs given that there are no jobs currently on site.

Please note that due to the 24 hours operation of the hospital the number of workers at any one time will be lower than 670. During normal business hours or at peak times the number of jobs on site is likely to be between 400 and 500.

### 6.2.2 Total salaries

Based on IBIS World Industry Reports, HillPDA has estimated total remuneration of workers at the proposed hospital as approximately \$73mil per annum.

**Table 12: Staff remuneration**

Land Use	Jobs	Avg Annual Wage	Total (\$m)
General Retail	13	\$29,000	\$0.4
Hospital	426	\$118,133	\$50.4
Speculative Professional suites / Consulting rooms	232	\$95,000	\$22.0
<b>Total</b>	<b>670</b>	<b>\$108,466</b>	<b>\$72.7</b>

Sources: IBIS World Reports; HillPDA

### 6.2.3 Gross value added

Gross value added (GVA) of an industry refers to the value of outputs less the costs of inputs. It also measures the contribution that the industry makes to the country's wealth or gross domestic product (GDP). We forecast the marginal GVA to be around \$92mil each year (measured in 2021 dollars) based on the following table.

**Table 13: Gross value added from development**

Land Use	Jobs	GVA / Worker	GVA (\$m)
General Retail	13	\$35,700	\$0.5
Hospital	426	\$152,066	\$64.8
Speculative Professional suites / Consulting rooms	232	\$115,000	\$26.6
<b>Total</b>	<b>670</b>	<b>\$137,074</b>	<b>\$91.9</b>

Source: IBIS World Reports; HillPDA

### 6.2.4 Investment stimulus

Where a significant property investment decision has been made, such as a hospital, it demonstrates businesses belief in the commercial prospects of the region. Such an investment can in turn stimulate and attract further investment. The direct investment in the subject site would support a wide range of economic multipliers as outlined above which would in turn support investment in surrounding industries. It would also raise the profile of Liverpool to potential investors.

SOCIAL IMPACTS



## 7.0 SOCIAL IMPACTS

The potential social impacts of this project are summarised in this section with potential mitigation measures suggested. A summary of relevant technical reports and their findings is provided below. It should be noted that it is expected that further reports would be completed as part of the detailed design at the DA phase, with existing reports completed to the highest level of detail available at the PP phase.

### 7.1 Assessment of potential impacts

The following tables draw on the above sections to predict the likely social impacts arising from the proposal. The impacts have been separately considered at the construction and operational phases. Impacts are assessed using the framework outlined in Chapter 3.0. A more detailed consideration of relevant other, including proposed mitigations, is included in APPENDIX A :.

### 7.1.1 Construction

The construction process has the potential to affect the amenity of sensitive receivers within the surrounding area. Sensitive receivers generally relate to residents but may also include other childcare centres, places of worship, community and recreational facilities or businesses (such as cafes and restaurants) that rely on the amenity of a locality to attract customers.

During construction, the following may affect local amenity:

- The removal of existing apartment buildings and structures
- The introduction of construction facilities to the environment
- Noise and dust arising from construction activities
- Unpleasant odours
- Increased traffic volumes and/or congestion.

Short term reduction in amenity may impact the existing residential and commercial properties within the immediate vicinity of the site. Construction impacts on local amenity are generally contained within close proximity to construction sites. Best practice for construction in established residential areas is to include consultation with neighbouring residents to outline expectations and standards.

A range of mechanisms can be applied to minimise any potential construction impacts on amenity. Such mechanisms are typically required as a condition of development consent and are employed by most building contractors and implemented through a Construction Management Plan. The Construction Management plan would outline mechanisms that include avoiding noisy or disruptive construction activities during the hours when residents are likely to want to enjoy surrounding open space or rest, such as evenings and weekends.

**Table 14: Social impact evaluation and mitigation response - construction**

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Dust from construction activity will cause a decline in air quality, potentially impacting the amenity of surroundings and health and wellbeing of neighbouring residents and workers	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>● Construction phase air quality impacts shall be minimised or avoided by incorporation of appropriate dust suppression and air quality control measures at various stages of the project.</li> </ul>	<ul style="list-style-type: none"> <li>● Preparation and implementation of a Construction Management Plan for construction activities.</li> </ul>	Low

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Noise and vibration from construction activity may negatively affect amenity for residents and businesses surrounding the site, impacting upon quiet enjoyment of surroundings, way of life and health and wellbeing	Likely + Moderate = High	<ul style="list-style-type: none"> <li>When planning construction work that will generate significant noise or vibration, consider: <ul style="list-style-type: none"> <li>Substitution by an alternative process.</li> <li>Restricting times when work is carried out.</li> <li>Screening or enclosures.</li> <li>Utilisation of temporary supports were deemed necessary</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Implementation of a Construction Management Plan, including: <ul style="list-style-type: none"> <li>Limiting noise-generating construction activity to approved site operating hours</li> <li>Utilising noise and vibration monitoring equipment to ensure that activities remain within specified tolerance</li> </ul> </li> </ul>	Medium
Additional construction vehicle movements may increase congestion on surrounding roads, impacting way of life, access and livelihoods for surrounding residents, workers and businesses	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>Manage access to/from adjacent properties</li> <li>Restrict construction vehicle movements to designated routes to/from the site</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of a Construction Pedestrian and Traffic Management Plan (CPTMP), to assess assessment of the parking, pedestrian and traffic issues associated with demolition activities for the proposed works and recommend appropriate mitigation strategies.</li> </ul>	Low
Impacts to surrounding businesses and pedestrians from changed access during construction, potentially affecting livelihoods and way of life	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>Manage and control construction vehicle activity in the vicinity of the site.</li> <li>Provide an appropriate and convenient environment for pedestrians and cyclists.</li> </ul>		Low

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
		<ul style="list-style-type: none"> <li>Minimise the impact on pedestrian movements</li> <li>Maintain appropriate capacity for pedestrians at all times on footpaths adjacent to the site.</li> <li>Maintain appropriate public transport access</li> <li>Carry out demolition activity in accordance with approved work hours.</li> </ul>		
Loss of employment for current workers on site arising from demolition of existing businesses on site affecting livelihoods and way of life	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>None. Although it is noted that this will be an impact during the construction phase and that the Economic Impact Assessment a net increase in jobs over at the operational phase (670 additional FTE jobs) and an increase in incomes (\$73m above the base case)</li> </ul>	<ul style="list-style-type: none"> <li>Utilising local services and encouraging workers to use local businesses</li> <li>It is projected that design and construction would generate and support 2,761 FTE job years (722 directly employed) and \$74m in direct incomes and salaries paid to households, much of which would be reinvested into surrounding businesses, resulting in an overall contribution of \$391m to the Greater Sydney economy.</li> </ul>	Medium

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Additional employment opportunities on site arising from construction activity (direct and indirect) positively impacting livelihoods	Likely + Moderate (positive) = High (positive)	<ul style="list-style-type: none"> <li>Construction activity will draw resources from and thereby generate economic activity in Liverpool LGA as well as from the surrounds. Assumptions are made on the proportion sourced from within and from outside the LGA.</li> </ul>	<ul style="list-style-type: none"> <li>It is projected that design and construction would generate and support 2,761 FTE job years (722 directly employed) and \$74m in direct incomes and salaries paid to households, much of which would be reinvested into surrounding businesses, resulting in an overall contribution of \$391m to the Greater Sydney economy.</li> </ul>	High (positive)
Loss of housing stock on site	Possible + Minor = Low	<ul style="list-style-type: none"> <li>None – other amenities are available close by during for use in the interim</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	Low
Potential changes to access for surrounding businesses and residences from parking for workers on site during construction, impacting way of life and access	Possible + Minor = Low	<ul style="list-style-type: none"> <li>Ensure dedicated parking is provided for workers, or that they are encouraged to travel via alternative means (e.g. public transport).</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of Construction Transport Management Plan to manage parking and access to site</li> <li>Due to the proximity of the site to both trains and buses, all staff will be encouraged to take public transport to and from the site, and as such there will be no vehicle parking on site.</li> </ul>	Low
Potential feeling of powerlessness or lack of means to have input or say on the proposal during construction for surrounding properties and the wide community,	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>Standard engagement mechanisms as part of SSDA process</li> </ul>	<ul style="list-style-type: none"> <li>Development of a Stakeholder Management Plan, in conjunction with the CMP, to address the implementation of project specific mitigation and management strategies in order to</li> </ul>	Low

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
negatively impacting decision-making systems			minimise the potential for negative impacts on the community in and around the construction site.	
Potential impacts to residents and visitors to Liverpool, particularly if construction work relating to the hospital is being undertaken at the same time as other construction impacting amenity and, potentially, health and well being	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>Standard construction management measures as part of approval.</li> </ul>	<ul style="list-style-type: none"> <li>Preparation of Construction Management Plan, to mitigate amenity impacts</li> <li>Coordination of these measures with Liverpool Hospital and Health Infrastructure to ensure that cumulative impacts resulting from any simultaneous construction activities will be minimised.</li> </ul>	Low

### 7.1.2 Operation

This section considers impacts that may occur once construction is completed and the proposal is occupied and in operation.

**Table 15: Social impact evaluation and mitigation response - operation**

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Overshadowing of nearby properties, particularly Bigge Park, could cause a reduction in social amenity, enjoyment of surroundings, health or way of life for surrounding residents, workers and visitors	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>Incorporation of measures to mitigate shadowing and incorporation of design elements based on detailed solar modelling to ensure compliance with relevant solar access requirements</li> </ul>	<ul style="list-style-type: none"> <li>The stepped form of the building has been determined through detailed shadow and solar access modelling for the building and site. The design has incorporated these measures, mitigating impacts to neighbouring properties and ensure that any shadowing is within relevant guidelines</li> </ul>	Low
Potential for increase in built form to reduce views for surrounding residents and businesses, negatively impacting, enjoyment of surroundings and way of life	Likely + Moderate = High	<ul style="list-style-type: none"> <li>Proposed floor plate has been designed to minimise the extent of view impacts on neighbouring properties (e.g. minimised width) and break up the mass and scale of the building</li> <li>Architectural design elements to reduce severity of visual impact</li> </ul>	<ul style="list-style-type: none"> <li>The design of the building and the selection of materials has taken into consideration its surrounding context. Special consideration has been given to the historical significance of the site, to ensure minimal impact to surrounding heritage items</li> </ul>	High
Substantial change in built form from 4-storey apartment blocks to 24-floor health care facility, potentially reducing visual amenity	Possible + Minor = Low	<ul style="list-style-type: none"> <li>Appropriate architectural and design elements to improve the</li> </ul>	<ul style="list-style-type: none"> <li>Consideration design elements to mitigate against potential negative impacts of building profile at detailed</li> </ul>	Low (positive)



Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
and disrupting the overall continuity of surrounds		aesthetics of the proposal and reduce potential visual impact	<p>design phase (as part of VIA and detailed design)</p> <ul style="list-style-type: none"> <li>Significant urban design elements within the site including publicly accessible plazas on the ground floor, with associated seating and landscaped planting, and third floor terrace for staff use with outdoor seating and planting.</li> </ul>	
Potential disturbance of as yet unknown culturally significant artefacts on the site and surrounds as a result of construction activity (e.g. excavation). Disturbance of such items could impact upon their cultural significance and therefore have impacts to the social and cultural fabric of the local community.	Unlikely + Minimal = Low	<ul style="list-style-type: none"> <li>Implementation of unexpected find policy for any Aboriginal or non-Aboriginal archaeological items uncovered during construction per recommendation of Preliminary Aboriginal Cultural Heritage And Historical Archaeological Advice.</li> </ul>	<ul style="list-style-type: none"> <li>The Preliminary Aboriginal Cultural Heritage And Historical Archaeological Advice has stated that no further investigation of site specific archaeological remains is required.</li> </ul>	Low
Increased employment opportunities available on site (670 FTE jobs), benefitting way of life and livelihood	Almost certain + Major (positive) = High (positive)	<ul style="list-style-type: none"> <li>None (positive)</li> </ul>	<ul style="list-style-type: none"> <li>None (positive)</li> </ul>	High (positive)

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Noise emissions from the operation of the site (e.g. mechanical plant facilities) potentially impact resident and business (on site and surrounding) enjoyment of surroundings, way of life and health and wellbeing	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>Preparation of an acoustic assessment as part of the detailed design of the proposal, with implementation of recommendations to ensure that operational noise is kept within relevant or approved guidelines through standard design or operational mitigation measures</li> </ul>	<ul style="list-style-type: none"> <li>Preparation of an acoustic assessment as part of the detailed design of the proposal, with implementation of any specific design or operational recommendations.</li> </ul>	Low
Noise emissions from building may impact upon surrounding residents and workers, potentially affecting enjoyment of surrounding, way of life and health and wellbeing	Possible + Minor = Low	<ul style="list-style-type: none"> <li>Standard noise control design elements and operational requirements as part of approvals process</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of recommendations of Noise and Vibration Assessment, including specific mitigations (see APPENDIX A :) for: <ul style="list-style-type: none"> <li>Mechanical services</li> <li>Helicopter noise</li> <li>Construction noise and vibration.</li> </ul> </li> <li>Undertaking an acoustic assessment at detailed design phase</li> </ul>	Low
Existing crime hotspots near the site (robbery, theft and assault) could increase the risk of antisocial behaviour around site, impacting safety and wellbeing, and	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>Implementation of standard design elements to minimise anti-social behaviour, including: <ul style="list-style-type: none"> <li>Active frontages</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Implementation of CPTED standard as part of detailed design phase</li> </ul>	Low

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
livelihoods for workers and visitors to the site and surrounds. Built up areas with high crime can have the potential to create a feeling of unsafeness impacting way of life; enjoyment of surroundings and safety and wellbeing		<ul style="list-style-type: none"> <li>Designated access points which are clearly visible</li> </ul>		
Additional demand for and pressure upon child care services arising from increase in local working population on site. This could potentially impact upon way of life, and access for local residents and workers.	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate with Liverpool Hospital Management on provision of child care services for wider health precinct.</li> </ul>	High (positive)
Impact to surrounding parking availability from on site uses, impacting accessibility and way of life for surrounding residents, workers and visitors, and livelihoods for nearby businesses who rely on existing parking.	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>Parking is to be constructed in line with relevant requirements for the uses on site, particularly with the requirements of the site-specific DCP</li> <li>Alternative transport options (e.g. cycling) are to be provided facilities in accordance with relevant requirements</li> </ul>	<ul style="list-style-type: none"> <li>Investigation of parking provision as part of detailed TIA. Adoption of mitigation or enhancement strategies proposed as part of design</li> </ul>	Low

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Additional vehicular congestion on nearby streets arising from road users on site (residents, workers and visitors), which could impact upon access and way of life for road users and pleasantness of surroundings for pedestrians.	Possible + Moderate = Medium	<ul style="list-style-type: none"> <li>Construction of access points and intersections to meet relevant design standards.</li> </ul>	<ul style="list-style-type: none"> <li>Preparation of detailed traffic assessment at detailed design phase and implementation of recommendations to minimise impacts on network performance</li> </ul>	Low
Location of site close to public transport and active transport links within Liverpool will encourage workers to travel using alternatives to private vehicles, providing benefits to way of life and health and wellbeing.	Possible + Moderate = Medium (positive)	<ul style="list-style-type: none"> <li>Secure bicycle parking facilities on, surface parking options for visitors and other visitors</li> <li>End of trip facilities for workers.</li> </ul>	<ul style="list-style-type: none"> <li>Ensuring that storage facilities have clear access to cycling approaches to the site</li> </ul>	Medium (positive)
Added meeting places for community through ground floor plazas to be provided on site	Possible + Moderate = Medium (positive)	<ul style="list-style-type: none"> <li>Ensuring that spaces are well designed and pleasant</li> </ul>	<ul style="list-style-type: none"> <li>Ensuring that there are adequate facilities to suit use by likely staff and visitor complement (i.e. for a range of ages and backgrounds, including seating, open areas and play facilities, as appropriate)</li> </ul>	Medium (positive)
Added amenity through retail tenancies and associated services to be provided on the ground floor	Possible + Moderate = Medium (positive)	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>	Medium (positive)

Detail	Evaluated	Standard measures	Project-specific mitigation measures	Residual impact significance
Significant contribution to access to healthcare services and alleviation of pressure upon public health care services within the wider area through provision of 155 beds and associated ancillary services	Possible + Major (positive) = High (positive)	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	High (positive)
Cumulative benefits through location adjacent to Liverpool Hospital, with direct access via overbridge, providing significant cumulative benefits for overall access and health and wellbeing.	Possible + Major (positive) = High (positive)	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	High (positive)

## 7.2 Impact enhancement and mitigation

During construction there are a range of potential temporary impacts, particularly to amenity, access and way of life arising from disruptive construction activities, which can be mitigated through the implementation of appropriate plans of management, including a Construction Management Transport Plan. Some mitigations for potential impacts during construction that may be considered as part of such a plan are summarised below:

- Construction phase air quality impacts shall be minimised or avoided by incorporation of appropriate dust suppression and air quality control measures at various stages of the project.
- When planning construction work that will generate significant noise or vibration, consider:
  - Substitution by an alternative process.
  - Restricting times when work is carried out.
  - Screening or enclosures.
- Utilisation of temporary supports where deemed necessary
- Manage access to/from adjacent properties
- Restrict construction vehicle movements to designated routes to/from the site
- Manage and control construction vehicle activity in the vicinity of the site.
- Provide an appropriate and convenient environment for pedestrians and cyclists.
- Minimise the impact on pedestrian movements
- Maintain appropriate capacity for pedestrians at all times on footpaths adjacent to the site.
- Maintain appropriate public transport access
- Carry out demolition activity in accordance with approved work hours.
- Ensure dedicated parking is provided for workers, or that they are encouraged to travel via alternative means (e.g. public transport).

The following mitigations are proposed for potential impacts arising from the proposal when completed and operational. It is noted again that, as the proposal is at the PP stage, these mitigations would be subject to more detailed design and reporting at the DA (detailed design) phase. Mitigations proposed are:

- Prepare and implement recommendations of Solar Access Impact Report (at detailed design phase)
- Architectural design elements to reduce severity of visual impact.
- Appropriate architectural and design elements to improve the aesthetics of the proposal and reduce potential visual impact at detailed design phase (as part of VIA and detailed design)
- Significant urban design elements, within the site and surrounds including communal open space and landscaping
- Implementation of unexpected find policy for any Aboriginal or non-Aboriginal archaeological items uncovered during construction per recommendation of Preliminary Aboriginal Cultural

Heritage And Historical Archaeological Advice. The Preliminary Aboriginal Cultural Heritage And Historical Archaeological Advice has stated that no further investigation of site specific archaeological remains is required.

- Preparation of an acoustic assessment as part of the detailed design of the proposal, with implementation of recommendations to ensure that operational noise is kept within relevant or approved guidelines through standard design or operational mitigation measures. Preparation of an acoustic assessment as part of the detailed design of the proposal, with implementation of any specific design or operational recommendations.
- Implementation of design elements to minimise anti-social behaviour, including:
  - Active frontages
  - Designated access points which are clearly visible
  - Implementation of CPTED standard as part of detailed design phase
- Coordinate with Liverpool Hospital Management on provision of child care services for wider health precinct
- Parking is to be constructed in line with relevant requirements for the uses on site, particularly with the requirements of the site-specific DCP
- Alternative transport options (e.g. cycling) are to be provided facilities in accordance with relevant requirements Investigation of parking provision as part of detailed TIA. Adoption of mitigation or enhancement strategies proposed as part of design
- Construction of access points and intersections to meet relevant design standards. Preparation of detailed traffic assessment at detailed design phase and implementation of recommendations to minimise impacts on network performance
- Secure bicycle parking facilities on, surface parking options for visitors and other visitors
- End of trip facilities for workers. Ensuring that storage facilities have clear access to cycling approaches to the site
- Ensuring that open spaces are well designed and pleasant and that there are adequate facilities to suit interaction for a range of ages, abilities and backgrounds (appropriate to likely users of the spaces) to cater for a range of activities



# CONCLUSION

## 8.0 CONCLUSION

This report has considered the potential social and economic impacts arising from a planning proposal for consideration by Liverpool Council to accompany a Planning Proposal to enable a State Significant Development Application a proposed new private hospital at 61-71 Goulburn Street, Liverpool.

The SEIA has examined the site and surrounds, noting that:

- The site is located in the strategic centre of Liverpool, a metropolitan under the Greater Sydney Region plan, earmarked for future expansion of its existing health and education centre
- As such, the site is well situated to agglomerate with the existing Liverpool Hospital and broader Health Collaboration Area, being situated opposite the hospital, with the design proposing an elevated access bridge to enable freer movement
- The site is approximately 500 metres' walk from Liverpool Railway Station and interchange, as well as a range of local bus stops that service the public hospital, affording it excellent public transport access
- The proposal will contribute high quality open space within the site for use by workers, patients and visitors
- There is demand for additional palliative and preventative health care, with a growing population that is simultaneously ageing, with the demand assessment indicating a shortfall of 1,810 beds in the area according to national benchmarks.<sup>5</sup>

The SIA has considered both potential positive and negative social impacts associated with the proposal, noting:

- Without additional provision of health care facilities, which will be significantly beneficial to meeting current and future needs in the area. The location adjacent to the existing health precinct is likely to lead to significant agglomeration benefits, as well as some alleviation for pressure on public health facilities
- The proposal will contribute significant economic benefits to the area, adding to the local and regional economies both during construction (\$391 million GVA and 2,761 total job years) and in operations (\$92 million GVA and 670 jobs)
- The proposal improves provision of passive open space near to and within the site and includes publicly accessible ground floor plazas, with associated landscaping and planting.

This report also suggests mitigation measures which will help to maximise social benefits and minimise negative impacts to the community, which if implemented, are deemed sufficient to mitigate potential negative impacts and produce an overall social benefit.

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<sup>5</sup> Ethos Urban (2021), *Preliminary Market Needs Analysis* [email advice received 19 October 2021]

# APPENDIX

## APPENDIX A : REVIEW OF TECHNICAL PAPERS

### A.1 Disturbance from noise and vibration

Exposure to environmental noise may affect the function of social and business services (both positively and negatively), especially those that are dependent on a quiet environment. Noise impacts may also affect the way people use space, their ability to communicate and the way individuals undertake daily activities. This includes heightened annoyance, stress and sleep disturbance.

The proponent has commissioned E-LAB Consulting to prepare a Noise and Vibration Assessment of the proposal and likely impacts during construction and operation. It identified that the following noise and vibration impacts may potentially arise:

- Mechanical services
- Helicopter noise
- Construction noise and vibration

The report includes a range of mitigation strategies to be implemented at the detailed design phase to ameliorate and manage these impacts.

- Mechanical services
  - Positioning mechanical plant away from nearby noise sensitive receivers; Acoustic attenuators fitted to duct work
  - Screening around mechanical plant
  - Acoustic insulation within duct work
  - Acoustically insulated bends fitted to duct work
  - Reselection of mechanical plant.
- Helicopter noise
  - Modelling in report for noise levels and external façade performance should be considered in detailed design
  - Locate noise-sensitive spaces within the building, or towards the southern and western façade to minimise exposure to helicopter noise.
- Construction noise and vibration
  - Where a process generates excessive noise mitigation methods typically increase distance or introduce physical screens to block noise, examples of practices that will reduce noise from the site and disruptive activities include:
    - › Increasing the distance between noise sources and sensitive receivers
    - › Reducing the line-of-sight noise transmission to residences or other sensitive land uses using temporary barriers (stockpiles, shipping containers and demountable offices can be effective barriers)

- › Constructing barriers that are part of the project design early in the project to introduce the mitigation of site noise
- › Installing purpose-built noise barriers, acoustic sheds and enclosures.
- An appropriate silencer for the crane (diesel engine) on the muffler and acoustic screen around the engine bay are recommended to attenuate the noise from it
- Use of alternative reversing alarms (as opposed to a simple tonal alarm, which can be a source of disruption) for vehicles operating on site (e.g. broadband audible alarms, variable-level alarms, non-audible warnings, proximity alarms, or spotters and work observers)

The report includes a range of monitoring and reporting requirements including the use of noise and vibrations loggers and notification systems to monitor for exceedance of limitations. Attended monitoring is also proposed at critical stages.

The proposed mitigations will be critical to maintaining the amenity and pleasantness of the site and surrounds for residents, workers and visitors during construction and operation and, as such, would assist in maintaining livelihoods of surrounding businesses and way of life. The proposed mitigations are supported.

### 8.1.1 Traffic

Changes in road network efficiency and connectivity include traffic disruptions or diversions due to temporary, partial or full closures of roads, increased construction traffic (including heavy vehicles) and alterations to standard travel routes. The social impacts arising from disruptions of this nature can be wide ranging, including impacts upon access to essential services (e.g. the adjacent public hospital), way of life (increased travel time necessitating a change in routine), enjoyment of surroundings (noise and exhaust from any additional road traffic) and increased travel times potentially affecting the livelihoods of workers and businesses who rely on the efficiency of the road network.

A Traffic Impact Assessment (TIA) has been prepared by Ason Group to evaluate the potential impact of the proposal upon the function of the surrounding road transport network. The report notes the integrated nature of the proposal and the proposed pedestrian overbridge to the adjacent Liverpool Health and Academic Precinct within the Innovation Precinct with strong links to existing sustainable transport infrastructure. Further key findings from the TIA include

- Council have suggested upgrades to the pedestrian infrastructure and connections to missing cycle links as part of broader strategies including the Liverpool Public Domain Master Plan
- The PP proposes an at-grade pedestrian crossing to activate the Goulburn Street frontage and provide a connection to the adjacent Liverpool Public Hospital
- Analysis of the key intersections indicate that the surrounding road network is currently performing with good levels of service and only moderate average delays
- Application of the RMS Guide Traffic Generation rates for private hospitals suggests the proposal will generate:
  - 72 veh/h during the peak hours upon opening
  - 134 veh/h at full capacity in the future.

- Distribution and analysis of the surrounding road network further to the addition of the above traffic generation has been undertaken with further SIDRA analysis confirming the key intersections will continue to perform well, with no adverse impacts on the surrounding road network.
- In terms of car parking, the Proposal provides a total of 336 car parking spaces which is in accordance with the parking requirement of 228 car parking spaces with reference to the RMS Guide.

The TIA concludes that the proposal is considered supportable on transport planning grounds and is not expected to result in any adverse impacts on the surrounding transport network and, as such, is unlikely to produce negative impacts to access, way of life or other social impact areas as a result of traffic.

### 8.1.2 Heritage

Austral Archaeology have been commissioned to prepare a Heritage Impact Assessment (HIA) for the proposal. Preliminary advice at the time of writing prepared with respect to Aboriginal cultural heritage indicated that:

*The study area contains no recorded Aboriginal sites, no objects were identified during the site inspection, and the study area does contain landform features which indicate a high likelihood for the presence of unrecorded Aboriginal cultural material, based on:*

- *Distance from a known water source.*
- *Lack of landforms such as elevated flats and ridgelines, which could be used for continued occupation or transitional movement.*
- *Known history of 20th Century disturbance within the study area.*

*It is therefore considered that there is low potential for Aboriginal cultural heritage to be present within the study area and no further heritage investigations area required in this regard.*

With respect to non-Aboriginal heritage, the site is situated outside the original grid alignment of the Liverpool township. The presence of remains of a brick drain of possible heritage significance within the site, but research and inspections carried out as part of the assessment have indicated that the subsequent excavation of the modern sewer main is likely to have removed any such archaeological material.

The preliminary recommendations of the assessment indicate:

1. *No further investigations or assessment is required concerning Aboriginal cultural heritage*
2. *If Aboriginal archaeological material or deposits are encountered during earthworks, all works affecting that material or deposits must cease immediately to allow an archaeologist to make an assessment of the find. The archaeologist may need to consult with Heritage NSW and the relevant Aboriginal stakeholders regarding the find. Section 89A of the National Parks & Wildlife Act 1974 requires that Heritage NSW must be notified of any Aboriginal objects discovered within a reasonable time*

3. *No further investigations or assessment is required concerning historical archaeological material within the study area*
4. *If historical archaeological relics are identified during the works, all works in the immediate vicinity are to cease immediately and Heritage NSW are to be notified in accordance with the NSW Heritage Act 1977. A qualified archaeologist is to be contacted to assess the situation and consult with Heritage NSW regarding the most appropriate course of action.*

This assessment supports the implementation of the HIA preliminary advice to mitigate any impacts to local cultural or community identity arising from the proposal.



## Disclaimer

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