Social Impact Assessment

New Primary School in Edmondson Park

Prepared for School Infrastructure NSW
May 2021

creating opportunities

EMM
creating opportunities

Servicing projects throughout Australia and internationally

SYDNEY
Ground Floor, 20 Chandos Street
St Leonards NSW 2065
T 02 9493 9500

NEWCASTLE
Level 3, 175 Scott Street
Newcastle NSW 2300
T 02 4907 4800

BRISBANE
Level 1, 87 Wickham Terrace
Spring Hill QLD 4000
T 07 3648 1200

ADELAIDE
Level 4, 74 Pirie Street
Adelaide SA 5000
T 08 8232 2253

MELBOURNE
Ground Floor, 188 Normanby Road
Southbank VIC 3006
T 03 9993 1905

PERTH
Suite 9.02, Level 9, 109 St Georges Terrace
Perth WA 6000
T 02 9339 3184

CANBERRA
PO Box 9148
Deakin ACT 2600

Social Impact Assessment

New Primary School in Edmondson Park

Report Number

J210258 RP1

Client

School Infrastructure NSW

Date

25 May 2021

Version

v3 Final

Prepared by	**Approved by**
	
Amanda Micallef	**Santiago Ayala**
Social Planner	Associate, Social Scientist
25 May 2021	25 May 2021

Executive Summary

ES1 Overview

EMM Consulting Pty Ltd (EMM Consulting) has been commissioned by School Infrastructure NSW (SINSW) on behalf of the Department of Education (DOE) to prepare a Social Impact Assessment (SIA) to accompany a State Significant Development Application (SSDA) to the NSW Department of Planning, Industry and Environment (DPIE) for the new primary school in Edmondson Park (the Project). The works subject to this proposal are to be carried out on the primary school site located on the corner of Buchan Avenue and Faulkner Way (the site).

On 10 December 2020, the Secretary of the DPIE issued Secretary's Environmental Assessment Requirements (SEARs) for SSDA Number SSD-10224. This report has been prepared in accordance with the SEARs requirements.

ES2 Study methodology

This SIA has been informed by best practice guidance and standards set out by the International Association for Impact Assessment (IAIA) and International Finance Corporation (IFC), and developed in accordance with the NSW Department of Planning, Industry and Environment (DPIE) *draft Social Impact Assessment Guideline: State Significant Projects, October 2020* (SIA Guideline) (DPIE 2020). The assessment of the social impacts considered a range of complex factors and often competing interests. The impact assessment is reflective of this and has:

- assessed some aspects of the Project as both negative and positive as they relate to different groups of people;
- included negative impacts on local communities while documenting the benefits to the broader region;
- identified management strategies to maximise identified benefits and mitigate and minimise negative impacts;
- considered the impacts on vulnerable groups and provided management strategies to ensure that any existing disadvantages are not exacerbated; and
- considered each community's access to critical resources, such as education, housing and health care, and how this affects their resilience.

EMM Consulting conducted a social impact workshop on 7 and 10 May 2021 attended by EMM Consulting's Social Scientists and Social Planners (see Appendix D). The purpose of the social impact workshop was to assess impacts using a social risk framework based on a combination of consequence and likelihood. The social risk assessment is informed by the data collected from the SIA field study, SINSW engagement activities, literature review, and social baseline study.

ES3 Existing environment

The Project is located within the state suburb (SSC) of Edmondson Park and may directly impact landowners, residents, and businesses within the vicinity of the Project site. While the site itself is localised, direct and indirect impacts may be farther reaching. As such, the Project is considered to have two key study areas: a local study area and a wider study area.

The Project may have direct and indirect impacts within Edmondson Park SSC related to local social infrastructure and services, local workforce, local business and industry, local housing and accommodation, and community health and wellbeing. Furthermore, the student catchment is anticipated to predominantly comprise the Edmondson Park postcode, with most intake from the north-west of school location. Accordingly, Edmondson Park SSC comprises the local study area for the Project.

The Project is likely to have a broader reach due to use of infrastructure, supply chains, haulage routes, transportation of goods, materials and equipment, and the movement of its workforce (DPIE 2020). These factors require the area of social influence to include regional areas likely to be impacted by the Project which will extend to Liverpool LGA forming the wider study area.

ES4 Potential impacts and benefits of the proposal

A summary of the key potential social impacts and benefits identified are provided in Table ES1. The full assessment of impacts and benefits are provided in Section 7.

Table ES1 Key social impacts and benefits

Impact/Challenge	
Public safety impact related to operation traffic	**Medium-11**
Operation of the Project could result in a significant number of vehicles moving within the vicinity of the new primary school during school dop-off and pick-up hours, increasing the vulnerability of pedestrians travelling to and from the school, and generally through the area. Road safety measures will be incorporated into the Traffic Management Plan, including installation of marked pedestrian crossing and signage, engaging traffic control personnel and adequate provision of "kiss and drop" infrastructure. There is also an opportunity to promote an "active travel initiative" to further reduce vehicle reliance.	
Benefits	
Community benefit related to social cohesion, capital and resilience	**Significant-15**
The Project is anticipated and to enhance the social cohesion and social capital in the school and community by facilitating students to form friendships with other children within their community and maintain those friendships outside of a school setting. The provision of the new primary school would also enhance engagement between parents/caregivers). The school would provide a necessary point of initial contact, where parents/caregivers can meet and subsequently develop relationships with others within the local community. The Project would also enhance social cohesion, capital and resilience by offering use of the school hall for community use outside of school hours. There are additional opportunities to further enhance local social cohesion and capital by offering volunteering opportunities, language classes, community use arrangements for outdoor green space areas.	
Accessibility benefit related to access to, and use of, social infrastructure related primary education	**Significant-11**
Successful construction and operation of the new primary school in the local area would enhance current access to and use of education facilities by local residents. Provision of a local public school would reduce current travel times for students and parents during drop-off and pick-up hours, enable students to develop and maintain relationships with peers who reside in the same neighbourhood, and increase accessibility related to school drop-off and pick-up by parents/caregivers. The inclusion of teaching staff in the design and opening processes for the new school, consideration of outside of school hours care (OSHC) needs, and adequate provision of enrolment information and timelines would further enhance the potential accessibility benefits.	
Livelihood benefits related to teaching and school staff opportunities	**Significant-12**
The new primary school is anticipated to employ 45 full-time equivalent (FTE) teaching staff, seven executive staff, and six school administrative and support staff (SASS). As such, the potential for the new primary school to provide employment and career opportunities for persons within the wider study area – both related to teaching and non-teaching positions as it is reasonable to assume that a proportion of currently unemployed persons within the local area and wider study area would hold the relevant qualifications to fill teaching staff positions at the new school, therefore contributing to reductions in unemployment in the local area and wider study area. It is recommended to develop and implement a Local Employment/Recruitment Strategy and Plan to increase the number of employed persons from the local and wider study area.	

Table ES1 Key social impacts and benefits

Impact/Challenge	
Health and wellbeing benefit related to childhood obesity	**Significant-11**
As of 2019, the rate of childhood overweight and obesity in the South Western Sydney LHD was 28.3%, compared to the NSW average of 22.4%. Having a school in the local area may encourage higher student participation in extra curriculars offered to students school outside of school hours and encourage more active travel to school if students and parents/caregivers reside in walking or cycling distance of the school. Transport Encouragement Programs (ie "active travel initiatives") will be implemented as per the School Travel Plan to further increase students' daily active time. There is an opportunity to further enhance health and wellbeing benefits related to reduced childhood obesity in the local area by offering Project facilities to non-school recreation groups on the weekend and incorporating healthy eating initiatives into school programming.	
Health and wellbeing benefit related to mental health	**Significant-14**
The successful construction and operation of the new primary school would help to address issues related to feelings of isolation and related mental health issues by providing a local space that is easily accessible and establishes opportunities for relationship building between students, parents/caregivers, and the local community. The new primary school would reduce feelings of isolation by enhancing social cohesion and capital within the local community. To further enhance local health and wellbeing related to mental health and feelings of isolation, there is an opportunity to develop a sense of community beyond the students and parents/caregivers of the new primary school. There is an additional opportunity to extend benefits associated with reduced isolation and improved mental health outcomes to the wider study area by exploring and implementing initiatives which connect primary school students with persons living in aged care facilities throughout the wider study area.	

ES5 Proposed mitigation measures

Mitigation and management strategies have been proposed for each of the identified potential social impacts to minimise negative consequences and to maximise social benefits for the local community. Performance indicators will be developed by SINSW for each mitigation and enhancement measure in consultation with stakeholders and will be monitored throughout the Project life span by SINSW.

An adaptive approach will allow SINSW to manage and respond to changing circumstances and new information over time through ongoing monitoring and periodic review of mitigation strategies; this will allow for modification if required and if appropriate. This adaptive approach will ensure that the management of social impacts identified in the SIA will result in effectively minimising negative social impacts and maximising social benefits for the local community. The proposed mitigation and enhancement measures are summarised in full in Section 8.

ES6 Conclusions

This SIA provides an assessment of potential social impacts and benefits associated with the Project. It identifies the relevant social issues, social impacts and benefits, and associated mitigation and enhancement measures applicable to the design, construction, and operation of the Project.

The Project is considered to be in the interest of the public and is assessed as providing significant benefits to the local community related to:

- promoting social cohesion and resilience;
- increasing social capital,
- increasing access to, and use of, social infrastructure related to primary and preschool education;
- livelihood opportunities; and
- improving mental health.

These benefits will outweigh the challenges, primarily constrained to the construction phase of the project which can be successfully mitigated.

Table of Contents

Appendices

Tables

Figures

1 Introduction

EMM Consulting Pty Limited (EMM) has been commissioned by SINSW on behalf of the DOE to prepare a SIA to accompany an SSDA to the DPIE for the new primary school in Edmondson Park (the Project).

The works subject to this proposal are to be carried out on the primary school site located on the corner of Buchan Avenue and Faulkner Way (the site).

On 10 December 2020, the Secretary of the DPIE issued SEARs for SSDA Number SSD-10224. This report has been prepared in accordance with the SEARs requirements, specifically to address Item 10 which states:

> **"**Provide a Social Impact Assessment prepared in accordance with the draft Social Impact Assessment Guideline 2020."

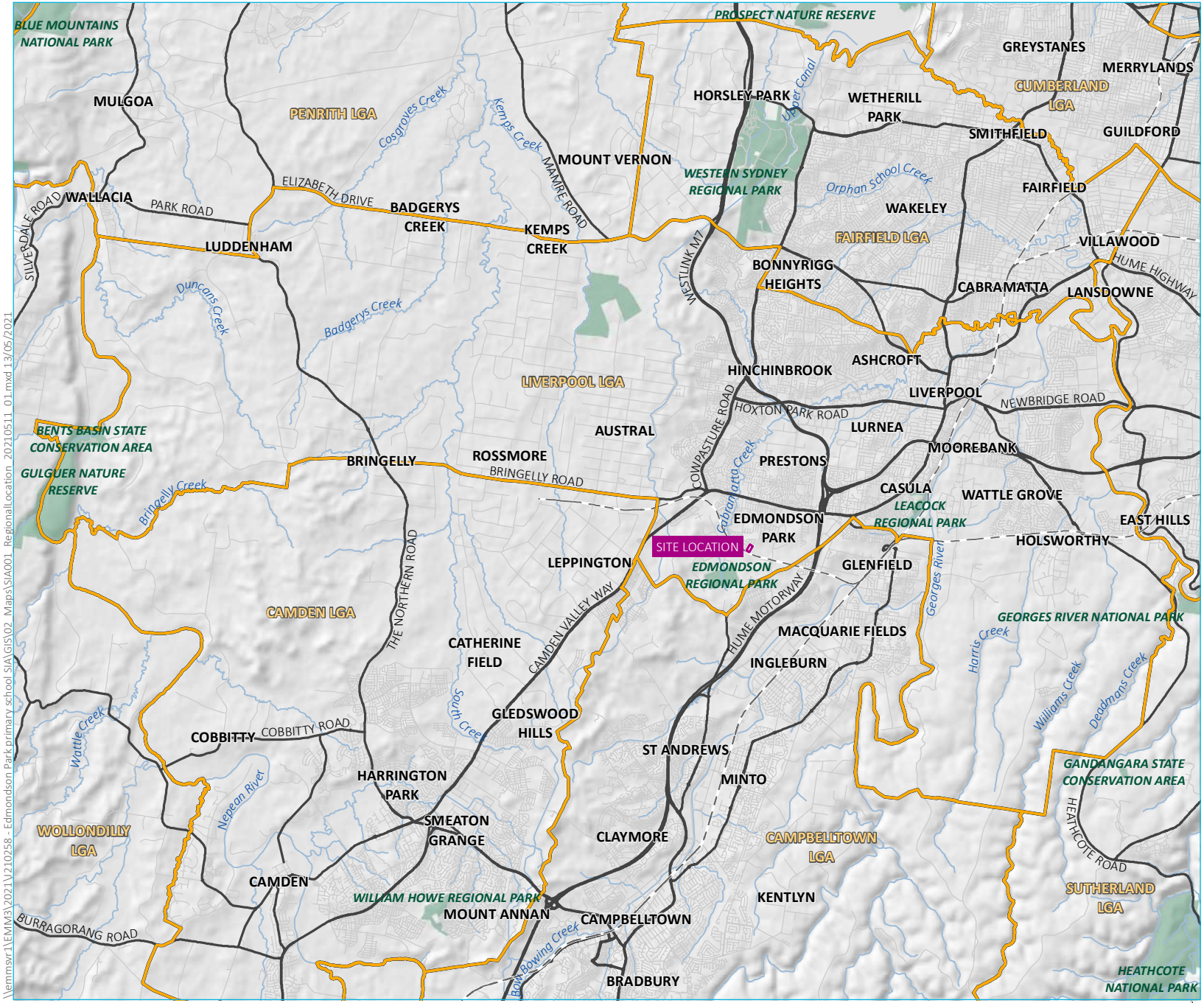
1.1 Project location

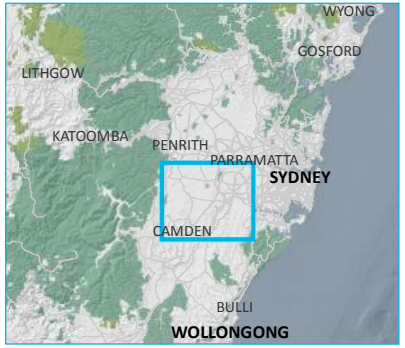
The new primary school in Edmondson Park is located on the former Ingleburn Military Precinct land. The surrounding developments are currently controlled by the State-Owned Corporation working with government and the private and not-for-profit sectors to deliver housing projects, Landcom. This greenfield site has no existing buildings.

The site is located within close proximity to the new Edmondson Park railway station (approximately 2.5 kms) and the rapidly developing Town Centre station (approximately 2.8 km). The Project falls within the Liverpool City Council local government area (LGA). The regional context of the Project is shown in Figure 1.1.

The site is located on the corner of Buchan Avenue, a major local road to be completed in the near future with access to Edmondson Park train station, and Faulkner Way, a quiet local street connecting to the adjacent residential neighbourhood. The future road on the southern edge of the site is not yet named but is anticipated to be a residential street. The surrounding street network and area is characterised by residential developments. The local context of the Project is shown in Figure 1.2.

The site currently contains small to medium regrowth bushland across portions of the site. An Environment Site Assessment was prepared by JBS&G (2021) for the site and confirms the site is suitable for its proposed use as an education facility.





KEY

- Site boundary
- Rail line
- Major road
- Minor road
- Named watercourse
- NPWS reserve
- Local government area

INSET KEY

- Major road
- NPWS reserve
- State forest

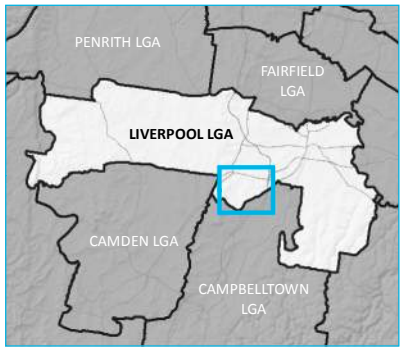
Source: EMM (2021); DFSI (2017); GA (2011); ASGC (2006)

\\emmsvr1\EMM3\2021\210258 - Edmondson Park primary school SIA\GIS\02_Maps\SIA001_RegionalLocation_20210511_01.mxd 13/05/2021

Regional context

New Primary School in Edmondson Park
Social Impact Assessment
Figure 1.1

EMM
creating opportunities



KEY

- Site boundary
- Train station
- Rail line
- Major road
- Minor road
- Watercourse/drainage line
- Waterbody
- NPWS reserve
- Local government area

INSET KEY

- Major road
- Local government area

Source: EMM (2021); MetroMap (2021); DFSI (2017); GA (2011); ASGC (2006)

\\emmsvr1\EMM3\2021\P210258 - Edmondson Park primary school SIA\GIS\02_Maps\SIA002_LocalContext_20210513_02.mxd 13/05/2021

Local context

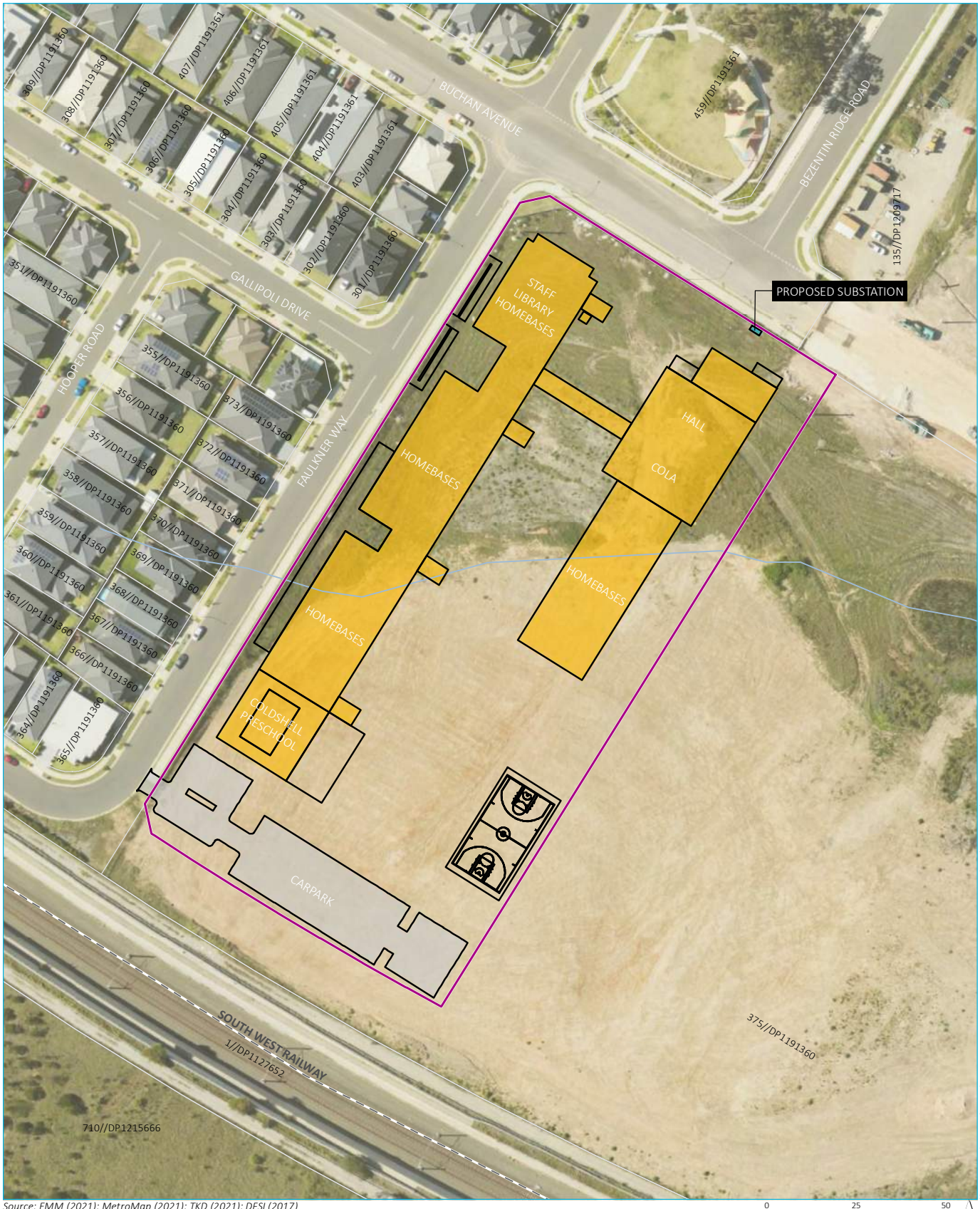
New Primary School in Edmondson Park
Social Impact Assessment
Figure 1.2

EMM creating opportunities

1.2 The Project

The Project site is shown in Figure 1.3, artist impressions of the Project site are shown in Figure 1.4. This state significant development application seeks approval for a new core 35 primary school accommodating 1,012 students and 40-place coldshell preschool at Buchan Avenue, Edmondson Park. The works entail:

- site preparation and excavation;
- land use for the purpose of a new primary school;
- construction of new buildings including:
    - a three-storey building on the western portion of the site primarily addressing Faulkner Way comprising 36 homebases, four special support unit teaching spaces, staff room, administration office at the ground floor and library at the first floor addressing the corner of Buchan Avenue and Faulkner Way, and student amenities;
    - a coldshell of a single storey preschool for educational programs for children the year before they commence kindergarten, accommodating 40 places, connected at the southern end of the three-storey building to be operated by Liverpool City Council;
    - a single storey building on the eastern portion of the site comprising a communal hall, out of school hours care, 8 homebases and covered outdoor learning area;
- landscaping and public domains works including tree planting, a sports court and creation of various assembly, play and learning zones;
- a drop-off and pick-up zone, and bus zone on Buchan Avenue;
- an at-grade staff carpark at the south of the site with ingress and egress provided off Faulkner Way at the south-west corner of the site;
- primary pedestrian entrance from Buchan Avenue and an additional entrance on Faulkner Way for the ground floor support unit; and
- other ancillary infrastructure and utilities works and digital signage.



Source: EMM (2021); MetroMap (2021); TKD (2021); DFSI (2017)

0 25 50 m

GDA 1994 MGA Zone 56

N

\\emmsvr1\EMM3\2021\P210258 - Edmondson Park primary school SIA\GIS\02_Maps\SIA003_ProjectSite_20210513_02.mxd 21/05/2021

KEY

- Site boundary
- Site details
- Proposed building
- Proposed substation
- Proposed carpark
- Rail line
- Watercourse/drainage line
- Cadastral boundary

Project site

New Primary School in Edmondson Park
Social Impact Assessment
Figure 1.3

EMM
creating opportunities

Figure 1.4 Artist impression of the proposed school

1.3 Purpose of this report

EMM has been engaged by SINSW to prepare and submit an SIA as part of an EIS to support an SSDA for the Project under Section 4.1.2(8) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It has been prepared to the form and content requirements set out in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation).

This SIA documents the assessment methods and results, the initiatives built into the project design to avoid and minimise associated impacts, to the local community, and the mitigation and management measures proposed to address any residual impacts not able to be avoided.

The specific objectives of this assessment are to:

- describe the existing social conditions, services and demographic profile;
- identify and assess the extent and nature of potential social risks;
- evaluate the significance of the social impacts, positive and negative arising from the project;
- provide mitigation measures to reduce the negative social impacts and enhancement measures for significant positive impacts; and
- develop a monitoring and management framework.

1.4 Assessment guidelines and requirements

This SIA report has been prepared in accordance with relevant government assessment requirements, guidelines and policies; in particular, the methods outlined in the draft SIA Guideline (DPIE 2020) and the SEARs for the Project, issued on 10 December 2020. To inform preparation of the SEARs, the DPIE invited relevant government agencies to advise on matters to be addressed in the EIS. These matters were considered by the Secretary for the DPIE when preparing the SEARs.

The individual SEARs relevant to this SIA states:

> **"Social:** Provide a Social Impact Assessment prepared in accordance with the draft Social Impact Assessment Guideline 2020."

1.4.1 Authorship and SIA Declarations

The authorship SIA Declarations for this report are provided in the following sections.

i Authorship

This report has been prepared by a suitably qualified and experienced lead author and reviewed and approved by a suitably qualified and experienced co-author, who hold appropriate qualifications and have relevant experience to carry out the SIA for this Project. The following introduces each author:

Amanda Micallef (lead author)

- Master of Development Practice, The University of Queensland
- Bachelor of Arts in International Development, University of Guelph
- Member Planning Institute of Australia

Amanda is a Social Scientist/Social Planner with experience conducting a range of social planning and impact assessment projects, including baseline studies, risk assessments, data analysis, and community and stakeholder engagement. Her community engagement experience includes online community engagement, indigenous engagement, and the co-creation of youth indigenous development programs internationally. Amanda has worked with clients across a range of sectors, including mining and extractives, critical infrastructure, and alternative energies in New South Wales, Queensland, and Victoria.

Santiago Ayala (co-author, review and quality assurance)

- Master of Social Planning and Development, The University of Queensland
- Master of International Relations/Peace and Conflict Studies, The University of Queensland
- Bachelor of Social Anthropology, University of Andes Colombia
- Negotiation and Leadership, Law School, Harvard University
- Member International Association of Impact Assessment (IAIA)
- Member Planning Institute Australia - Social Planning Chapter
- Member Australian Evaluation Society

Santiago is a social and strategic planning professional with over 21 years' experience in Australia and overseas. His breadth of expertise includes social assessment, policy development, social safeguards and resettlement, stakeholder engagement and management, social performance, and government and community relations.

Santiago has expertise working with and for corporate, government and multilateral organisations across a range of sectors including conventional and renewable energy, water and sanitation management, infrastructure, mining, and oil and gas incorporating engineering solutions as well as behavioural change.

The curriculum vitae for each author is provided in Appendix D.

ii SIA Declarations

The authors declare that this SIA report:

- was completed on 25 May 2021;
- has been prepared in accordance with the EIA process under the EP&A Act;
- has been prepared in alignment with the DPIE's (2020) Draft SIA Guideline;
- contains all reasonably available Project information relevant to the SIA; and
- as far as EMM Consulting is aware, contains information that is neither false nor misleading.

Assumptions and limitations of this report are outlined in Section 2.2.8.

Amanda Micallef
Social Planner
25 May 2021

Santiago Ayala
Associate, Social Scientist
25 May 2021

2 Methodology

The preparation of this SIA has been developed in accordance with the:

- SEARs;
- social characteristics and community values of the local and wider study areas; and
- the draft SIA Guideline (DPIE 2020).

The assessment of social impacts was conducted using the draft SIA Guideline (DPIE 2020) and its Technical Supplement (DPIE 2020). The draft SIA Guideline utilises eight categories to identify social impacts, they are as follows:

- **way of life**: how people live, work, play and interact;
- **community**: its composition, cohesion, character, how it operates and sense of place;
- **accessibility:** how infrastructure provided by public, private or not for profit organisations, including services and facilities is accessed and used;
- **culture**: shared beliefs, customs, values and stories, and connection to Country, land, places, waterways and buildings, both Aboriginal and non-Aboriginal;
- **health and wellbeing**: physical and mental health;
- **surroundings**: access to and use of ecosystem, public safety and security, access to and use of natural and built environment, aesthetic value and/or amenity;
- **livelihoods:** how people sustain themselves through employment or business, their capacity to do so and whether disadvantage is experienced; and
- **decision-making systems**: extent community can have a say in decisions that affect their lives, access to complaint, remedy and grievance mechanisms.

This SIA has been informed by best practice guidance and standards set out by the International Association for Impact Assessment (IAIA) and International Finance Corporation (IFC).

2.1 Defining the study area

This SIA addresses the social impacts and benefits of the proposed Project to the local area, wider study area and to the State. It considers whether the Project increases the demand for community infrastructure and services.

This study area[1] has been determined in accordance with the draft SIA Guideline (DPIE 2020) and considered the following in its identification:

- the scale and nature of the Project, its associated activities, potential direct impacts, potential indirect impacts that may extend from the Project site and potential cumulative impacts;
- who may be affected by the Project, how they are expected to be affected, and their relevant interests, values and aspirations;
- any potentially affected built or natural features located on or near the Project site or in the surrounding area that have been identified as having social value or importance, including key social infrastructure, facilities and amenities; and
- any relevant social trends or social change processes being experienced by communities near the Project site; experienced the Project and others like it to date.

While the Project site itself is localised, direct and indirect impacts may be further reaching. As such, the Project is considered to have two key study areas: a local study area and a wider study area. The study area for the Project has been defined and is further described in Section 4.1.

2.1.1 Potentially affected communities

This section describes potentially affected communities in the local study area, and the wider study area, which may be impacted, negatively or positively, by the Project.

Key considerations for identifying potentially affected communities are the risk of social impacts (negative and positive) as a consequence of the Project. Factors considered in defining the SIA scope included:

- proximity of properties and communities to the Project and its access routes;
- vulnerabilities that increase risk, and/or magnitude of potential impacts on communities or groups;
- the role, culture and identity of communities in the local area and wider study area;
- location of businesses who could supply the Project;
- communities and vulnerable groups potentially affected by other projects within the local area and wider study area; and
- likelihood of social impacts and opportunities for the local area and wider study area.

[1] The term 'study area' has been used to identify the relevant areas which may experience direct and/or indirect impacts as a consequence of the Project instead of 'social locality' to remove confusion related to understandings of ABS-defined locality boundaries. The study area has been defined and described using the same analysis and considerations outlined for the identification of the 'social locality' as presented in the Draft SIA Guideline (DPIE 2020).

2.2 Methodological approach

The methodology for delivery of the SIA as part of the SSDA is illustrated in Figure 2.1 and described in detail below.

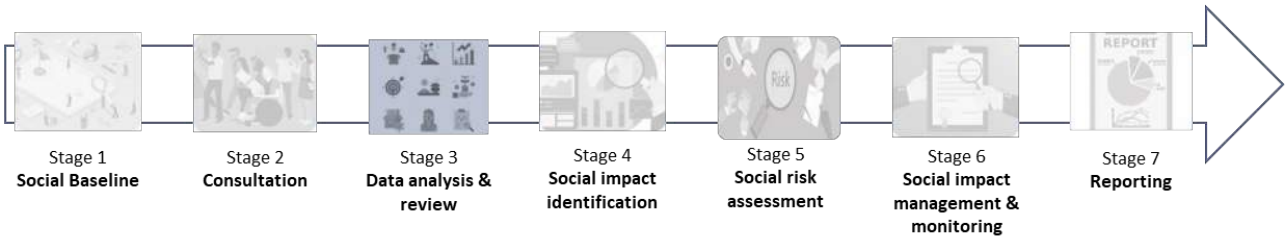


Figure 2.1 Phases of the SIA methodology

The following methods were used to collect and assess the data which informs the SIA.

2.2.1 Stage 1 – Social baseline study

The first step in the preparation of the SIA was to understand the social context without the Project and understand the existing social environment and trends that are relevant to the potential social impacts through a social baseline study. The social baseline study was prepared using:

- existing demographic, health, housing, and socio-economic data from the Australian Bureau of Statistics, government agencies, and local government;
- published literature and social research;
- government policies and plans; and
- documents relating to similar infrastructure projects that:
  - provided a community profile, including a socio-economic profile of the area of social influence;
  - provided an analysis of the social infrastructure and capacity within the area of social influence; and
  - outlined government strategic policies and plans.

The baseline study conducted by EMM provides the benchmark against which potential social impacts have been identified and assessed and informs subsequent stages. The social baseline study is presented in Appendix A and a summary in Section 4 of this report.

2.2.2 Stage 2 – SIA consultation

Community consultation and engagement was undertaken with consideration of social distancing requirements due to the COVID-19 pandemic.

Key consultation and engagement objectives set out in the SIA Guideline (DPIE 2020) include:

- ensure potentially affected people are identified and have enough understanding of the proposed project, how it may affect them, the environmental impact assessment process, and how they can participate in it;

- collect qualitative and quantitative data, evidence and insights in ways that maximise diversity and representativeness of views;
- understand the interests people have in the project and how potential impacts may be experienced from their perspectives;
- consider the views of people in a meaningful way, and use these insights to inform project planning and design, mitigation and enhancement measures, and monitoring and management frameworks;
- provide opportunities for people to collaborate on project design matters and provide input into the identification and consideration of preferred solutions;
- confirm data, assumptions, findings and recommendations;
- ensure people know how their input and views have been taken into account, and to help illustrate what actions or mitigating measures will be put into place to address concerns; and
- respect people's privacy, allowing them to communicate their views anonymously if they desire (DPIE 2020, p.27).

The field study component of the SIA used social research methods, including in-depth interviews and online community survey, to collect qualitative and quantitative data to meet the above objectives, including:

- validate baseline data and assumptions;
- identify the impacts on the nearby neighbours and broader community; and
- confirm identified impacts and identify potential management strategies.

EMM also used previously collected information from SINSW community and stakeholder consultation activities to inform the SIA and to assist in determining perceptions of social impacts identified during the SIA field study.

The specific methods and outcomes of the community engagement and SIA field studies are presented in Section 5.

2.2.3 Stage 3 – Data analysis and review

A review of relevant recent social research was undertaken to allow for the support and validation of findings. In addition, a review of local, regional, and State plans and policies, along with SIAs which focus on the SIA study area, was undertaken. Research findings were incorporated in relevant sections as referenced. The data analysis and review used secondary qualitative and quantitative data to:

- validate the socio-economic data;
- familiarise the Team with the Project area;
- understand the potential community and stakeholder issues and impacts; and
- provide the basis for identification of potential impacts and cross-assessment of identified impacts.

2.2.4 Stage 4 – Social impact identification

With a clear understanding of the scope of the Project, the social baseline and the input from the data analysis and review, expert social scientists in the team identified the potential social impacts resulting from the proposed Project. This analysis informed the socioeconomic risk assessment outlined in Section 5. The identification of the Project's potential social impacts and benefits was completed through several different complementary approaches, helping to triangulate the findings and confirm their accuracy. These approaches included:

- consideration of environmental constraints – review of similar projects in the local area as well as available academic and grey literature to identify potential impacts;
- consideration of the existing social environment – demographic and social analysis in the form of a social baseline study;
- consideration of field findings – findings from field studies contributed to the identification of potential impacts and benefits from the Project, as well as potential opportunities;
- consideration of data analysis and review findings – findings from data analysis and review of community consultation to the identification of potential impacts and benefits from the Project;
- consideration of local plans and policies – findings from the review aided to contextualise and understand the local priorities as well as to identify local values; and
- consideration of cumulative impacts – review of documentation from other existing projects in the study area.

2.2.5 Stage 5 – Social risk assessment

The social risk assessment stage assessed each of the social impacts identified to predict the nature and scale of potential social impacts for the life of the Project and post closure. A social risk assessment workshop to consider all identified potential social impacts was conducted on 7 and 10 May 2021 where all members of the SIA technical team (see Appendix D) participated. A social risk approach was adopted to assess the consequence and likelihood of potential positive and negative social impacts with and without mitigation. The social risk assessment matrix used for the assessment can be found in Appendix B. The assessment framework is described in detail in Section 7.

2.2.6 Stage 6 – Social impact management and monitoring

A mitigation and management framework has been prepared for all potential social impacts and benefits to allow for the identification of:

- required impact mitigation measures for construction and operations;
- enhancement measures to maximise the potential benefits from Project construction and operations; and
- partnership opportunities.

Findings from Stages 1 – Stage 4 were used to inform the development of the social impact management plan to form part of the SIA Report.

2.2.7 Stage 7 – SIA Reporting

Development of this SIA technical report and internal peer review was conducted by Social Planners and Social Scientist's with experience in application of social science methodologies to determine social impacts and in accordance with the draft SIA Guideline (DPIE 2020).

2.2.8 Limitations and assumptions

This SIA has been based on available information at the time of writing and has been designed to respond to the SEARs specific to the proposal. The assumptions and limitations of this report are as follows:

This SIA has been based on available information at the time of writing and has been designed to respond to the SEARs specific to the proposal. The assumptions and limitations of this report are as follows:

- background and baseline information is based on desktop research;
- the social impacts have been informed by evidence from primary and secondary data and engagement sources, including:
  - in-depth interviews and online community survey conducted by EMM's Social Scientists and Social Planners;
  - evidence from SINSW based on their conducted community consultation; and
  - academic, government, and grey literature;
- results from other technical studies conducted as part of the SSDA for the Project were not available at the time of preparation of this report, and as such have not informed the impact assessment or recommended mitigation measures;
- the impact assessment is based on:
  - evidence from consultation conducted during the SIA field study;
  - review of similar projects in the local area as well as available academic, government, and grey literature to identify potential impacts;
  - demographic and socioeconomic analysis in the form of a social baseline study;
  - findings from data analysis and review of secondary community engagement sources; and
  - consideration of local plans and policies.

3 Political and planning context

This section provides a summary of the relevant plans and strategies across NSW and Liverpool LGA that inform the social risk assessment and mitigation and management strategies.

3.1 Federal

The Project is located within the federal electorate of Werriwa which is currently represented (in the House of Representatives) by the Anne Maree Stanley, member of the Australian Labour Party (ALP).

The recognition, protection, and conservation of cultural heritage sites and protected areas fall under the *Environmental Protection and Biodiversity Conservation Act 1999* administered by the Department of Agriculture, Water and the Environment (DAWE). There are no specific federal legislative or regulatory instruments that directly impact on the SIA for the Project.

3.2 State

The New South Wales Parliament consists of a Legislative Assembly (lower house) and Legislative Council (upper house).

The Project sits within the NSW state electorate of Macquarie Fields. The current member for Macquarie Fields is Anoulack Chanthivong, member of the ALP. The Project sits near the boundary for the Liverpool electorate which may experience impacts. The current member for Liverpool is Paul Lynch, member of the ALP.

The NSW DPIE is responsible for administering the EP&A Act and its subordinate legislation and policies.

The Project is seeking a development approval under Section 4.1.2(8) of the EP&A Act.

The *State Environmental Planning Policy (State Significant Precincts) 2005* is the primary environmental planning instrument for the site.

3.2.1 State strategies

i NSW 2021

The NSW Government have a ten-year state-wide plan in place to restore economic growth within NSW and establish the state as priority for business. The plan outlines goals and targets in accordance with five strategies:

- rebuild the economy;
- return quality services;
- renovate infrastructure;
- strengthen the local environment and communities; and
- restore Government accountability (NSW Government nd).

In addition to the economic goals for the state, the plan highlights the need to improve quality services, including education and learning outcomes for all students.

ii Greater Sydney Region Plan – *A Metropolis of Three Cities*

The Greater Sydney Region Plan is "…a vision of three cities where most residents live within 30 minutes of their jobs, education and health facilities, services, and great places" (Greater Sydney Commission 2018). The plan divides Greater Sydney, as the name suggests, into three cities:

- the Western Parkland City (Greater Penrith, Western Sydney Airport, Campbelltown-Macarthur, and surrounds), wherein the Project is located;
- the Central River City (Greater Parramatta, Liverpool, and surrounds); and
- the Eastern Harbour City (Sydney CBD and surrounds).

The Plan outlines challenges to be addressed to achieve the vision of the three city metropolis:

- imbalance of jobs within the CBD centred around the harbour and radial rail network;
- geography of the Sydney Basin, framed by ridges, waterways, and national parks with ridges and ravines in some parts restricting accessibility;
- the historic car-based suburban form;
- changing demographics with an ageing population in the central and western areas, increase in children, and decrease in working age population driving pressure on health and education services; and
- landscape, climate, and amenity differences across the region.

Education is a key objective of the Plan under the direction of "jobs and skills for the city":

- "Objective 21: Internationally competitive health, education, research and innovation precincts" (Greater Sydney Commission 2018).

The Project will also provide an opportunity to design a place for people in the community to come together, as required by the direction of "a city of great places" (Greater Sydney Commission 2018), with the potential indicator of increased access to open spaces.

iii Strategic Plan 2018–2022

The NSW Department of Education's (2018) *Strategic Plan 2018–2022* outlines the vision of being "…Australia's best education and one of the finest in the world". The Plan defines the Department of Education's commitment to ensuring that "…infrastructure meets the needs of a growing population and future-focused learning and teaching… workforce is engaged and high performing… community has confidence in public education" (NSW Department of Education 2018). Development of the new school in Edmondson Park would be a step in fulfilling these commitments.

3.2.2 State policy and guidelines

i Draft Social Impact Assessment Guideline: State Significant Projects, 2020

The draft SIA Guideline (DPIE 2020) provides direction on assessing impacts arising from state significant development projects in the context of the environmental impact assessment (EIA) process under the EP&A Act. In this draft guideline, SIA is the process of identifying, predicting, evaluating and developing responses to the social impacts of a proposed state significant resource project which requires proportionate and tailored assessment to suit each project's context and the nature and scale of its potential impacts and benefits.

The objectives of this guideline are to:

- provide a clear, consistent and rigorous framework for identifying, predicting, evaluating and responding to the social impacts of state significant resource projects, as part of the overall EIA process;
- facilitate improved project planning and design through earlier identification of potential social impacts;
- promote better development outcomes through a focus on minimising negative social impacts and enhancing positive social impacts;
- support informed decision-making by strengthening the quality and relevance of information and analysis provided to the consent authority;
- facilitate meaningful, respectful and effective community and stakeholder engagement on social impacts across each EIA phase, from scoping to post-approval; and
- ensure that the potential social impacts of approved projects are managed in a transparent and accountable way over the project life cycle through conditions of consent and monitoring and reporting requirements.

3.3 Local

The Project is located in Liverpool LGA which has the highest proportion of directly impacted stakeholders. The plans and strategies supported by local government are representative of the needs of local communities and identify strategies and opportunities to further improve the liveability and resilience of these communities, which could be affected by the Project. A summary of the relevant Mayors and Councillors (Cr) is provided in Table 3.1.

Table 3.1 Councillors, 2021

Role	Councillors	
Mayor	Cr Wendy Waller	
Deputy Mayor	Cr Ali Karnib	
Councillors	Cr Gus Balloot	Cr Mazhar Hadid
	Cr Nathan Hagarty	Cr Peter Harle
	Cr Tina Ayyad	Cr Tony Hadchiti
	Cr Charishma Kaliyanda	Cr Karress Rhodes
	Cr Geoff Shelton	

The local government has regional and strategic plans that articulate their vision for the future of their community. These are summarised in Table 3.2.

Table 3.2 Regional planning context

Plan/Strategy	Summary	Responsibility	Timeframe
Our Home, Liverpool 2027	This plan is the Community Strategic Plan (CSP) for Liverpool which defines their vision and priorities over the next ten years. The CSP is underpinned by a quadruple bottom line linked to four community directions: social (creating connection); • environment (strengthening ad protecting our environment; • economic (generating opportunity; and • civic leadership (leading through collaboration). The Plan outlines that the Liverpool community wants: • *"an area where connection is created between all people in the community;* • *more community activities and events; [and]* • *facilities to be well maintained and multipurpose; access provided to all (youth, seniors, people with disability)".* The development of a new school in Edmondson Park would provide all these things for community members living in the suburb and surrounds.	Liverpool City Council	2017 – 2027
Four-Year Delivery Program 2017 – 2021	The CSP is supported by multiple documents, including a Four-Year Delivery Program 2017 – 2021 which translates the directions into strategies for the four years from 2017 – 2021. The plan outlines strategies, with numerous specific tasks, to achieve each direction: • Creating connection: – social aspect of the quadruple bottom line – includes cultural activities, recreation and active living, access and equity, and community facilities. • Strengthening and protecting our environment: – natural and built environmental aspect of quadruple bottom line – includes waste management, urban design, planning and protecting specific environmental features. • Generating opportunity: – economic aspect of quadruple bottom line – includes small business strategies, economic sustainability strategies, internal and external transport links and the financial sustainability of Council. • Leading through collaboration: – civic leadership aspect of quadruple bottom line – includes leaderships and representation, consultation and community participation in decision-making, policy frameworks and ethical practices. The document also outlines the Council's budget to achieve these strategies. One of the goals under creating connection is to deliver a range of community events and activities. The development of a new school in Edmondson Park would provide spaces for such community events to be held in order to include the community in the local area in such programs.	Liverpool City Council	2017 – 2021
Multiple strategies supporting CSP	There are several other strategies which support the CSP, creating "…a comprehensive planning framework for Council to deliver actions that are community focused": • City Activation Strategy (an innovative model for precinct activation encouraging development of a well-integrated and economically vibrant City Centre); • Destination Management Plan (detailing Council's priorities for the development of the visitor economy in Liverpool); • Disability Inclusion Action Plan (commitment with improving access to services, facilities, and jobs for people with disabilities);	Liverpool City Council	2019 – 2024 2018/19 – 2022/23 2017 – 2021 20 years

Table 3.2 Regional planning context

Plan/Strategy	Summary	Responsibility	Timeframe
	• Community Facilities Strategy (strategies to provide high quality facilities and services); • Recreation, Open Space and Sports Strategy (guiding Council's decision-making and investment for future provision and management of Liverpool's recreation, open space, and sporting facilities; • Innovation Liverpool (Council's commitment to supporting innovation in our organisation and community); and • Cultural Strategy (supporting and developing a thriving creative culture in Liverpool). Educational institutions are an important building block for community development with schools being "…vital to the social health of their local communities" (OECD 2018). The new school could: • boost the economy by providing children with the necessary skills to drive growth after finishing education; • be an opportunity to construct inclusive facilities and systems for people with disabilities; • provide brand new, high quality facilities and services for the community; • provide recreation, open spaces, and sporting facilities for us by the wider community; • support innovation at early ages; and • be designed to support and develop a thriving creative culture in the LGA.		2018 – 2028 2017 – 2027 2017 – 2021
Resourcing Strategy	The Resourcing Strategy tests community aspirations and goals against financial realities in the LGA. The Council outlines four parts of their Resourcing Strategy: • 10 Year Asset Management Plan – Overview and Planning Framework; • Workforce Management Plan 2017; • Long Term Financial Plan 2017; and • Information Technology Strategy 2017	Liverpool City Council	2017 – 2027 2017 – 2021
Liverpool Education Improvement Plan (LEIP) 2021	The LEIP includes five priorities for the Council over the next three years: • Priority 1 – mental health and wellbeing of children and young people supported so they can flourish in their education; • Priority 2 – access for children and young people to curriculum allowing acquisition of necessary oracy, fluency, and comprehension in reading; • Priority 3 – educational inclusion to meet the needs of children and young people with special needs and disability; • Priority 4 – recruiting, developing, supporting, and retaining best teachers and leaders; and • Priority 5 – children and young people equipped to engage in lifelong learning with clear pathways towards successful employment. The development of a new primary school in Edmondson Park would contribute to achieving these priorities for the community within the local area.	Liverpool City Council	2021
Connected Liverpool 2040: Local Strategic Planning Statement (LSPS)	The LSPS outlines 16 land use planning priorities under the themes of 'Connectivity', 'Liveability', 'Productivity', and 'Sustainability', focussing on transport, amenities, economy, and environment. The LSPS will determine what kind of development and growth occurs in Liverpool over the next 20 years, setting actions to deliver on planning priorities to meet the community's future vision of the city.	Liverpool City Council	2020 – 2040

Table 3.2 Regional planning context

Plan/Strategy	Summary	Responsibility	Timeframe
2020	The LSPS includes quotes from consultation and engagement with the community stating what makes their suburb a great place to live. One response was “close proximity to shops and schools”, which in regard to local schools, is something that the local area currently lacks, with only one private education option in the suburb (see Section 4.3).		

4 Social baseline

This chapter provides a summary of the baseline information and key social conditions in the study area for the proposed primary school that contribute to the identified social impacts. A complete baseline study that forms the basis for the SIA is provided in Appendix A.

4.1 Study area

The Project is located within the SSC of Edmondson Park and may directly impact landowners, residents, and businesses within the vicinity of the Project site. While the site itself is localised, direct and indirect impacts may be farther reaching. As such, the Project is considered to have two key study areas: a local study area and a wider study area.

Local area

The Project may have direct and indirect impacts within Edmondson Park SSC related to local social infrastructure and services, local workforce, local business and industry, local housing and accommodation, and community health and wellbeing. Furthermore, the student catchment is anticipated to predominantly comprise the Edmondson Park postcode, with most intake from the north-west of school location. Accordingly, Edmondson Park SSC comprises the local study area for the Project.

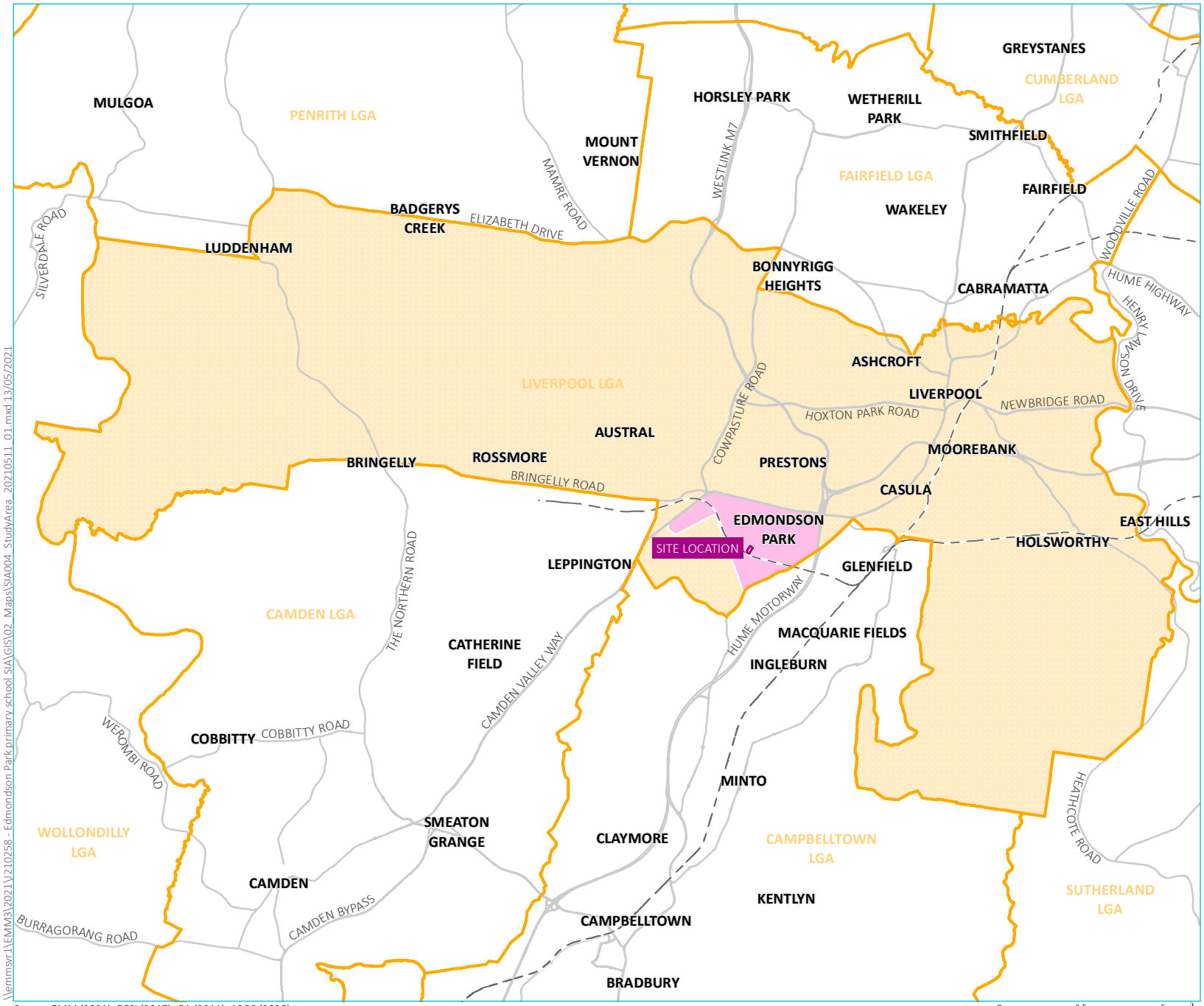
Wider area

The Project is likely to have a broader reach due to use of infrastructure, supply chains, haulage routes, transportation of goods, materials and equipment, and the movement of its workforce (DPIE 2020). These factors require the area of social influence to include regional areas likely to be impacted by the Project which will extend to Liverpool LGA forming the wider study area.

These communities have been mapped to the Australian Bureau of Statistics (ABS) categories used for data collection (see Table 4.1) and the local and wider area of social influence (herein referred to as local area or wider area), illustrated in Figure 4.1.

Table 4.1 Study area

Study area	Geographic area	ABS data category	Referred to in report as:
Local study area	Edmondson Park	SSC	Local area
Wider study area	Liverpool	LGA	Wider area
State of New South Wales	State of New South Wales	New South Wales STE	NSW



\\emmsvr1\EMM3\2021\P210258 - Edmondson Park primary school SIA\GIS\02_Maps\SIA004_StudyArea_20210511_01.mxd 13/05/2021

Source: EMM (2021); DFSI (2017); GA (2011); ASGC (2006)

Study area

New Primary School in Edmondson Park
Social Impact Assessment
Figure 4.1

EMM
creating opportunities

4.2 Demographics

According to the 2016 Census of Population and Housing, the local area had a total population of 2,271 people (ABS 2016a). The wider area had a 2016 population of 204,326 with an estimated 2019 population of 227,585 (ABS 2016a; ABS 2019). Analysis of ABS data shows that the population of the local area has experienced extremely high population growth between 2011 – 2016 (436.9%), which is much higher than the rate of growth in the regional area (13.4%) and NSW (8.1%). Population projections published by DPIE (2019) suggest that the projected population of the regional area is estimated to increase by 229,450 people from 2016–2041, representing a total change of 108.2% and an average annual growth rate of 3.0% (DPIE 2019). The high growth in the regional area reflects the trends discussed above with growth in outer Sydney suburbs attributable to high prices and demand in Sydney forcing the existing and new residents to seek housing further outside of the CBD (NSW Government 2021; Greater Sydney Commission 2018). The Greater Sydney Region Plan (Greater Sydney Commission 2018) is planning for extreme growth in the Greater Sydney region in the next 40 years.

In the local area, the largest age group is persons aged 35–44 years (19.6%), followed by 25–34 years (18.8%), and 5–14 years (15.9%), suggesting a significantly younger population in the local area compared to NSW. This includes children aged 5–14 years in the local area in 2016. However, this number is anticipated to have doubled from 2016–2020 (resulting in a predicted 730 school-aged children in the local area in 2020), with continued predictions of significant growth, as supported by population forecasts in the wider study area. The younger age within the local area and wider study area is also reflected in the smaller proportion of persons aged 55 years and older in the local area (11.6%) and the median ages of the local area (31 years) and regional area (33 years), which are significantly younger than the median age across NSW (38 years). The younger population in the study area is likely reflective of trends of young families migrating to outer suburbs after having children as larger housing options are more affordable in these areas (Wade 2018). Outer Sydney suburbs are particularly attractive for young migrant families for similar reasons of affordability (Birrell and Healy 2018) (see Section A.3 of Appendix A).

4.2.1 Cultural diversity

Compared to NSW averages, the local area and wider study area have a higher level of cultural diversity. In 2016, 46.7% of the local area population was Australian born. Australian-born persons also constitute a much lower proportion of the population in the wider study area (51.7%) compared to NSW (65.5%). The local area and wider study area also have a much lower proportion of intergenerational Australians, with only 13.8% of people in the local area and 21.4% of people in the wider study area with both parents born in Australia, compared to 45.4% across NSW (ABS 2016a). The local area has a high proportion of first- and second-generation persons from India, Fiji, and the Philippines (ABS 2016a). A significantly larger proportion of households in the local area (67.0%) and wider study area (52.2%) speak a non-English language at home compared to 26.5% in NSW. The high proportion of migrants in the local area and wider study area is representative of the preference of migrants within Australia to settle in major cities and surrounding suburbs over regional areas (Australian Government 2019). The preference of migrants for settlement in outer Sydney areas is largely driven by the long-term multicultural history of the region, with new migrants choosing to settle in areas with existing migrant communities.

4.2.2 Aboriginal and/Torres Strait Islander population

There is a significantly lower proportion of Aboriginal and/or Torres Strait Islander identifying persons in the study area than in NSW (ABS 2016a). In the study area, 0.3% of persons in the local area and 1.5% in the regional area identified as Aboriginal and/or Torres Strait Islander, compared to 3.0% in NSW. Compared to the total population of the regional area, there is a much smaller proportion of persons aged 65 years and older who identify as Aboriginal and/or Torres Strait Islander, as well as a stark decrease in persons aged 15–24 years.

The Indigenous population's smaller proportion of the population (both males and females) living beyond 65 years aligns with the lower life expectancy among Indigenous Australian's nationally that is particularly acute in Indigenous males (AIHW 2019), with much of this gap is explained by the relationships between increased socio-economic disadvantage, worsened mental health outcomes, and related health risk behaviours, including greater proportions of smoking and alcohol use (AHMAC 2017).

4.3 Education

The local area has four childcare services, including long day care, preschool, and outside of school hours care (OSHC), which provide a total of 344 places for enrolment (ACECQA 2021). There is one combined non-government school in the local area with 867 student enrolments from kindergarten to Year 11 (ACARA 2021). At the time of the Census in 2016, there were 365 children aged 5–14 years in the local area. However, this number is anticipated to have doubled from 2016–2020 (resulting in a predicted 730 school-aged children in the local area in 2020), with continued predictions of significant growth, as supported by population forecasts in the wider study area (see Section 4.2). This suggests a shortage of government schooling available for children and young adolescents in the local area.

There are no University or TAFE campuses in the local area, however, there are tertiary institutions in surrounding suburbs including two universities, one TAFE in Liverpool and another TAFE in Macquarie Fields.

Within the local area in 2016 there was a larger proportion of persons attending preschool (6.7%) and primary school (31.8%) compared to the regional area (5.0% and 27.6% respectively) and the whole of NSW (5.7% and 26.1% respectively) (ABS 2016a). The larger proportion of preschool and primary school students likely reflects the younger population of the local area compared to NSW (see Section A.3 of Appendix A), and the higher proportion of family households within the local area (see Section A.7.1 of Appendix A). The most common level of schooling achieved amongst persons aged 15 years and older in the local area was Year 12 or equivalent (74.3%), with a much higher proportion of people who have completed Year 12 or equivalent than the regional area (59.5%) which is more consistent with NSW (59.1%). Accordingly, a smaller proportion of persons in the local area (14.4%) have completed Year 10 or equivalent compared to the regional area (20.3%) and NSW (23.4%). Smaller proportions of students dropping out of school in earlier year levels may be indicative of the higher youth unemployment in the local area (17.5%) compared to NSW (13.6%) with more adolescents in school than working, and greater labour force participation rate (67.2% in the local area compared to 59.2% in NSW). These trends indicate that educational attainment in the local area is greater than in NSW.

4.4 Health and wellbeing

Poorer physical and mental health outcomes in the South Western Sydney Local Health District (LHD) compared to trends across NSW suggest that a portion of the study area population may be more vulnerable to health impacts as a result of the Project, notably through air quality.

4.4.1 Respiratory health

Asthma is an indicator of respiratory health of the community and vulnerability to dust and other air impacts. Persons suffering from asthma in the local area may be more vulnerable to impacts resulting from the Project such as traffic and construction related dust and emissions. In 2019 in South Western Sydney LHD 12.8% of children and 11.8% of persons aged 16 and over suffered from asthma, compared to 13.1% of children and 11.5% of persons aged 16 years and over in NSW (NSW Health 2019).

4.4.2 Mental health

The mental health of the study area can be indicated by rates of intentional self-harm hospitalisations and levels of psychological distress using the Kessler 10 (K10) approach; a 10-item questionnaire that measures anxiety, depression, agitation, and psychological fatigue in the most recent 4-week period (NSW Health 2019).

The overall trend in intentional self-harm hospitalisations for persons aged 15–24 years is increasing in both the South Western Sydney LHD and NSW. The rate of intentional self-harm hospitalisations for persons of all ages in the South Western Sydney LHD has been consistently lower from 2001–2006 and 2012–2019 compared to NSW. In 2019 the rate in South Western Sydney LHD was 60.9 per 100,000 compared to 90.7 per 100,000 in NSW (NSW Health 2019). These trends are assumed to reflect the local area, suggesting that there may be poorer mental health outcomes for the local community compared to NSW, and as such greater vulnerability to Project related impacts.

In 2019 psychological distress in persons aged 16 years and over based on the K10 approach was higher within the South Western Sydney LHD than NSW, with 19.7% and 17.7% (respectively) of persons with high and very high levels of psychological distress.

4.4.3 Safety and crime

In the regional area, the most common offence type from 2016–2020 was theft (BOCSAR 2019). Other common offences include assault, drug offences, against justice procedures, and other offences. The most common offence types committed by alleged juvenile offenders were robbery (34.7% of all offenders), sexual offences (13.9% of offenders), and theft (11.2% of offenders) (BOCSAR 2019).

4.5 Local housing and rental market

Rent and mortgage repayments constitute a significant proportion of household costs. The local area paid more for mortgage repayments ($2,643) each month in 2016 than the regional area ($2,123) and NSW ($1,986) (ABS 2016a). Rent repayments were also more expensive in the local area ($560) than the regional area ($370) and NSW ($380) (ABS 2016a). Despite higher rent payments compared to NSW, rental housing was more affordable in the local and regional areas, while house ownership was significantly more expensive in the local area than the regional area and NSW.

Housing stress is considered to occur when households in the lower 40% of income distribution spend more than 30% of their income in housing costs (rents or mortgage repayments) (AHURI 2019). This can mean that local people who are not employed in high-paying jobs may be unable to afford local rents which can be pushed up by higher salaries. In the local area in 2016, a smaller proportion of persons (7.5%) had rent payments greater than or equal to 30% of household income than in the regional area (14.5%) and NSW (12.9%) (ABS 2016a), while a significantly greater proportion in the local area (20.1%) had mortgage payments greater than or equal to 30% of household income than in the regional area (12.2%) and NSW (7.4%). Lower proportions of housing stress for renters and greater proportions for homeowners is likely reflective of the lower proportion of rental tenures in the local area (see Section A.7.2 of Appendix A) as well as the oversupply of rental housing (see Section A.7.4 of Appendix A). Lower mortgage affordability in the local area is indicative of the very high levels of home ownership with a mortgage within the local area (see Section A.7.2 of Appendix A), as well as the increasing costs of housing in the local area (see Section A.7.4 of Appendix A).

Residential vacancy rates in the local area have been well above the equilibrium of 3.0% from March 2018 to November 2020, suggesting an extreme oversupply of rental housing. The highest vacancy rate during this period was 23.0% in December 2018 and the lowest rate was 7.1% in July 2020, consistently remaining significantly above 3.0%. The most recent rate (November 2020) of 9.5% and overall decreasing trend in vacancy rates suggests increasing use of rental housing, which aligns with the trends of increasing population in the local area (see Section A.3of Appendix A).

4.6 Local workforce skill and capacity

At the time of the 2016 Census the unemployment rate in the local area (6.1%) was fairly consistent with (though slightly lower than) the NSW rate of 6.3%. However, the unemployment rate in the regional area (7.5%) was higher than both the local area and NSW (ABS 2016a). The labour force participation rate in the local area is also higher than the rates in the regional area and NSW. Youth unemployment in the local area (17.5%) and regional area (15.3%) is also higher compared to the NSW average of 13.6%. Lower workforce participation could be attributable to the younger population in the local area, resulting in a greater proportion of working aged persons.

In the local area the top three occupations are professionals (23.9%), clerical and administrative workers (14.2%), and technicians and trades workers (11.8%). The high proportion of professional in the local area is consistent with NSW trends, and reflects the high proportion of Bachelor degree level qualifications and postgraduate degree qualifications in the local area (see Section A.5.2ii of Appendix A) as 75% of professions within Australia hold a Bachelor degree or higher qualification (National Skills Commission 2020). The proportion of the workforce employed in in the construction industry is 8.4% in the local area (the same in NSW) and 9.9% in the regional area (ABS 2016a). This suggests there is a workforce pool in the area for use in the construction phase of the Project.

In the local and regional area there is a lower proportion of persons employed in the education and training industry compared to NSW (6.0% in the local area and 6.7% in the regional area compared to 8.4% in NSW), suggesting a potentially limited workforce pool for the operational phase of the Project (ABS 2016a).

4.7 Vulnerable groups

There are numerous vulnerable groups within the study area community including the elderly and persons with a disability (need for assistance), socio-economically disadvantaged groups, children with neurodevelopmental and neurobehavioral disorders (such as autism and attention deficit hyperactivity disorder, and overweight/obese children.

4.7.1 Disability

There is varying need for assistance in the study area, with 3.3% of persons in the local area and 6.2% in the regional area compared to 5.4% in NSW requiring need for assistance relating to the core activities of self-care, mobility, and communication due to a long-term health condition (lasting 6 months or longer), a disability (lasting 6 months or longer) or old age (ABS 2016a). The lesser need for assistance in the local area is likely attributable to its younger population compared to NSW. Within South Western Sydney LHD there is an abundance of social infrastructure available in the local area, including disability services and aged care facilities with high level care available (Liverpool City Council 2020; Healthdirect 2021; Ask Izzy 2021).

4.7.2 Socio-economic disadvantage

According to the 2016 SEIFA, there is some variation in terms of socio-economic advantage and disadvantage between communities within the local area and regional area. The local area is at least in the top 70% of suburbs in NSW in terms of advantage, as Edmondson Park is in the 7th or higher decile for all indexes (ABS 2016b). The local area falls within the 9th decile for Index of Relative Socio-economic Disadvantage (IRSD), the 10th decile for Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) and Index of Economic Resources (IER), and the 7th decile for Index of Education and Occupation (IEO).

Decile rankings of 9 and 10 for IRDS and IRSAD (respectively) means that compared to other suburbs across NSW, there are likely a higher proportion of households with high income, people with qualifications, and people in skilled occupations in the local area, as well as a smaller proportion of households with low incomes, or a smaller proportion of people in low-skilled occupations (see Section A.5 and A.6 of Appendix A).

Ranking in the 10th decile for IER suggests that compared to other suburbs across NSW, there are a greater proportion of households in the local area with high income or households paying high rent, as reflected in a higher weekly median rent in the local area compared to NSW (see Section A.7.3 of Appendix A). This also suggests a larger proportion of households with high income, as is the case in the local area (see Section A.6.2 of Appendix A). Ranking in the 7th decile for IEO suggests that there may be more people with qualifications and more people in skilled occupations, as well as fewer people without qualifications or in low-skilled occupations (see Section A.5 and A.6 of Appendix A).

4.7.3 Overweight/obese children

As of 2019, the rate of childhood overweight and obesity in the South Western Sydney LHD was 28.3%, compared to the NSW average of 22.4%. This is the second highest rate of childhood overweight and obesity across LHDs in NSW (South Western Sydney LHD 2019). According to the South Western Sydney LHD (2019), overweight and obesity can impact children's physical health, mental health, and social wellbeing. Children who are overweight or obese are more likely to develop conditions such as diabetes which can lead to other chronic conditions, significantly affecting a child's quality of life. Furthermore, children who are overweight or obese are more likely to remain overweight or obese as adults (South Western Sydney LHD 2019). Nutrition, physical activity related behaviours, and environmental factors all contribute to the prevalence of overweight and obesity in children (South Western Sydney LHD 2019).

4.8 Community culture and values

The community vision as described by Liverpool City Council is for Liverpool City to be "rich in nature, rich in opportunity, and creating community". There is a dedication to values that promote cooperation and equity, the sustainable ecological and economic development of the region, and civic leadership (Liverpool City Council 2017).

The Darug and Tharawal Aboriginal peoples are recognised as the traditional owners of the area known as Liverpool LGA. The study area lies at the border of the land formerly occupied by the Darug and Tharawal indigenous people, where the Georges River formed a natural border between these groups. Tharawal country extended from Botany Bay in the north and as far south as the Shoalhaven River and east from Campbelltown to the coast, and Darug country encompassed Parramatta through to the Blue Mountains and from the Hawkesbury River in the north to Appin in the south, respectively. The many rivers acted as natural demarcation of the areas and the flat terrain of the Cumberland Plain was favourable to the livelihood of the indigenous peoples (EMM 2020).

The Tharawal Local Aboriginal Land Council manages the range of support services and serves the Aboriginal and Torres Strait Islander communities in the study area.

4.9 Community strengths and vulnerabilities

A summary the key strengths and vulnerabilities within the community based on the existing social conditions is provided in Table 4.2.

Table 4.2 Community strengths and vulnerabilities

Vulnerabilities	Themes	Strengths
High youth unemployment (17.5%).	Workforce	Large proportion of professionals in the area (23.9%). Large proportion of working aged people in the area. Larger proportion of people with Year 12 as highest level of schooling completed than regional area and NSW.
Limited government school options in the area for primary and secondary school aged children – only one school immediately in the suburb which is private.	Access to information/ services	Good recreational and sporting services available in the regional area. Well serviced in terms of health infrastructure and services in the regional area.
Significantly lower volunteering rates in the local area (11.2%) and regional area (11.0%) compared to NSW (18.1%).	Community	High levels of socio-economic advantage compared to NSW.
Significantly less mortgage affordability in the local area (ie more households paying above 30% of household income for mortgages compared to NSW). Higher mortgage and rent repayment costs in the local area compared to NSW.	Housing	Capacity in the current rental market with extreme oversupply of rental housing options. Greater rental affordability in the local area (ie less households paying above 30% of household income for rent compared to NSW).
Poorer mental health outcomes (indicated by high and very high psychological distress) than in NSW. Higher rates of childhood obesity compared to NSW.	Health & community wellbeing	Well serviced in terms of access to health services within a short distance in the regional area. The rate of recorded offences per 100,000 people in the regional area has consistently remained below the rate of recorded offences in NSW. Significantly fewer intentional self-harm hospitalisations than in NSW.

5 Community and stakeholder engagement

SINSW has conducted community engagement for the Project, including provision of project information and updates via the Project website, letterbox drops, school channels themselves, and information sessions.

This section summarises the findings from the community engagement activities undertaken in relation to the Project. Consultation for this SIA was carried out during the COVID-19 pandemic and conducted in accordance with applicable Australian National and NSW health agency advice.

5.1 SINSW engagement activities

During the consultation period for the Project, SINSW engaged with the community using several methods, including:

- a virtual information room (VIR) including a community survey for public feedback on Project design features (19–23 April 2021);
- providing information and updates on the Project design and timeline via communication materials;
- promotion of consultation activities and materials via:
    - advertisement in the Liverpool Champion (Wednesday 14 April 2021);
    - SINSW website Project page;
    - Project update letter box drop to approximately 1,400 houses in Edmondson Park; and
    - emails to local school network Principals from the Director, Educational Leadership encouraging school communities to share advice and provide feedback.
- provision of email contact details and a web enquiry form for community members to contact SINSW regarding the Project.

5.1.1 VIR and community survey

Community engagement with the VIR consisted of 98 unique visitors, with 10 visitors completing the community survey. The majority of the 98 unique visitors visited the page to view an animated fly-through of the Project design, followed by the timeline for Project delivery.

Respondents to the survey consisted of three parent/caregivers of potential students, three local residents, two other, one community member, and one teacher. The key themes from survey responses included:

- importance of green space for playing;
- importance of incorporating local Aboriginal history in the design, including artworks and interactive play elements. Also, suggestions to work with local aboriginal groups to develop these design aspects;
- consideration of climate change and urban design in the school design, including sustainability, shade/heat, and water flow;

- further information about a high school at Edmondson Park;
- further design details about the inside of the classrooms; and
- further information about construction and enrolment timeframes.

Overall, feedback for the Project was positive with interest from the local area community for the design and development of the school.

5.1.2 Email and web enquiry engagement

The Project page on the SINSW website provides an email address and web enquiry form for community members to get involved in the Project. As a result, SINSW has had interactions with nine community members regarding the New Primary School in Edmondson Park. Interactions with community members have been in the form of email correspondence, one phone call to SINSW's 1300 number, and one webform enquiry. The topics raised in these discussions include Project delivery timelines, construction impacts, enrolment procedures during operation, the scope, design and location of the new school, and community sentiment for the Project.

5.2 SIA field study activities

In-depth interviews and a community survey (administered online) were used to engage and consult the community and key stakeholders regarding the Project. The methods of engagement and consultation with community and key stakeholders and details of participation are provided in Table 5.1.

Table 5.1 Consultation participation

Method	Administered	Timeframe	Invited	Participated
In-depth interviews	Face to face, videoconference, and teleconference	26 April–7 May 2021	20 service provides and 26 local residents	12 interviews (total of 22 service providers and one local resident)
Community survey	Online	26 April–10 May 2021	All local community – advertised on the SINSW Project webpage, emailed to community members that have engaged the SINNSW project team, and the 'Edmondson Park Community' Facebook group	32 respondents

5.2.1 In-depth interviews participation

Interviews were conducted with local residents and key stakeholders from 27 April 2021 to 7 May 2021. The interviews involved the identification of perceived impacts and benefits as a consequence of the Project. A total of 12 interviews were conducted face to face, via videoconference, and via telephone with:

- four local council representatives;
- one local resident;
- one Director, Educational Leadership;
- two local school principals and one local assistant school principal;

- three South Western Sydney Local Health District representatives;
- one local childcare provider;
- two OSHC providers; and
- eight local real estate agents.

Each of the service provider interviews offered insights into the potential impacts and benefits of the Project to specific areas of service in the community. The key findings from the interviews are displayed in Section 5.3.

5.2.2 Online community survey participation

i Participation and project awareness

An online community survey was open to the public to identify issues and potential impacts relating to the Project. The survey included open ended, multiple choice, and rating-style questions which provided both qualitative and quantitative data. The survey was available for response for three weeks from 27 April 2021–10 May 2021.

The online community survey was advertised on the Project webpage within the SINSW website, emailed directly to interested local residents and key stakeholders, and advertised on the 'Edmondson Park Community' Facebook group on 30 April 2021.

There was a total of 32 responses to the online community survey. Out of the 32 respondents:

- 24 were from the local area (75.0%);
- two were from the wider study area (6.3%); and
- six were from outside the study area or overseas (18.7%).

Of those respondents from the local area, 21 (65.6%) respondents identified as local land owners or residents, one identified as a teacher or school staff (3.1%), one (3.1%) as a business owner, and five (15.6%) as caregivers of primary or preschool aged children. Project awareness across the results varied, with nine (28.1%) of the respondents indicating they have a fair awareness of the Project and an additional 13 (40.6%) indicating good or very good awareness. The remaining 10 (31.3% respondents indicating poor or very poor awareness of the Project (see Figure 5.1).

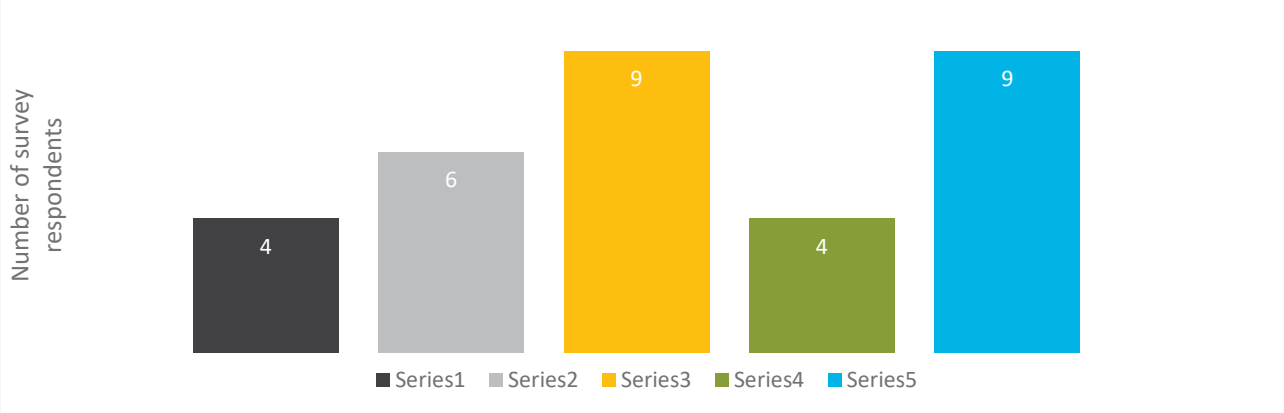


Figure 5.1 Project awareness in community survey

ii Project support

The vast majority (93.7%) of the respondents indicated they were either supportive or strongly supportive of the Project, with only one respondent strongly opposed and one neutral (see Figure 5.2). Respondents supportive of the Project indicated the local area has needed a primary school for a while. Additionally, five (15.6%) of the respondents mentioned the need for a secondary school in the suburb. A further two (6.3%) respondents also indicated that one school would not be sufficient for the rapidly growing population in the local area.

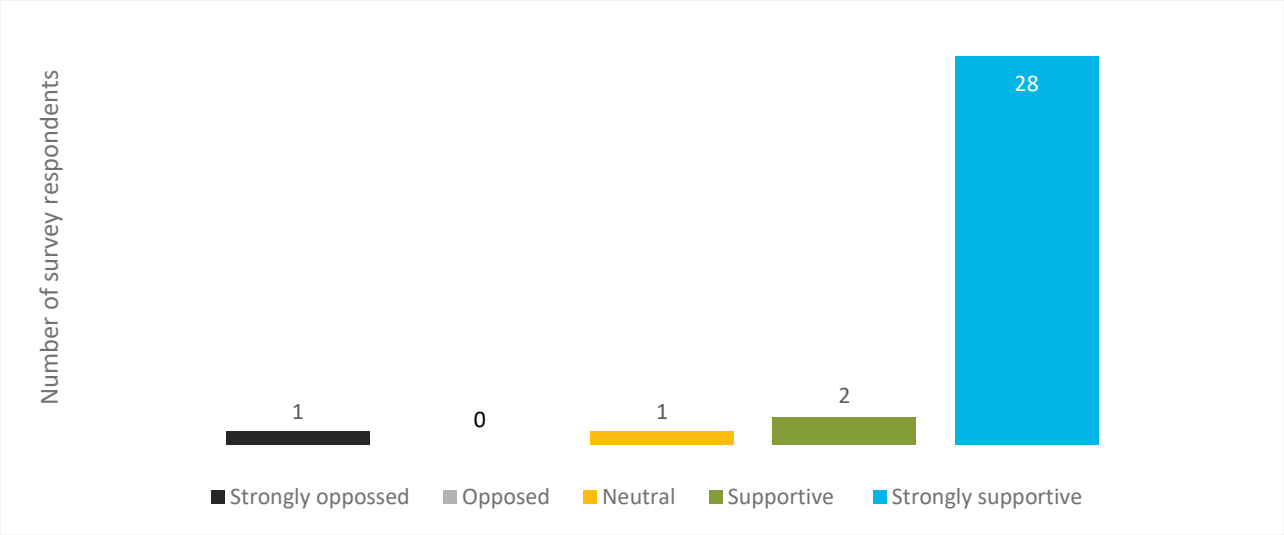


Figure 5.2 Project support in community survey

iii Perceived impacts and benefits

Overall, the respondents' perceptions of the Project were mostly positive. Project impacts and benefits on employment during construction and operation, access to childcare and education, access to housing, access to social infrastructure and other local services, community wellbeing, local character, public safety, local businesses and visual amenity were rated between positive and very positive by over 50% of respondents. The greatest perceived benefits of the Project were to local character, local businesses, access to education facilities and services, and public safety access to education facilities and services and public safety (all 81.3% positive/very positive out of 32 respondents). Community wellbeing and employment during construction and operation (all 78.1% positive/very positive) were also perceived to offer significant benefits to the local community. Construction impacts of the Project including dust, noise, and traffic, as well as operational impacts including school traffic and school noise were rated mostly neutral and negative, with one to two very negative ratings each. A detailed account of the perceived negative and positive impacts of the Project from online community survey results is shown in Figure 5.3.

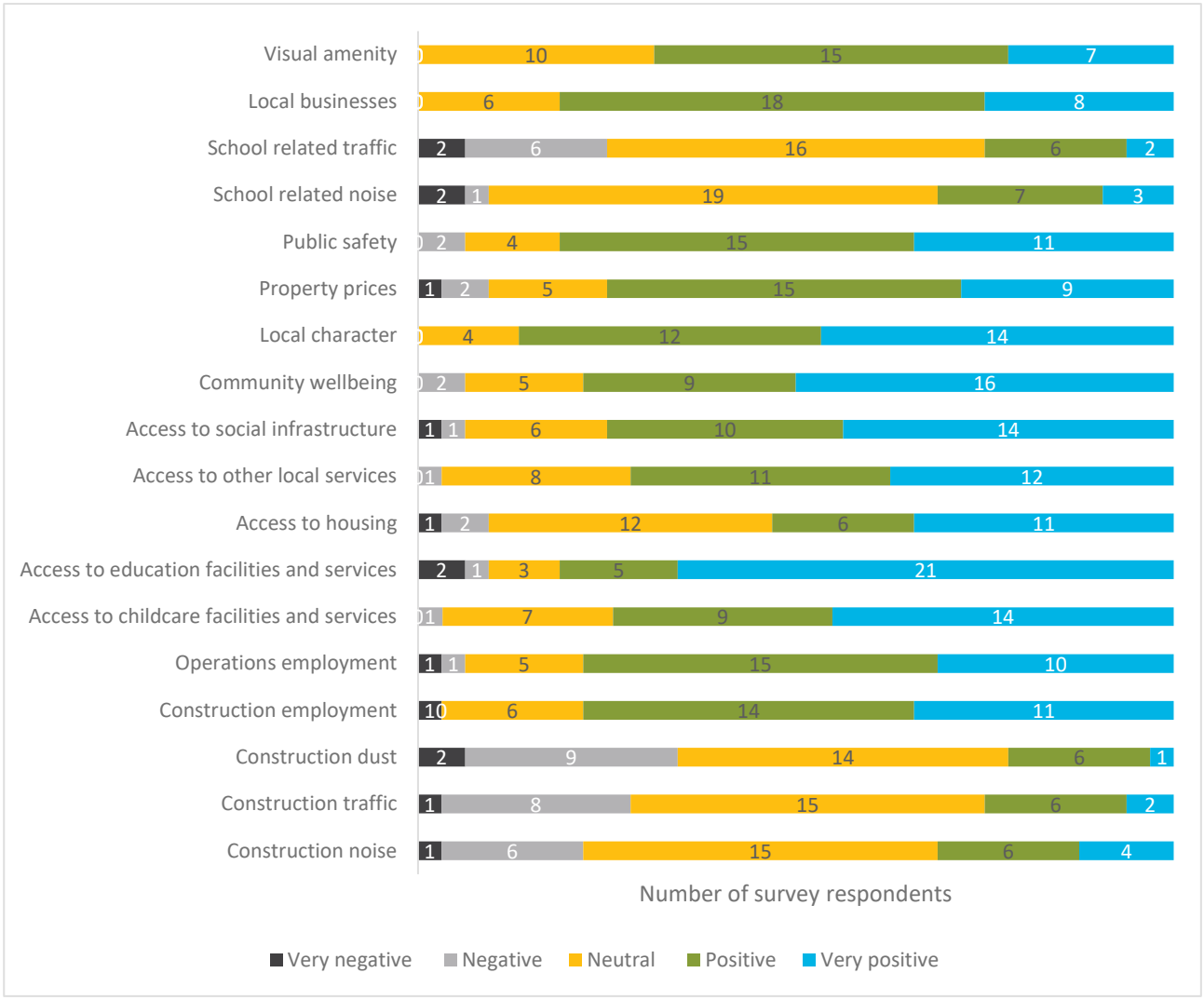


Figure 5.3 Perceived impacts in community survey

5.3 Summary of community engagement findings

This section outlines the key social impacts identified by participants in the community engagement and is informed by the findings of the in-depth interviews held with local members of the community, service providers, and local government staff, the community survey, and engagement activities conducted by SINSW. All consultation activities sought to understand how participants viewed their community and identify how the Project may impact on their community.

Participants identified values, strengths and vulnerabilities which offer an understanding of the community surrounding the Project site, shown in Table 5.2. The key issues or potential impacts, and opportunities or potential benefits identified by the community are organised into categories of social impact theme (see Table 5.2). A detailed summary of the most prominent social impacts that were identified through stakeholder consultation activities are available in Section 5.3.1.

Table 5.2 Community identified values, strengths and vulnerabilities

Values	Strengths	Vulnerabilities
Family-oriented	Housing (cheaper than inner city)	Rapid population growth
Educational outcomes	Access to public transport (train)	Lack of school
Cultural diversity	Road access (near major arterial roads)	Lack of social infrastructure
Community events	Socioeconomic advantage	Lack of green, open space
Active travel (walkability of neighbourhood)	Cultural diversity	High temperatures and urban heat island effect (no greenery)
Green, open space		Public transport (bus) accessibility
Community spaces		Housing (limited with growing population)
Affordable housing		Traffic
Friendships for children outside school		Missing sense of place/community

5.3.1 Community identified social impacts and benefits

i Livelihood

a Benefits

Several stakeholders who engaged in in-depth interviews indicated that the Project would be beneficial to the livelihoods of those employed within the school during operation, including opportunities for teachers, administration, canteen works, librarians, maintenance workers, and preschool staff.

ii Housing

a Impacts

Housing in the local area was discussed by almost all of the stakeholders interviewed. The perceived impact of the Project on the housing market in the local area suggested that stakeholders believed the school would increase the demand for properties nearby, with families wanting to move into the suburb to be within the catchment for admission to the school. One stakeholder discussed the reality of public education being that they must accept all applications for admission for students living within the designated catchment, meaning that capacity of the school was likely to be met within the first two or three years given extreme population growth in the local area.

iii Accessibility (education and facilities)

a Impacts

A recurring concern among the stakeholders was the anticipation that the school may not have sufficient capacity to accommodate the rapidly growing population in the local area. In addition, stakeholders expressed concerns over the lack of planning for a high school to accompany the new primary school. Stakeholders suggested that many members of the community have been waiting for a primary school to be built since they moved to the area serval years ago, and now have high school aged children and no high school to send them to in the local area. Stakeholders were also concerned about uprooting children from their local area after they have finished primary school and sending them high school away from their friends and further from home. Overall, stakeholders agreed that the school was a much-needed facility for the local community.

b Benefits

The main benefit of the Project discussed in every one of the interviews was access to education for the local community. Stakeholders expressed their relief that the school would be built noting that it would be beneficial for families in the area being able to walk or cycle to school, connect and form friendships with their neighbours, send preschool and primary school children to school in the same place, and be able to take children to school near their homes, minimising time spent travelling before and after school. Stakeholders also indicated that education was an important value for families in the local area.

c Opportunities

The Project was viewed by stakeholders as an opportunity to provide spaces for community use, of which there are currently none in the local area. All stakeholders discussed the need for green, open spaces and community facilities such as a hall to increase social cohesion in the community. The school was also discussed as an opportunity to provide educational programs outside of school hours, such a language classes for the very culturally diverse population in the area.

iv Way of life

a Impacts

Consultation with stakeholders highlighted traffic, parking, and litter as potential impacts on the amenity of the natural and built environment for nearby neighbours as a result of the Project. Stakeholders from businesses and schools in the surrounding area suggested that the Project would exacerbate an existing traffic issue in the local area, and also cause parking and litter issues for residents living in close proximity to the school. Given the position of the school in the bottom corner of the suburb, with limited access points to the surrounding streets, stakeholders are concerned that this will create bottleneck issues in mornings and afternoons, inconveniencing not only those accessing the school, but members of the community living in the streets surrounding the Project. Parking for these residents was also deemed of concern if parents choose to park further away and walk to school. One council representative suggested that residents often are concerned about litter being thrown into their yards by passing school children or parents on the way to or from school.

v Community health and wellbeing

a Impacts

During consultation, stakeholders indicated concern for several issues relating to health and community wellbeing, including childhood obesity, construction dust and noise, operational noise from children and traffic, isolation or exclusion for non-English speaking members of families (multicultural community), heat impacts for children, and litter in neighbouring properties. Stakeholders raised concerns over the mental wellbeing of surrounding neighbours with increased noise and activity in their street, potential parking and traffic issues, and rubbish being left on their properties, suggesting that these issues may cause conflict between the school and its neighbours.

b Benefits

The Project was perceived to have a positive impact in the way of providing green, open space for residents in the local area (increasing mental health and wellbeing), providing a point of contact with neighbours and the broader community thereby social cohesion, providing the opportunity for families to walk or cycle to school (increasing physical and mental health), and increasing the sense of place in the local area.

c Opportunities

Stakeholders also discussed several opportunities that could arise from the implementation of the Project. These include providing community spaces to bring people together; a community garden; rubbish management plans for the surrounding streets; language programs for members of the community; encouraging and promoting active travel initiatives as well as educating children on healthy eating/lifestyles; and providing extracurricular activities such as sports for not only students of the school, but the wider community.

vi Business

a Impact

One stakeholder from a local childcare centre raised concern over the inclusion of a preschool in the plans for the new school. The stakeholder suggested that there was already sufficient childcare facilities in the area, with many operating under capacity, and that the preschool would create competition for childcare centres.

vii Public safety

a Impacts

Stakeholders raised several public safety concerns relating to the Project. Concerns included safety of children when walking to and from school, potential hazards resulting from community use of facilities on school property, extreme heat in built up areas as a result of urban heat island effects, and the potential for traffic incidents (collisions) during peak school times. Stakeholders suggested that residents in the local area are very car reliant as a result of lacking social infrastructure, requiring driving to nearby suburbs for access; as such, they expressed concerns over potential road incidents for active travellers and those within vehicles, with high amounts of traffic on the roads. The concern about heat within the school was expressed by stakeholders from South Western Sydney LHD, suggesting that children are particularly susceptible to high temperatures, which are likely in highly built up areas such as schools.

b Opportunities

Opportunities relating to public safety identified by stakeholders included the provision of green, open spaces to reduce the heat in the area (and add to amenity), as well as several traffic management suggestions such as 30 km/hour school zones, parking exclusion zones within a 10-minute walk from the school to minimise traffic in the area and encourage active travel, and partnerships with the local council to ensure sufficient signage in surrounding streets.

A summary of the potential impacts, benefits and opportunities arising as a consequence of the Project, as identified by participants during the SIA field study and engagement conducted by SINSW are provided in Table 5.3.

Table 5.3 Community identified impacts, benefits and opportunities

Themes	Impacts	Benefits	Opportunities
	• Impacts to livelihoods of existing childcare service providers	• Local employment	• Local employments
	• Access to education – capacity unlikely to meet demand in the area • High school needed at the same time – children will have to go to schools outside the local area to attend high school • Overcapacity causing decreased learning outcomes • Community frustration if the Project is further delayed • Not enough preschool spaces for a suburb of mostly double income earners requiring childcare	• Access to education – school desperately needed • Likely to encourage other social services to move to the area • Special needs programs for students • Access to green space • Access to community facilities – hall, library, open space etc.	• Plan for the future by including space for expansion of classrooms and facilities • Ensure accessibility for disabled members of the community • Include plenty of greenery and green space in the design • Design facilities in a way that makes them accessible to the broader public • Potential partnership with local council for management/maintenance of facilities
	• Lack of housing availability – expected to increase when school opens with more families moving in	NA	NA
	• Exacerbate existing traffic issues in the area • Parking issues for surrounding neighbours • Litter at surrounding residences from children and parents before/after school	• Provision of a hub for the local community	• Potential to increase green space in the local community • Potential to offer school facilities for community use

Table 5.3 Community identified impacts, benefits and opportunities

Themes	Impacts	Benefits	Opportunities
	• Construction dust and noise • Noise during operation from children and traffic • Isolation/exclusion of non-English speaking family members • Childhood obesity • Heat impacts from urban heat island affect (children particularly vulnerable) • Litter at neighbouring residences from school families during drop off and pickup times	• Access to green, open space • Social cohesion from interaction with people from the same suburb • Ability for active travel to and from school for children and parents/carers • Increased sense of place for the community	• Organise events to bring the community together • Community garden to improve social cohesion, encourage healthy eating, teach children to grow their own food etc. • Rubbish management plan for surrounding areas as well on school property • Provide language programs in school facilities outside of school hours and signage in other languages or using symbols to improve understanding • Encourage active travel and promote healthy eating/lifestyles to reduce childhood obesity • Provision of sporting/exercise programs within school and for the broader community
	• Road safety for children walking/cycling to school • Student safety concerns if allowing community use of facilities – potential for hazards • Extreme heat in open areas if sufficient greenery/shade not provided (urban heat island effect) • Traffic incidents during pickup/drop off times	NA	• Provision of many trees/plants, shade covers to reduce urban heat island effect • Ensure sufficient signage in surrounding streets • 30km/hr school zone (during school hours) • No parking within 10 minutes' walk of the school to encourage active travel and reduce number of cars within the school zone

6 Expected and perceived impacts

This section summarises the key expected and perceived impacts demonstrated across the social baseline data, findings from the SIA field study, and outcomes of SINSW community engagement. Examples of education infrastructure developments and other SIAs prepared by the author, predominately in NSW, and academic research have been drawn on to provide context and background information that will inform the social impacts discussed in Section 7. The key expected and perceived impacts identified and discussed in this section are:

- school traffic causing public safety and amenity issues;
- improved access to primary and preschool education services;
- social cohesion, capital and resilience related to development of the school as a community hub;
- residential satisfaction and fulfilment related to placemaking and sense of place;
- improved health outcomes related to addressing childhood obesity; and
- public safety related to urban heat.

6.1 School traffic causing public safety and amenity issues

The potential for the new primary school to cause and exacerbate existing traffic issues in the local area was a key perceived impact expressed by stakeholders during consultation. Stakeholders raised concerns about operation traffic both in the context of reduced amenity and potential public safety issues.

As identified by the Westmead Catholic Campus SIA (Ethos Urban 2020), increased student populations which are concentrated in one location have the potential to disrupt the local community's way of life due to increased traffic and pedestrian movements during peak school drop-off and pick-up times. Traffic generation was also identified as a potential impact of the Bankstown North Public School Upgrade SIA (RPS Group 2020).

Operation of schools are also associated with potential risks to pedestrian safety, particularly during school drop-off and pick-up hours (Ethos Urban 2020). Road safety issues around schools may include illegal parking, unsafe crossing behaviour and pick-up and drop-off procedures (TfNSW 2020). To address risks associated with road safety, infrastructure and measures which may be incorporated around schools include installation of new school zones and 40 km/h signage, operating times of 40 km/h speed limits in school zones, traffic signals, pedestrian crossings, road repairs, and off-road shared travel paths (TfNSW 2020).

6.2 Access to local education services and facilities

One of the main perceived benefits of the Project was access to education services and facilities for the local community. Stakeholders identified several potential benefits relating to accessibility of local education services and facilities, including being able to walk or cycle to school, connecting and forming friendships with their neighbours, sending preschool and primary school children to school in the same place, minimising time spent travelling before and after school, and the opportunity to provide spaces for shared community use.

Establishing local schools may increase the capacity to meet the demands from growing populations (Urbis 2019) as well as provide increased schooling choice for local residents (RPS 2020). Increased accessibility from provision of local schools also has the potential to contribute to greater education attainment, and a resulting contribution of long-term economic flow-on benefits linked to better education opportunities, employment and health (RPS 2020). Studies show that local schools can contribute to improved education outcomes by reducing student

fatigue associated with longer travel to and from school (Pradhan & Sinha 2017; Tigre, Sampaio & Menezes 2017). Reducing travel distances may also enable students to walk or cycle to school, thereby increasing their physical activity and consequently learning outcomes (Kuehn 2013; Martin & Murtagh 2017). Barret et al. (2019) explain that local schools which maintain reasonable travel to school distances contribute positively to students' academic outcomes by reducing time spent in transit, increasing the opportunity for students to engage in afterschool activities, and increasing the potential for parents to engage with the school themselves. The provision of shared facilities offered through schools offers additional potential benefits for both school users and the wider local community due to greater access to local social infrastructure (Urbis 2019; RPS Group 2020; Ethos Urban 2020).

However, stakeholders engaged in SIA consultation and SINSW community engaged also perceived potential impacts associated with the future growth of the local community and the capacity of the new primary school. The local area is forecast to experience significant additional population growth into the future, which is likely due to the suburb's proximity to the Sydney CBD, recent housing and lifestyle developments in the suburb (NSW Government 2021), and urban sprawl in outer Sydney suburbs due to the high demand and cost of housing in Sydney (Greater Sydney Commission 2018). As revealed in the NSW Auditor-General's Report, *Delivering School Infrastructure*, it is estimated that an additional 180,000 students in the NSW government school system will need to be accommodated from 2021 until 2019, with most of these forecast enrolments expected to be required in already established areas of metropolitan Sydney (Crawford 2021). As such there may be a need to consider options to accommodate future increases in demand for government schooling in the local area.

6.3 Social cohesion, capital and resilience related to development of the school as a community hub

The potential for the new primary school to enhance social cohesion, capital and resilience in the local area was perceived as a significant benefit by stakeholders engaged in consultation.

Social cohesion refers to the degree of solidarity and connectedness within a group or community, including "the sense of belonging of a community and the relationships among members within the community itself" (Manca 2014). Social capital refers to the patterns and qualities of relationships in a community (ABS 2002b). Building social cohesion and capital within a community requires the engagement of the local community and the establishment and maintenance of effective long-term partnerships (AHRC 2015). The provision of local schools does not only provide the opportunity for students to enhance the quantity and quality of their relationships with other students in their local community but enhances engagement between parents/caregivers. Local schools provide a point of initial contact, where parents/caregivers can meet and subsequently develop relationships with others within the local community through engagement in school events and activities (such as fetes, parent information nights, fundraising events, and student recitals/performances) (Engel, Kington & Mleczko 2013). It is anticipated that parents/caregivers would also form relationships with one another through the friendships that their children form (Smith 2011).

School developments and upgrades can also create benefits social cohesion benefits which extend beyond the school community to the local and regional communities. By creating new cultural hubs whereby facility use is not limited to students and staff during school hours and offering collaborative programming with other services in the area (such as aged care and hospital services) to facilitate intergenerational learning and socialising, upgraded schools can provide significant opportunities for growth in social cohesion (Ethos Urban 2020).

6.4 Improved health outcomes related to increased opportunities for healthy lifestyles

During consultation, stakeholders identified multiple potential benefits and opportunities of the Project associated with healthy lifestyles, including encouraging and promoting active travel initiatives as well as educating children on healthy eating/lifestyles; and providing extracurricular activities such as sports for not only students of the school, but the wider community.

As of 2019, the rate of childhood overweight and obesity in the South Western Sydney LHD was 28.3%, compared to the NSW average of 22.4%. This is the second highest rate of childhood overweight and obesity across LHDs in NSW (South Western Sydney LHD 2019). According to the South Western Sydney LHD (2019), overweight and obesity can impact children's physical health, mental health, and social wellbeing. Children who are overweight or obese are more likely to develop conditions such as diabetes which can lead to other chronic conditions, significantly affecting a child's quality of life. Furthermore, children who are overweight or obese are more likely to remain overweight or obese as adults (South Western Sydney LHD 2019). Nutrition, physical activity related behaviours, and environmental factors all contribute to the prevalence of overweight and obesity in children (South Western Sydney LHD 2019).

Providing local schools can contribute to improved physical activity in children by providing additional opportunities for active travel. Active travel refers to "means of walking, cycling, scootering, skateboarding or any similar transport where human energy is spent to travel" (NSW Health 2019). Increased opportunities for local active travel for children can provide significant health benefits including improved concentration, increased independence and positive self-esteem, and contributions to safe mobility (NSW Health 2019). Local schools may also increase the opportunity for students to engage in afterschool activities, such as sports and other forms of active recreation (Barrett et al 2019). Research shows that increased physical activity is not only associated with physical health benefits, but improved mental health outcomes, including improved concentration and memory, stress management, and reductions in symptoms of depression and anxiety (Harris 2018; Bell et al. 2019; Healthdirect 2019).

Creating healthy food environments in schools is also shown to improve health outcomes. International research on the relationship between health and dietary behaviour resulting from healthy school food programs demonstrates positive impacts to students' health and wellbeing, including higher intake of vitamins, increased consumption of fruits and vegetables, and lower consumption of minimally nutritious foods (Engler-Stringer 2020).

6.5 Public safety related to urban heat

During consultation multiple stakeholders identified heat within the local area to be an issue within the local community, particularly related to vulnerable groups such as children and elderly persons. Stakeholders described the current lack of green space, coupled with the growing number of residences and urban structures, as contributing to heat issues within the local area, and emphasised the need for heat reduction measures to be incorporated into the design of the new primary school.

The issue of heat is associated with the urban heat island effect, which occurs when "urban areas become significantly warmer than surrounding areas when there is less green cover and more hard surfaces which absorb, store, and radiate heat" (AdaptNSW nd). Ecologist Dr Sebastien Pautsch has measured urban temperatures in Western Sydney and suggests that schools are often large contributors to local urban heat islands, with surfaces such as softfall rubber and Astroturf warming to between 80 and 90 degrees Celsius on mid-30-degree days (Pfautsch 2021). In the same study, Pautsch (2021) found a surface temperature of 105 degrees Celsius in a rubber tyre woven with metal. High temperatures in schools are of particular concern as children are more susceptible to overheating and heat-related illnesses than adults as they generate more heat during exercise and sweat less, reducing their bodies' ability to cool down (NSW Government 2020; Pfautsch et al. 2020).

In NSW there is a long-term trend of increasingly warmer air temperatures, with 11 of the hottest years recorded in Australia's history occurring in the past 15 years (BOM in Pfautsch, Wujeska-Klause & Rouillard 2020). Increasing temperatures are likely to be exacerbated by heat islands in urban built-up areas causing health problems for children and adults in such areas.

Pfautsch, Wujeska-Klause and Rouillard (2020) report, following analysis of tree canopies of 100 schools in Western Sydney, that urban heat island effects were reduced when the area of shade provided by tree canopies was increased. They note that in schools with fairly small surface areas, trees are often growing along the boundaries of the school and as such will provide minimal shade and cooling for the inner school areas. Pfautsch,

Wujeska-Klause and Rouillard (2020) suggest incorporating clusters of trees and vegetation within the school boundaries to provide shade to various areas to improve shaded areas and reduce heat within school sites. Internationally, there is also evidence on the benefits of green rooftops and green facades for cooling urban areas, which may be incorporated into school designs (Pfautsch et al. 2020; Hui 2011; USEPA 2019; Alhashami et al. 2018; Razzaghmanesh, Beecham & Salemi 2016; Player 2020).

7 Social impact assessment

This chapter provides a ranking of the identified social impacts of the Project. The aim of the SIA is to assess the proposed change to the current social conditions and has utilised data from several sources to develop a layered picture of the potential social impacts that are likely consequences or changes experienced by the community in which the proposed Project is located. In order to prioritise the identified social impacts, a risk-based framework, provided in Appendix B, has been adopted in the assessment of social impacts. The framework is applied using a likelihood (Table 7.1) and consequence (Table 7.2 and Table 7.3) ranking to potential social impacts and benefits.

Table 7.1 Likelihood ranking and definition

Level	Rank	Definition
Almost certain	5	Has occurred in the past in this project (or operation) or in similar project OR circumstances could cause it to happen during the project (or operation).
Likely	4	Has occurred in the life of this project (or similar project*) or in the last few years of operations or circumstances could cause it to occur again in the next few months.
Possible	3	Has occurred at least once in this project or a similar project (or in the history of this operation).
Unlikely	2	Has never occurred in this project (or operation) but has occurred at other similar projects (operations) with similar risk/benefit profile.
Rare	1	Is possible but has not occurred to date in this project or similar projects.

Source: EMM 2020.

Table 7.2 Consequence ranking and definition - Positive Consequences (Benefits)

Level	Rank	Extent of the benefit (people & geography - definitions for SIA*)	Duration of the benefit (definitions for SIA*)
Highly Desirable	4	The local, regional and potentially the national economy will benefit significantly. Improvements on social services and/or social cohesion.	Benefits will realise in the short term and will be permanent.
Desirable	3	The local and regional economy will benefit. Improvements on social services.	Benefits will realise in the short to medium term and may or may not be permanent.
Minor	2	The local economy will benefit. Improvements on social services.	Benefits will realise in the medium to long term and not be permanent.
Minimal	1	Marginal improvements/contribution to local economy. Marginal improvements/contribution to social services and/or social cohesion.	Benefits will realise in the short term and not permanent.

Source: EMM 2020.

Table 7.3 Consequence ranking and definition - Negative Consequence (Impacts)

Level	Rank	Level of impact (definitions for SIA*)	Duration of impact (definitions for SIA*)
Negligible	1	No or negligible socioeconomic impact.	Short timeframe impact on livelihood or liveability.
Marginal	2	Socioeconomic impact that will take small effort to restore and does not threaten livelihood. NO exogenous resources are required for the recovery.	Impacts on the livelihood or liveability are limited to the life of the project.
Moderate	3	Socioeconomic impact will require additional external resources to recover.	Impacts on livelihood and/or liveability will survive the life of the project.
Major	4	Socioeconomic impact will depend on external resources to recover.	Impacts on livelihood and liveability could survive long after the life of the project or can be permanent.
Extreme	5	Socioeconomic impact will depend on external resources to recover and may not be back to how it was before the impact.	Impacts on livelihood and liveability could survive long after the life of the project or can be permanent.

Assessment of social impacts is complex and as such requires the balancing of a range of factors and often competing interests. The impact assessment is reflective of this and has:

- assessed some aspects of the proposed Project as both negative and positive as they relate to different groups of people;
- included negative impacts on local communities while documenting the benefits to the broader region;
- considered the impacts on vulnerable groups and provided management strategies to ensure that any existing disadvantages are not exacerbated; and
- considered each community's access to critical resources, such as housing and health care, and how this affects their resilience.

The social impacts below have been assessed on a worst-case scenario initially and then the residual effect is assessed on the basis that mitigation of negative impacts or enhancement of positive impacts are successfully implemented. The assessment uses the terms unmitigated and mitigated when referring to negative impacts and un-enhanced or enhanced when referring to positive impacts.

The following data and information have been used to identify the impacts and their associated risks:

- data collected as part of the social baseline;
- findings from secondary community and stakeholder engagement sources;
- academic research;
- relevant previously conducted SIAs; and
- relevant high-quality government and agency reports.

A social impact workshop was conducted over two sessions on 7 and 10 May 2021 to assess impacts using a social risk framework shown in Appendix A. The social risk assessment is informed by the secondary data collected from the literature review, social baseline study, and secondary community engagement sources.

7.1 Way of life impacts

This section provides a detailed assessment, unmitigated/mitigated and unenhanced/enhanced, of the way of life impacts and the matters that significantly impact way of life as a consequence of the Project. The matters assessed include:

- construction noise and dust;
- construction traffic;
- operation traffic;
- intensity of use of education facilities; and
- community connectivity.

The assessment also considered how people interact daily with one another as this was an important factor towards local amenity.

7.1.1 Amenity related to construction noise and dust – unmitigated

Noise and dust created during Project construction works were noted by stakeholders as potential impacts during the construction phase of the Project. Of the 32 survey respondents, 11 (34.3%) identified construction dust as posing potential negative or very negative impacts to the local area. Seven survey respondents (21.9%) also perceived construction noise as a potential negative or very negative impact. However, the largest number of survey respondents perceived potential impacts from noise and construction as being neutral. Amenity impacts resulting from construction were also mentioned by stakeholders during in-depth interviews with local residents and key stakeholders but were not perceived as significant potential impacts.

Due to the developing nature of the local area, which is characterised by construction, it is anticipated that noise and dust resulting from Project construction would not significantly alter the existing amenity within the local area. However, noise from construction works still has the potential detract from local amenity, specifically affecting neighbouring residents. For local residents, construction related noise could impede on daily activities and the ability to relax within their own home and surrounding environment, including affecting at-home work arrangements and the ability for local residents to engage in relaxation and outdoor/social activities.

Dust creation during construction may also affect visual and recreational amenity surrounding the Project site due to potential dust accumulation in homes and residential areas). Although construction noise and dust could impact the amenity of the local area for the duration of the construction period, which is anticipated to last approximately 12 months, it is assumed that the most significant construction noise and dust impacts would arise during excavation/earth moving phases of the Project. The proposed building method, which involves construction sections of the building off-site and then assembling the already-constructed segments on site, is also anticipated to reduce noise and dust impacts that are generally involved during school infrastructure construction projects.

The likelihood of construction noise and dust impacting the amenity of the local area for residents in the immediate vicinity of the construction works is almost certain to occur with negligible consequences as impacts on amenity and liveability will be limited to the construction period, with impacts only affecting residences surrounding the Project site. Therefore, the unmitigated amenity impacts from noise due to construction works is assessed as Low-6. A summary of the assessment is provided in Table 7.7.

7.1.2 Amenity related to construction noise and dust – mitigated

The successful implementation of the construction management plan (CMP), which considers construction noise is anticipated to mitigate noise-related amenity impacts within the local area (Richard Crookes Constructions 2021). A CMP can mitigate amenity impacts by incorporating noise measures consisting of minimising noisy construction activities that occur before 7 am, incorporating respite periods, and public notification of proposed works.

The incorporation of dust mitigation measures into the CMP, including notification of potentially impacted residences, regular site inspections, and adequate water supply is also anticipated to effectively mitigate amenity impacts from dust.

It is also recommended to maintain a community grievance mechanism as per standard SSDA requirements, including a dedicated Project phone number, email, and complaints register.

If noise and dust from construction is well managed by adhering to the proposed mitigation measures, the likelihood of amenity impacts due to noise from construction is reduced to likely as the mitigation measures to be put in place will minimises their occurrence. The negative consequence remains negligible. Therefore, the mitigated risk is assessed as Negligible-4. A summary of the assessment is provided in Table 7.7.

Table 7.4 Summary of amenity related to noise and dust during construction

Social impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Amenity issues related to noise and dust	Local residents surrounding the Project site	Construction	Local area surrounding the Project site	Low-6	Negligible-4

7.1.3 Amenity related to construction traffic – unmitigated

Amenity impacts resulting from the construction phase of the Project may also consist of road noise and increased traffic. Of the 32 survey respondents, nine (28.1%) perceived construction traffic as a negative or very negative potential arising as a consequence of the Project. Traffic was also raised as a current issue in the local area during in-depth interviews. Stakeholders expressed that traffic is particularly bad moving in and out of the local area during school pick-up and drop-off times. Stakeholders also identified traffic issues related to some roads within the local area being in poor condition and narrow streets. One stakeholder specifically raised concerns regarding large and oversized construction vehicles affecting the flow of road traffic. During construction there is also the potential for residences to be temporarily obstructed due to construction equipment and vehicles, as well as traffic congestion.

Traffic impacts created by Project construction could affect residents' work and daily routines, as well as the ability for them to generally leave their homes. Construction traffic may also potentially cause disruptions, traffic delays, and congestion along Buchan Avenue, as well as along Camden Valley Way and Soldiers Parade/Bernera Road. Additionally, construction activities may contribute to additional traffic delays due to truck movements exacerbating the intensity of existing traffic congestion, causing disruptions for local road users. Increased road noise during construction may also occur due to the use of heavy vehicles and increased traffic associated with construction activities (DECCW 2011). Furthermore, traffic disruptions and congestion could contribute to amenity issues on roads being used as alternative routes during Project construction due to increased magnitude of traffic on roads not previously used as primary transport routes.

Combined, the amenity impacts arising as a consequence of construction traffic within the local area have the potential to contribute to inconveniences and unpleasantness for local residents and local businesses. If neglected, this would impede on the way of life and how local residents travel and conduct daily routines due to disruptions and annoyance associated with road noise and increased traffic.

Unmitigated, amenity impacts related to construction traffic is assessed as Medium-8. Without mitigation measures in place, the likelihood of road noise and traffic impacts occurring during construction of the Project is almost certain. However, such impacts are anticipated to occur with marginal socio-economic impacts as they are expected to be limited to the construction phase of the Project. A summary of the assessment is provided in Table 7.5.

7.1.4 Amenity related to construction traffic – mitigated

The successful implementation of a Traffic Management Plan (TMP) associated with the construction activity, which considers road noise and traffic, would mitigate amenity impacts relating to construction traffic within the local area. The TMP will incorporate road noise and traffic mitigation measures, including avoidance of transport within school pick-up and drop-off hours, and public notification of proposed works and associated traffic changes (PTC 2021a). A maintained community grievance mechanism (ie complaints hotline and Project email) could also reduce amenity impacts by providing the opportunity for residents to raise concerns about road noise and traffic issues, which can then be considered and addressed accordingly.

If road noise and traffic impacts related to Project construction are well managed by adhering to the proposed mitigation measures, the likelihood of amenity impacts concerning intensity of use is reduced to possible as the mitigation measures will help minimise their occurrence. The negative consequence is reduced to negligible as the proposed mitigation measures will further reduce any construction traffic impacts on liveability within the local area. Therefore, the mitigated risk is assessed as Negligible-3. A summary of the assessment is provided in Table 7.5.

Table 7.5 Summary of amenity related to construction traffic

Social impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Traffic generated by the construction of the Project	Local residents, particularly those surrounding the Project site and using traffic transport routes	Construction	Local area, particularly along Buchan Avenue, Camden Valley Way, and Soldiers Parade/Bernera Road	Medium-8	Negligible-3

7.1.5 Amenity related to operation traffic – unmitigated

Traffic related to the operation of the Project was a significant concern raised during consultation, with all stakeholders who participated in in-depth interviews identifying traffic as a key potential impact. During in-depth interviews, multiple stakeholders identified the difficulties associated with operational traffic – in particular during pick-up and drop-off times. Potential issues identified included:

- parking on the streets surrounding the school causing points of congestion which “flood” into adjoining and surrounding streets;
- congestion created by “kiss and drop” queues;
- parents and children crossing streets in locations not allocated for crossing (ie without pedestrian crossings);
- neighbouring residents’ driveways or vehicle being blocked by traffic or parked vehicles – preventing them from accessing or leaving their own property;
- insufficient staff parking;

- vehicle collisions (described as “crunching” vehicles); and
- illegal parking (eg double or triple parking).

These concerns were also raised in the context of increased traffic in an area that already experiences significant traffic (particularly during peak school drop-off and pick-up hours). Stakeholders also noted that driving is the predominant means of travel within the local area. During in-depth interviews, stakeholders explained that local services, shops, and recreation spaces/activities are largely not available within the local area, resulting in the need to drive to access and use social services, facilities, and infrastructure. As driving is currently standard behaviour for residents within the local area, parents may continue to drive students to school during Project operation, even if the school is close enough for students to walk or cycle. Stakeholders also explained parents’ preference for driving their children to school in the context of safety, and parent’s ensuring that their children are getting to and from school safely – particularly in the case of younger primary school aged students. Parent’s preference to drive their children to school may further contribute to operational traffic impacts.

The amenity impacts related to operational traffic in the local area has the potential to detract from the current amenity of the local community and affect local residents due to increased traffic, congestion, and pedestrian movement in the local area, particularly within school zones and peak drop-off and pick-up times. In NSW, motorists are required to drive no faster than 40 km/h through school zones on gazetted school days between 8:00 am–9:30 am and 2:30 pm–4:00 pm (NSW Government). Therefore, additional traffic relating to reduced spends within school zones also has potential to exacerbate existing traffic delays during gazetted school days.

The Project design will ensure that traffic infrastructure around the new primary school is suitably designed to accommodate both users of the school and surrounding residents. This is currently being considered in the design, with designated areas for “kiss and drop”, a separate entrance for the preschool, and disability accessible classrooms. It is also anticipated that the staff car park included in the current design of the school will assist in managing traffic and parking impacts. However, this will depend on the number of parking spaces provided.

Unmitigated, amenity impacts related to operation is assessed as Medium-8. The likelihood of amenity impacts, including traffic, congestion, and parking issues, occurring during the operation of the Project is almost certain without mitigation measures in place. Amenity impacts related to operation traffic are anticipated to occur with marginal socio-economic impacts as impacts on liveability will be limited to the life of the Project and amenity-related impacts are anticipated to require small effort to restore. A summary of the assessment is provided in Table 7.6.

7.1.6 Amenity related to operation traffic – mitigated

During in-depth interviews stakeholders emphasised the need to carefully and thoroughly consider traffic implications in the design of the Project itself, as well as along roads surrounding and providing access to the new school, prior to operation.

Implementation of an “active travel initiative” as part of the Transport Encouragement Programs will be included in the School Travel Plan (PTC 2021b). This could include the provision of signage that improves wayfinding and encourages walking and/or cycling in multiple locations within 800 m of the school (eg ‘school 700 m this way’), sufficient provision of marked pedestrian crossings in key locations within 800 m of the school, provision of bicycle parking (for both students and staff) at the school, and active encouragement of parents/caregivers to walk or cycle with their children to school through information sessions, newsletters, informative emails, and active travel brochures available from the school. It is also proposed in the School Travel Plan that that the school encourage and facilitates carpooling through of the different school communication channels. This would enable parents/caregivers to register for the forum, submit expressions of interest to engage in carpooling, and identify the general area where they travel from to find other parents/caregivers who are interested in a similar arrangement. Providing this service would facilitate increased carpooling arrangements by providing parents/caregivers the opportunity to reach out and meet others attending the new school. During in-depth

interviews, stakeholders noted that it is currently difficult for residents to engage with their neighbours, as there are very limited spaces to facilitate meeting new people. A carpooling forum would act as a virtual meeting space, improve the ability for parents/caregivers to engage with their neighbours, increasing the potential to form carpooling arrangements while contributing to other benefits such as community cohesion and building.

To address traffic in the local area which could be created or exacerbated by Project operation, it is recommended that SINSW liaise with Liverpool City Council infrastructure and transport representatives to assess and address any road and transport related infrastructure within the local area which may contribute to traffic impacts during operation of the Project. This could include upgrading intersections, damaged roads, installing road signage where necessary, and determining new bus routes as well as potential locations for new bus stops (including infrastructure such as seating and shelters) to service the local area. It is also recommended that SINSW engage with Transport for NSW, depending on road regulations and jurisdictions.

Successful implementation of the proposed mitigation measures would result in reducing the likelihood of the impact to possible as the mitigation measures to be put in place would minimise their occurrence and contribution to amenity impacts related to operation traffic in the local area. The negative consequences would also be reduced to negligible as the recommended mitigation measures would eliminate or significantly reduce impacts to liveability within the local area. Therefore, the mitigated impact from noise from Project operations is assessed as Negligible-3. A summary of the assessment is provided in Table 7.6.

Table 7.6 Summary of amenity related to operation traffic

Social impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Traffic generated by the operation of the Project	Local residents	Operation	Local area	Medium-8	Negligible-3

7.1.7 Amenity related to intensity of use of education facilities – unmitigated

During in-depth interviews, three stakeholders identified the potential for acoustic impacts associated with intensity of outdoor play and learning to affect local amenity for residents located close to the new school. A member of the local council specifically identified the need to consider the use of open space and the planning of outdoor play and learning spaces.

During the operation of the Project, an increased intensity of use of education facilities may continue to contribute to amenity impacts arising from noise in the local area – particularly related to the use of bell and public address (PA) systems, outdoor learning and play activities, and out of hours use of the communal hall.

Noise can be considered offensive if it interferes with the comfort of the person outside the premise where the noise originates from (EPA 2013). This is dependent on audibility, duration and characteristics of the noise, with schools and activities that occur within the evenings and early mornings considered as offensive noise (EPA 2013). The potential for noise to increase during school hours due to the use of bell and PA systems, noise created by students during outdoor learning and play activities, and out of hours use of the communal hall may detract from the current amenity of the local community and affect local residents. The Project proposes to operate five days a week between 9:30 am–3:30pm, with the potential for activities and programs to also be made available outside of core operating hours occasionally during the evening period from 6:00 pm–10:00 pm (JHA 2021). As the site of the Project is currently vacant, the change in the noise environment may be significant for some residents adjacent to and surrounding the Project site once operation commences.

Predicted noise levels during typical school activities within the hall are expected to meet noise level criteria for the nearest noise sensitive receivers (JHA 2021). The predicted noise levels from the Communal Hall are not expected to meet the noise level criteria during the evening from 6:00 pm–10:00 pm at the nearest noise sensitive receivers during amplified music events. However, given the infrequency of amplified music events, it is not anticipated that noise impacts will regularly affect residences along Faulkner Way. According to the Noise and Vibration Impact Assessment (JHA 2021) outdoor learning and play activities associated with the Early Learning Centre playground will meet noise criterion at the nearest noise sensitive receivers along Faulker Way. The location and design of the school already provides some noise barriers, including positioning of the Covered Outdoor Learning Area (COLA) on the eastern portion of the Project site and the outdoor play area on the southern portion of the Project site (away from existing residences along Faulkner Way). The nature of the noise is also not considered to result in a significant impact, as demonstrated in the SIA conducted for St Anthony of Padua Catholic School Australia (URBIS 2019), where a small noise exceedance associated with outdoor playgrounds was identified during the assessment but was considered unlikely to have negative impact. At this stage, PA and school bell systems have not been made, therefore a detailed assessment of noise impacts has not been conducted. However, concerns have been raised regarding potential for noise impacts arising from inadequate design and installation, as well as inappropriate use of School PA and bell systems.

Unmitigated, the amenity impact arising from intensity of use of the education facility is assessed as Negligible-3. It is possible that noise created from PA systems and outside of core hours use of the Communal Hall may cause amenity impacts in the local area during the life of the Project, particularly for residents located on Faulkner Way. However, the socio-economic consequences are anticipated to be negligible. A summary of the assessment is provided in Table 7.7.

7.1.8 Amenity related to intensity of use of education facilities – mitigated

To mitigate impacts relating to intensity of use of education facilities within the local area, the continued maintenance of a complaints and grievance register (ie Project phone number and email) throughout operation is recommended to document and address concerns raised by residents regarding amenity impacts.

In addition, negotiating changed times for activities that may incur significant impacts, as well as notifying residents of activities which may create significant noise (such as school safety/emergency drills, and school-wide carnival days) may prevent further impacts to amenity and way of life. It is also recommended that during amplified music events in the evening, the Eastern and Western bi-fold doors be closed (JHA 2021).

To reduce amenity impacts associated with unpleasant PA and bell sound systems, it is recommended that SINSW incorporate less severe sounds in notification sound systems. It is also recommended that the positioning of PA speakers to face away from neighbouring residences be considered in the Project design, and PA and bell systems only be used during school hours (JHA 2021).

Successful implementation of the proposed mitigation measures would result in reducing the likelihood of the impact to unlikely as the mitigation measures put in place would minimise their occurrence and contribution to amenity impacts in the local area. The anticipated consequence remains negligible. Therefore, the mitigated impact from noise from Project operations is assessed as Negligible-2. A summary of the assessment is provided in Table 7.7.

Table 7.7 Summary of amenity related to intensity of use of education facility

Social impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of Life	Intensity of use of education facility, including PA system and outdoor learning/play areas	Local residents surrounding the Project site	Operation	Local area surrounding the Project site	Negligible-3	Negligible-2

7.1.9 Way of life related to provision of shared community facilities and green space – enhanced

During consultation, stakeholders frequently identified the local area as having inadequate green, open space for community use and a lack of social infrastructure, mainly related to provision of community facilities such as a hall. The Project was viewed by stakeholders as an opportunity to provide spaces for community use, of which there are currently none in the local area. All stakeholders engaged in in-depth interviews discussed the need for green, open spaces and community facilities such as a hall. Survey respondents also perceived the Project to offer potential benefits related to social infrastructure. The communal school hall will be available to the local community outside of school operating hours. The design of the school currently enables access to the hall without having to travel through the rest of the school, as the hall will be located with an entrance accessible from Buchan Avenue. The library, hall and sports facilities will also be open to the public outside of school terms. However, exact community use arrangements will need to be further investigated as it is imperative that the hall is offered for community use without jeopardising its maintenance. During consultation with the two school principals and assistant principal, they explained that there are difficulties associated with offering school facilities for community use and leaving green spaces and school play areas open to the public, as this may result in damage to property (through overuse, inappropriate use vandalism, etc), requiring the new primary school to use funds for maintenance instead of allocating funds towards education and learning outcomes. The school may need to perform risk assessments and implement operational mitigation measures whilst considering the use of school facilities by external community user groups to ensure the safety to those intending to use the outdoor facilities if different from the use for which they were originally intended and designed.

Unenhanced, the way of life benefit related to provision of shared community facilities and green space is assessed as Moderate-7. If Project facilities are offered for community use outside of operating school hours, including use of the school hall, library and sports facilities, the likelihood of benefit is likely, with anticipated minor positive benefits due to improvements on local social infrastructure for the wider community. A summary of the assessment is provided in Table 7.8.

7.1.10 Way of life related to provision of shared community facilities and green space – enhanced

There is an opportunity to further enhance way of life benefits related to provision of shared community facilities and green space in the local area by also offering green and recreation spaces facilities, in addition to use of the school hall, library and sports facilities, to non-school community and recreation groups outside of school hours. It is suggested that SINSW and the executive staff of the new school explore the potential to open the outdoor play area outside of school hours. However, this would likely require additional security arrangements such as security cameras to reduce the potential of school grounds being damaged. Alternative community use arrangements may also include payment of bond or a nominal fee to use school facilities, designated persons of contact to maintain responsibility for use of the facilities, and fencing with key access for approved parties. It is also suggested that SINSW and executive staff of the new primary school explore a potential partnership with Liverpool City Council to manage community use of outdoor school facilities. As such, further consultation, liaison, and assessment is required to determine the feasible opportunities available.

The enhanced way of life benefit related to provision of shared community facilities and green space is assessed as Moderate-8. Assuming that outdoor green space and recreation spaces are available for use by the local community (through shared use agreements, bond provision/nominal payment, and application of security/surveillance measures) the likelihood of preschool education accessibility benefits is likely. The anticipated positive consequences are anticipated to be minor, as provision of community use facilities would realise in the medium term, with potential benefits linked to improvements of social services. A summary of the assessment is provided in Table 7.8.

Table 7.8 Summary of way of life related to community connectivity

Social impact	Issue	Affected parties	Duration	Extent	Unenhanced	Enhanced
Way of life	Provision of shared community facilities and green space	Local residents	Operation	Local area	Moderate-7	Moderate-8

7.2 Community impacts

This section provides a detailed assessment, unmitigated/mitigated and unenhanced/enhanced, of the community impacts and the matters that significantly impact community as a consequence of the Project. The matters assessed include:

- social cohesion, capital, and resilience; and
- sense of place.

7.2.1 Community related to social cohesion, capital, and resilience – unenhanced

Social cohesion refers to the degree of solidarity and connectedness within a group or community, including "the sense of belonging of a community and the relationships among members within the community itself" (Manca 2014). Social capital refers to the patterns and qualities of relationships in a community (ABS 2002b). Building social cohesion and capital within a community requires the engagement of the local community and the establishment and maintenance of effective long-term partnerships (AHRC 2015).

During consultation, stakeholders frequently raised the issue of a lack of community spaces and green space in the local community. Stakeholders consistently identified a lack of community space, including playing areas, fields, sporting facilities, community halls, parks, and places to generally congregate as a current vulnerability of the local area. One resident in particular emphasised that the absence of community spaces and places to gather in general has resulted in the local area missing a "neighbourhood feel". They explained that this missing facilitated interaction has resulted in residents of the suburb not becoming familiar with one another.

The successful construction and operation of the new primary school would provide a space to facilitate interactions amongst local members of the community, thereby increase social cohesion, capital, and resilience in the local area. As many students currently attend school in other suburbs, most notably Prestons, there is less opportunity for them to engage with the outside of school hours as travel may be difficult for parents to arrange, particularly after travelling from work. Through the provision of a local primary school, students will be able to form friendships with other children within their community and maintain those friendships outside of a school setting – enhancing the social cohesion between children in the local area.

The provision of the new primary school would also enhance engagement between parents/caregivers). The school would provide a necessary point of initial contact, where parents/caregivers can meet and subsequently develop relationships with others within the local community through engagement in school events and activities (such as fetes, parent information nights, fundraising events, and student recitals/performances) (Engel, Kington & Mleczko 2013). It is anticipated that parents/caregivers would also form relationships with one another through the friendships that their children form (Smith 2011).

The new primary school would also provide enhanced opportunity for community interaction and cohesion through the provision of the school hall for community use. The design of the school will facilitate and encourage community use of the school hall by enabling access to the hall without having to travel through the rest of the school, as the hall will be located with an entrance accessible from Buchan Avenue. However, exact community use arrangements will need to be further investigated as it is imperative that the hall is offered for community use without jeopardising its maintenance.

Community benefits related to enhanced social cohesion, capital, and resilience associated with the Project is assessed as Significant-12. Assuming the successful construction and operation of the Project, the likelihood of community benefits from social cohesion, capital, and resilience is almost certain as it will facilitate significantly enhanced interactions between members of the local community (most notably students and parents/caregivers). The anticipated positive consequences are desirable, as construction and operation of the Project would realise in the medium term, with potential permanent benefits linked to providing a hub for students, parents, and local community members. A summary of the assessment is provided in Table 7.9.

7.2.2 Community related to social cohesion, capital, and resilience – enhanced

Social cohesion and social capital of a community can also be enhanced through offering opportunities for volunteering in school activities and community facilities. Research indicates that volunteering within a community can contribute to better psychological wellbeing for volunteers and increases social capital in the community (Kragt & Holtrop 2018). In 2016 the rate of volunteering in the local area (11.2%) and wider study area (11.0%) was significantly lower than the NSW average of 18.1% (ABS 2016a). The new primary school could provide volunteering opportunities for local residents which largely do not exist within the local area, including volunteering at the school library, canteen, and during events.

It is suggested that the new primary school also explore the potential to host or facilitate a language school or language classes for the local community outside of school operating hours. Compared to NSW averages, the local area and wider study area have a higher level of cultural diversity. In 2016, 46.7% of the local area population was Australian born, compared to 65.5% of the population across NSW. The local area also has a much lower proportion of intergenerational Australians, with only 13.8% of people in the local area with both parents born in Australia, compared to 45.4% across NSW (ABS 2016a).

A significantly larger proportion of households in the local area (67.0%) also speak a non-English language at home compared to 26.5% in NSW. Providing or hosting a language school for both children and adults outside of school hours – which offers both English language classes as well as other language classes – would not only provide an additional opportunity for community members to engage with each other but could increase social cohesion and capital by helping community members feel more comfortable with speaking with their neighbours and learning about each other's cultures. It is also suggested to use incorporate alternative communication elements and approaches into provision of information improve understandability. This could include using symbols instead of text on signage, creating highly visual newsletters and communication materials for students and parents/caregivers, and addressing assemblies in different languages.

There may be an opportunity to further enhance community benefits related to social cohesion, capital and resilience in the local area by offering Project facilities for uses beyond student education and activities. This could include offering the outdoor play facility for use by local recreation and community groups, hiring of sporting facilities outside of school hours, and use of the school hall by community groups. However, potential issues related

to open access of outdoor facilities to the local community were identified by both school principals and assistant school principal during in-depth interviews. Although there is an expressed significant need to provide open, green space in the local area, there are maintenance and safety implications which will require further investigation to determine the most effective means of provision of green and open space. During consultation with the two school principals and assistant principal, they explained that there are difficulties associated with leaving green spaces and school play areas open to the public, as this may result in damage to property (through overuse, inappropriate use vandalism, etc), requiring the new primary school to use funds for maintenance instead of allocating funds towards education and learning outcomes.

The school may need to perform risk assessments and implement operational mitigation measures whilst considering the use of school facilities by external community user groups to ensure the safety to those intending to use the outdoor facilities if different from the use for which they were originally intended and designed.. Alternative community use arrangements may include payment of bond or a nominal fee to use school facilities, designated persons of contact to maintain responsibility for use of the facilities, and fencing. As such, further consultation, liaison, and assessment is required to determine the feasible opportunities available.

By offering facilities and opportunities for the local community to gather and engage, the Project could act as a central cohesive space, contributing to both bonding social capital (connections within a group or community) and bridging social capital (connections between groups or communities) within the local area (Social Capital Research & Training 2018). Enhanced, the community benefit related to social cohesion, capital and resilience is assessed as Significant-15. With the implementation of the recommended enhancement measures, the likelihood of community benefit becomes almost certain. The positive consequences are anticipated to be highly desirable as benefits related to improvements to social services and community spaces and social cohesion could be permanent. A summary of the assessment is provided in Table 7.9.

Table 7.9 Summary of community related to social cohesion, capital and resilience

Social impact	Issue	Affected parties	Duration	Extent	Unenhanced	Enhanced
Community	Social cohesion, capital and resilience	Local residents	Operation	Local area	Significant-12	Significant-15

7.2.3 Community related to sense of place – unenhanced

Sense of place refers to the characteristics that make a place special or unique, including aspects of an area that foster a sense of authentic human attachment and belonging. Sense of place can include both geographical components as well as feelings or perceptions held by people residing within that place.

Smith (2011) explains that residential satisfaction related to sense of place is an important social component of a local area as it affects residents' psychological wellbeing and quality of life. Residential satisfaction is associated with the development of various physical factors, including the provision of parks, infrastructure, and amenities within a community; social factors such as feelings of belonging to a community and social support; and personal factors such as home ownership and length of residence (Smith 2011).

During consultation stakeholders explained that the new primary school would contribute to placemaking and sense of place by giving the community "a bit more of a name" and making the relatively new suburb more known to the wider study area and surrounding areas. Multiple stakeholders also felt that the new primary school would facilitate the further establishment and development of the local area within the local area, such as community services and local shops/businesses, by continuing to attract additional local services and businesses.

The unenhanced community benefit related to sense of place from the construction and operation of the new primary school is assessed as Moderate-7. Assuming the successful construction and operation of the new primary school, the likelihood of community benefits is likely. The anticipated positive consequences are minor, as contributions to placemaking and residential satisfaction would realise in the medium term, with benefits linked to improvements on local sense of place as well as the local economy. A summary of the assessment is provided in Table 7.10.

7.2.4 Community related to sense of place – enhanced

The construction and operation of the Project will provide a significant community benefit for local residents related to sense of place. There may be an opportunity to further enhance community benefits related to placemaking and sense of place incorporating visual character building into the design of the new primary school. It is recommended that SINSW and executive staff of the new primary school explore the opportunity to incorporate visual representations of the local community, such as murals, paintings, other artistic media, and native vegetation. within the school grounds. Decorating the new primary school in a way that reflects community values could enhance the community's sense of ownership of the new primary school. However, as the local community is culturally diverse, it is also recommended to engage local residents in this process through the application of the SINSW consultation strategy to further investigate the values of the local community and ask questions surrounding design aspects that can be influenced by the local community.

Enhanced, the community benefit related to sense of place is assessed as Moderate-8. With the implementation of the recommended enhancement measure, the likelihood of accessibility benefit becomes almost certain, with the positive consequences remaining minor. A summary of the assessment is provided in Table 7.10.

Table 7.10 Summary of community related to sense of place

Social impact	Issue	Affected parties	Duration	Extent	Unenhanced	Enhanced
Community	Sense of place	Local residents	Operation	Local area	Moderate-7	Moderate-8

7.3 Accessibility impacts

This section provides a detailed assessment, unmitigated/mitigated and unenhanced/enhanced, of the accessibility impacts and the matters that significantly impact accessibility as a consequence of the Project. The matters assessed include:

- provision of a public primary education facility;
- provision of a preschool education facility; and
- exceeding the student capacity of the school.

7.3.1 Access to and use of social infrastructure, services and facilities related to primary education– unenhanced

A substantial need for a primary school in the local area was expressed by all stakeholders during in-depth interviews, with stakeholders identifying the project as providing significant benefits related to access to education services in the local area. This need was also expressed during consultation conducted by SINSW, particularly through stakeholder emails stressing the demand for a local primary school. Of the 32 survey respondents, 26 (81.3%) also perceived the Project as contributing very positive or positive impact related to access to education facilities.

The new primary school is anticipated to positively impact the local community by helping to meet the current demand for primary schooling within the local area driven by relatively recent residential development and associated population growth, particularly related to the migration of young families to the local area due to relatively affordable housing compared to prices within and around the Sydney Central Business District (CBD) (Greater Sydney Commission 2018).

The closer distance of the new primary school to the homes of local residents, combined with the provision of outside of school hours care (OSHC), will increase accessibility related to school drop-off and pick-up by parents/caregivers. During consultation multiple stakeholders explained that most households within the local area (including parents/caregivers of children who currently access primary schools outside of the local area) are double income earning households, meaning that both parents/caregivers are working. Having a local school will enhance the ease of parents/caregivers to drop-off and pick-up students before and after they go to work by significantly reducing commuting times. The proximity of the new primary school to the Edmondson Park train station is anticipated to further benefit work commute arrangements.

Successful construction and operation of the new primary school in the local area would enhance current access to and use of education facilities by local residents. Provision of a local public school would reduce current travel times for students and parents during drop-off and pick-up hours. Stakeholders revealed that students residing within the local area currently have to travel to the wider study area to access public school, resulting in significant travel times due to traffic during peak hours. Having a school within the vicinity of their residences would contribute to improved education outcomes by reducing student fatigue associated with longer travel to and from school (Pradhan & Sinha 2017; Tigre, Sampaio & Menezes 2017). Reducing travel distances may also enable students to walk or cycle to school, thereby increasing their physical activity and consequently learning outcomes (Kuehn 2013; Martin & Murtagh 2017). The ability for students to develop and maintain relationships with peers who reside in the same neighbourhood is also expected to result in enhanced education outcomes due to the development of a sense of belonging in a community and feelings of fulfilment (Barrett et al. 2019).

The unenhanced benefit of access to and use of social infrastructure, services and facilities related to primary education assessed as Significant-11. Assuming the successful construction and operation of the Project, the likelihood of education accessibility benefits is likely. The anticipated positive consequences are desirable, as provision of educational facilities would realise in the medium term, with potential permanent benefits linked to improvements of social services. A summary of the assessment is provided in Table 7.11.

7.3.2 Access to and use of social infrastructure, services and facilities related to primary education – enhanced

During consultation, a school principal and assistant school principal emphasised the need for teaching staff to be involved in the design and opening processes for the new school. As the teachers of the new primary school will be one of the main users of the facility, and are knowledgeable about the facilities and resources they require to foster effective and efficient learning environments, it is imperative that they provide input into the infrastructure that they will need to support learning outcomes. This includes supporting resources and infrastructure such as PA systems, phone connections and internet provision, and other learning materials which will need to be in place prior to commencing operation. Involving teaching staff in the design and opening of the new primary school will require SINSW and the principal of the new primary school to conduct hiring processes well in advance to the opening of the school. Early hiring processes would not only ensure teacher input into the design and school resources, but would also aid in building early rapport and relationships within the local community – enhancing community familiarity with the new primary school and effectively enhancing their access to the new school.

The new primary school is already anticipated to provide OSHC. However, it is also recommended that the design of the new primary school considers the anticipated demand of OSHC facilities to ensure that OSHC facilities can accommodate student numbers. This includes identifying spaces which can be used as storage rooms for OSHC, and anticipating use of a kitchen to provide breakfast for students accessing before OSHC, as well as snacks for students

accessing after OSHC services. To ensure that OSHC providers have adequate provision of required facilities and resources, it is recommended that the school liaise with OSHC providers prior to operation of the school.

To further enhance local access to the new school, it suggested that parents/caregivers of prospective students are provided with sufficient information and notice related to registration processes and requirements, including eligibility and important dates. This should include community information sessions, newsletter distribution (via email and letterbox), and website updates.

Enhanced, the benefit of access to and use of social infrastructure, services and facilities related to primary education is assessed as Significant-12. With the implementation of the recommended enhancement measure, the likelihood of community benefit becomes almost certain, with the positive consequences remaining desirable.

A summary of the assessment is provided in Table 7.11.

Table 7.11 Summary of access to and use of social infrastructure, services and facilities related to primary education

Social impact	Issue	Affected parties	Duration	Extent	Unenhanced	Enhanced
Accessibility	Access to and use of primary education infrastructure, services and facilities	Local residents	Operation	Local area	Significant-11	Significant-12

7.3.3 Access to and use of social infrastructure, services and facilities related to preschool education – unenhanced

In the local area, there are currently four childcare services available providing a total of 344 places for enrolment (ACECQA 2021). The services available include long day care, preschool, and outside of school hours care (OSHC). All of the available services are centre-based service providers. Of the four childcare services available, two currently offer preschool services alongside long day care services (ACECQA 2021). During consultation, stakeholders expressed a need for preschool education facilities in the local area. Stakeholders explained that although there are currently ample day care facilities services in the local area, they generally have to travel outside of the local area to access specific preschool services. During in-depth interviews, multiple stakeholders, including the Director of Education Leadership and school principals and assistant school principal, perceived the provision of preschool services with the new primary school as providing significant benefits to the local area. Survey respondents also perceived the provision of the preschool as providing potential positive and very positive benefit to the local community.

The preschool included as part of the new primary school is anticipated to be operated by Liverpool City Council. This would provide a high-quality provision of care, education services, environments and programs, as well as an important opportunity for partnership with local and state government. The preschool education facility would also support the transition from preschool to primary school by addressing NSW's commitment of 600 hrs of quality preschool education for preschool students prior to entering primary school (NSW Government 2020). Operating the preschool on the same site as the new primary school would also ease the transition from preschool to primary school by increasing preschool students' familiarity with primary school facilities – as preschool students will be able to see primary school learning play areas (although they will be separate from preschool play areas). The operation of the preschool in the same site as the new primary school would also enhance access for parents/caregivers with children of multiple ages, as parents/caregivers with both preschool aged children and primary school aged children would be able to drop-off and pick-up their children from the fame facility – reducing commuting times.

The unenhanced benefit of access to and use of social infrastructure, services and facilities related to preschool education assessed as Moderate-7. Assuming the successful construction and operation of the Project, the likelihood of preschool education accessibility benefits is likely.

The anticipated positive consequences are anticipated to be minor, as provision of educational facilities would realise in the medium term, with potential benefits linked to improvements of social services. A summary of the assessment is provided in Table 7.12.

7.3.4 Access to and use of social infrastructure, services and facilities related to preschool education – enhanced

It is recommended that the school incorporate a "buddy program" or mentoring program enhance the ease of transition from preschool to primary school. By incorporating integration programs, preschool children are given the opportunity to interact and engage with primary school children, enhancing their familiarity and comfort with a primary school setting. It is suggested that SINSW and staff of the new primary school explore additional integration opportunities in partnership with Liverpool City Council representatives and teams operating the preschool.

Enhanced, the benefit of access to and use of social infrastructure, services and facilities related to preschool education is assessed as Moderate-8. With the implementation of the recommended enhancement measure, the likelihood of accessibility benefit becomes almost certain, with the positive consequences remaining desirable. A summary of the assessment is provided in Table 7.12.

Table 7.12 Summary of access to and use of social infrastructure, services and facilities related to preschool education

Social impact	Issue	Affected parties	Duration	Extent	Unenhanced	Enhanced
Accessibility	Access to and use of preschool education infrastructure, services and facilities	Local residents	Operation	Local area	Moderate-7	Moderate-8

7.3.5 Accessibility related to student capacity of the school – unmitigated

During consultation, multiple stakeholders raised concerns regarding the capacity of the school. Specifically, in relation to the significant population growth that is anticipated to occur within the next 10 years. The population of the local area is estimated to increase by approximately 18,000 people by about 2030 (Urbis 2019). This growth was also noted by Liverpool City Council staff and real estate representatives in the local area. This forecast growth reflects the growth that has already occurred in the local area since 2011 – as demonstrated by the population increase of 436.9% from 2011–2016, compared to only 13.4% in the wider study area and 8.1% in NSW. The high rate of growth in the local area may be attributed to the suburb's proximity to the Sydney CBD as well as recent housing and lifestyle developments in the suburb (NSW Government 2021). With prices and demand for housing in Sydney continuing to grow, urban sprawl is causing growth in outer suburbs such as the local area (Greater Sydney Commission 2018). The proximity of the local area to Liverpool, the pre-existing Edmondson Park train station (which connects to the Sydney CBD, and other major transport lines (such as the M5 and M7 Motorways) increases its attractiveness. The demographic of the local area is also characterised by young/new families (see Section 4 and Appendix A). The younger population in the study area is likely reflective of trends of young families migrating to outer suburbs after having children as larger housing options are more affordable in these areas (Wade 2018). Outer Sydney suburbs are particularly attractive for young migrant families for similar reasons of affordability (Birrell and Healy 2018). Multiple stakeholders, including real estate representatives, South Western Sydney Local Health District representatives, local school principals, and the Project's Director of Educational Leadership, confirmed

these trends. With the construction and operation of the new school, it is very likely that it will continue to attract more people (in particular families with school-aged children).

As public schools are required to enrol all students residing within their designated catchment, it is expected that continued growth at the current rate will eventually result in student enrolments exceeding student capacity at the new school. This may result in classrooms at capacity, negatively affecting both teaching and learning processes and outcomes (Kewaza 2013). During in-depth interviews, both local school principals and assistant school principal stated that exceeded student capacity has already occurred within other public schools in suburbs surrounding the local area, resulting in the need to install demountable classrooms to accommodate the increasing student numbers. Although provision of demountable classrooms can accommodate student numbers, they can impact accessibility of education facilities by reducing available green and outdoor play areas and impacting school services design for smaller enrolment numbers. The potential loss of outdoor learning and play areas could impact learning outcomes due to reduced space for physical activity and active learning.

Unmitigated, the impact to accessibility related to exceeding student capacity of the new primary school is assessed as Medium-10. Without mitigation measures in place, the likelihood of impacts to education access and learning outcomes due to an exceeded student capacity is likely, with anticipated moderate consequences. A summary of the assessment is provided in Table 7.5.

7.3.6 Accessibility related to student capacity of the school – mitigated

To mitigate the potential impacts related to oversized classrooms and potential loss of outdoor learning and play areas it is recommended that proactive hiring of teaching and non-teaching staff to accommodate for increased student numbers and locate any demountable classrooms that may be required in future in areas that are not designated outdoor learning and play areas. This may require additional investigation and assessment regarding the allocation of land owned by SINSW, including considerations regarding potential installation of demountable classrooms which can be accommodated on and around the Project site. Considerations in the design of student services such as library, OSCH, outdoor play areas and canteen should include options for future expansion to meet potential future increased demand.

Successful implementation of the proposed mitigation measures would reduce the likelihood of accessibility impact as a consequence of oversized classrooms and reduced outdoor learning, play spaces and student services to unlikely as the recommended mitigation measures would minimise their occurrence by providing adequate space and infrastructure to accommodate to any exceedance of student capacity. The negative consequences would also be reduced to negligible as the recommended mitigation measures would eliminate or significantly reduce impacts to accessibility and learning outcomes for students attending the new primary school. Therefore, the mitigated impact is assessed as Negligible-2. A summary of the assessment is provided in Table 7.13

Table 7.13 Summary of accessibility related to student capacity of the school

Social impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Accessibility	Exceeding the student capacity of the school	Local students	Operation	Local area	Medium-10	Negligible-2

7.4 Livelihood

7.4.1 Livelihood related to teaching and school staff opportunities – unenhanced

The new primary school is anticipated to employ 45 FTE teaching staff, seven executive staff, and six SASS. During in-depth interviews, three Liverpool City Council staff, as well as representatives from the South Western Sydney LHD, identified the potential for the new primary school to provide employment and career opportunities for persons within the wider study area – both related to teaching and non-teaching positions. Survey respondents also identified employment during Project operation as a significant potential benefit, with 26 of the 32 respondents (81.3%) identifying operation employment as a positive or very positive potential impact.

At the time of the 2016 Census the unemployment rate in the local area (6.1%) was fairly consistent with (though slightly lower than) the NSW rate of 6.3%. However, the unemployment rate in the wider study area (7.5%) was higher than both the local area and NSW (ABS 2016a). Within the local area, approximately 6.0% of people with non-school qualifications hold a qualification in teaching, as well as approximately 6.5% of people in the wider study area (ABS 2016a). It is reasonable to assume that a proportion of currently unemployed persons within the local area and wider study area would hold the relevant qualifications to fill teaching staff positions at the new school, therefore contributing to reductions in unemployment in the local area and wider study area.

The local area population is anticipated to grow significantly within the next ten years. The growth in the wider study area is anticipated to increase by 108.2% between 2016 – 2024, representing an average annual growth rate of 3.0% (see Section 4 and Appendix A). This growth will likely contribute to an increasing student population of the new primary school year on year, with this trend confirmed in the context of surrounding public schools during in-depth interviews with two local school principals and one assistant school principal.

If student population continues to increase beyond the intended capacity, there will be a need to continue hiring staff each year – resulting in further employment opportunities for residents within the local area and wider study area, as well as people with the relevant qualifications and experience who reside within one hour of the new school.

Unenhanced, the livelihood benefit related to teaching and school staff opportunities is assessed as Significant-11 as employment of a workforce from the local area and wider study area is likely. The potential benefits are desirable as the local and wider economy will benefit, with benefits anticipated to realise in the short to medium term. A summary of the assessment is provided in Table 7.14.

7.4.2 Livelihood related to teaching and school staff opportunities – enhanced

It is recommended to development and implement a Local Employment/Recruitment Strategy and Plan to increase the number of employed persons from the local and wider study area. This would contribute to reductions in unemployment and improve the lives of those employed by providing financial and job security in the long-term. However, some of the skills and experience required for teaching positions and executive staffing positions may be highly specialised and as such persons with the most relevant experience will be considered and selected for these roles to ensure the best learning provisions for students. This may require sourcing firms and workers from outside of the local and wider areas due to any shortages of specialised skills or extensive experience of applicants. It is also anticipated that anyone hired outside of the local area or wider study area will relocate to within one hour of the new primary school to satisfy Workplace Health and Safety commuting requirements.

The assessment of the enhanced benefit is Significant-12 for residents of the local area and wider study area who possess the relevant qualifications and experience to contribute to the operation of the new school. Although the implementation and commitment to a local-hire program would increase the likelihood of the livelihood benefit to almost certain, the benefit would remain desirable. A summary of the assessment is provided in Table 7.14.

Table 7.14 Summary of livelihood related to teaching and school staff opportunities

Social impact	Issue	Affected parties	Duration	Extent	Unenhanced	Enhanced
Livelihood	Teaching and school staff career and job opportunities	Residents within the wider study area and within an hour commute of the school with relevant teaching and non-teaching qualifications/ experience	Operation	Wider study area and within an hour commute of the school	Significant-11	Significant-12

7.5 Health and wellbeing

This section provides a detailed assessment, unmitigated/mitigated and unenhanced/enhanced, on the health and wellbeing impacts and the matters that may significantly impact the health and wellbeing as a consequence of the Project. The matters assessed include:

- construction dust;
- childhood obesity;
- mental health related to isolation;
- operational traffic; and
- urban heat.

7.5.1 Health and wellbeing related to construction dust – unmitigated

Construction emissions have the potential to exacerbate the health and wellbeing of nearby neighbours (to the Project site and along the haulage route) with respiratory conditions and those sensitive to changes in air quality during construction. Construction emissions include particulates (particulate matter) which can include dust, motor vehicle emissions, smoke, and odours (Environment NSW nd). Dust emissions from construction may cause adverse health impacts with symptoms including irritation of the eyes, coughing, sneezing, hay fever reactions, and asthma attacks (WA Health 2020). However, the risk to health varies depending on the size and nature of the dust particles and existing respiratory vulnerabilities (NSW Health 2017).

During consultation, one childcare representative raised concerns related to vulnerability of children and those with asthma to dust generated during construction. Those with asthma and other respiratory conditions are more vulnerable to effects of poor air quality, with even small increases in particulate matter (PM) concentrations able to exacerbate their symptoms (WA Health 2020). Trend data for prevalence of asthma in the South Western Sydney LHD, which encompasses the local area and wider study area, indicates that for children aged 2–15, the prevalence of current asthma cases was lower between 2005–2007 and 2014–2019 in comparison to the whole of NSW. The percentage of current asthma cases in South Western Sydney LHD has also generally been decreasing from 2002–2019. Data for prevalence of asthma in the South Western Sydney LHD indicates that asthma has been slightly less prevalent in the South Western Sydney LHD compared to the whole of NSW from 2002–2019 (NSW Health 2019). However, approximately 11.8% of adults within South Western Sydney LHD still reported prevalence of asthma in 2019. It is assumed that a small proportion of local residents within proximity to the Project area and haulage route will have respiratory conditions or asthma that increase their pre-existing vulnerability to dust emissions and their potential to be affected by dust.

However, these potentially affected people do have the ability to adapt and cope with these impacts given the adequacy and availability of health services in the local area (see Section 4 and Appendix A).

Without an air quality impact assessment, it is difficult to determine the impact on air quality that the Project may have. As such, assessment of the risk of physical health impacts from construction generated dust assumes worst case scenario level impact during the construction phase. The unmitigated impact of construction generated dust on physical health of nearby neighbours is assessed as Medium-9. Without mitigation measures in place and considering the cumulative impact in the local area which is rapidly growing at the back of housing construction, it is likely that health impacts related to dust could occur with marginal negative consequences due to the potential for health impacts on local residents with existing respiratory conditions and vulnerabilities.

7.5.2 Health and wellbeing related to construction dust – mitigated

Dust emissions from construction can be mitigated by the implementation of the CMP. Mitigation measures outlined in the CMP include covering of vehicles to and from the site carrying loads that may generate dust emissions; installation, operation, and maintenance of dust control measures and/or equipment on all processing equipment, disturbed areas, truck loading areas, and stockpiles; and water spraying of unsealed roads to suppress dust when in use (Richard Crookes Constructions 2021). Maintenance of a community grievance mechanism, regular site inspections, and notification of local residents would manage community perceptions and most importantly allow those with respiratory conditions and those who are sensitive to changes in air quality to manage their health and prevent adverse events. Successful implementation of these mitigation measures would reduce the impact of construction generated dust on health and wellbeing to Negligible-3 as likelihood would be reduced to possible and consequences would be reduced to negligible. A summary of the assessment is provided in Table 7.15.

Table 7.15 Summary of health and wellbeing related to construction dust

Social impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Health and wellbeing	Construction dust exacerbating existing health issues and vulnerable persons	Local residents, particularly neighbours to the Project site and haulage routes	Construction	Local area, particularly adjacent to the Project site and haulage route	Medium-9	Negligible-3

7.5.3 Health and wellbeing related to childhood obesity – unmitigated

As of 2019, the rate of childhood overweight and obesity in the South Western Sydney LHD was 28.3%, compared to the NSW average of 22.4%. This is the second highest rate of childhood overweight and obesity across LHDs in NSW (South Western Sydney LHD 2019). According to the South Western Sydney LHD (2019), overweight and obesity can impact children's physical health, mental health, and social wellbeing. Children who are overweight or obese are more likely to develop conditions such as diabetes which can lead to other chronic conditions, significantly affecting a child's quality of life. Furthermore, children who are overweight or obese are more likely to remain overweight or obese as adults (South Western Sydney LHD 2019). Nutrition, physical activity related behaviours, and environmental factors all contribute to the prevalence of overweight and obesity in children (South Western Sydney LHD 2019).

Having a school in the local area may encourage higher student participation in extra curriculars offered to student's school outside of school hours, such as school sporting activities, as parents/caregivers could more easily arrange pick-up and drop-off to activities due to reduced commuting times. The local school may also encourage more active travel to school if students and parents/caregivers reside in walking or cycling distance of the school.

The unenhanced health and wellbeing benefit related to addressing childhood obesity by providing opportunities for increased activity outside of school hours from the construction and operation of the Project is assessed as Limited-3. The likelihood of health and wellbeing benefits from the construction and operation of the school alone is possible. The anticipated positive consequences are minimal, as benefits would realise in the short-term with

marginal improvements to existing health and wellbeing of students. A summary of the assessment is provided in Table 7.16.

7.5.4 Health and wellbeing related to childhood obesity – mitigated

Promoting "active travel initiatives" as part of Transport Encouragement Programs as included in the School Travel Plan will further increase students' daily active time (PTC 2021b). This could include:

- installing bicycle locking facilities to encourage cycling to and from school;
- installing signage and marked pedestrian crossings to increase pedestrian safety and encourage walking;
- encouraging carpooling or "walk-pooling" arrangements through hosting or facilitating an online carpooling forum; and
- providing informative materials to both parents and students which outline the health benefits of active travel (through newsletter, emails, assemblies, or information nights).

With the above enhancement measure in place, the enhanced health and wellbeing related to addressing local childhood obesity is assessed as Moderate-7. The implementation of an "active travel initiative" would increase the likelihood of health and wellbeing benefits to likely, with the positive consequences increasing minor.

There is an opportunity to further enhance health and wellbeing benefits related to reduced childhood obesity in the local area by offering Project facilities to non-school recreation groups on the weekend and incorporating healthy eating initiatives into school programming. Non-school recreation groups, such as local sporting groups, dance troupes, or martial arts classes, could hire school facilities for a nominal fee or a bond payment to ensure accountability for use of the school facilities. This could provide additional opportunities for students to engage in active recreation activities outside of school hours. It is suggested that SINSW and the executive staff of the new school explore the potential to open the outdoor play area outside of school hours. However, this would likely require additional security arrangements such as security cameras to reduce the potential of school grounds being damaged. Healthy eating initiatives, which would include offering a healthy breakfast program, offering healthy canteen food and drink options, and consistently providing healthy eating information and messaging to both students and parents/caregivers would also contribute to enhanced healthy lifestyle habits in students.

Further enhanced, the health and wellbeing benefit related to addressing childhood obesity in local students is assessed as Significant-11. With these additional enhancement measures in place, the likelihood of benefit further increases to likely, with anticipated desirable benefits due to improvements on social services which would realise in the short to medium term and may be permanent if children maintain their healthy lifestyle habits after leaving the primary school. A summary of the assessment is provided in Table 7.16.

Table 7.16 Summary of health and wellbeing related to childhood obesity

Social impact	Issue	Affected parties	Duration	Extent	Unenhanced	Enhanced
Health and wellbeing	Childhood obesity	Local residents, particularly local children	Operation	Local area	Limited-3	Moderate-7 Significant-11

7.5.5 Health and wellbeing related to mental health – unenhanced

The mental health of the study area can be indicated by rates of intentional self-harm hospitalisations and levels of psychological distress using the Kessler 10 (K10) approach; a 10-item questionnaire that measures anxiety, depression, agitation, and psychological fatigue in the most recent 4-week period (NSW Health 2019). The overall trend in intentional self-harm hospitalisations for persons aged 15–24 years is increasing in both the South Western Sydney LHD and NSW. In 2019 psychological distress in persons aged 16 years and over based on the K10 approach was higher within the South Western Sydney LHD than NSW, with 19.7% and 17.7% (respectively) of persons with high and very high levels of psychological distress. This indicates that a proportion of the population of the local area would have pre-existing mental health conditions.

Usher, Bhullar & Jackson (2020) note that although all people can experience negative psychological effects when isolated, the most vulnerable to isolation are children and adolescents, older adults, minority groups, those from lower socio-economic groups, females, and people with pre-existing mental health conditions. Isolation in the context of COVID-19 has also increase separation from family, friends, and the local community – exacerbating the mental health impacts of isolation (Usher et al. 2020).

During in-depth interviews, representatives from the South Western Sydney LHD explained that isolation and associated impacts to mental health is experienced in many newly or relatively newly developed residential communities, particularly amongst stay-at-home parents/caregivers.

This can be exacerbated in single car households without sufficient access to other transportation options, as travel to community spaces and other areas to engage with other people can be difficult if others within a household need to drive to access these spaces.

The successful construction and operation of the new primary school would help to address issues related to feelings of isolation and related mental health issues by providing a local space that is easily accessible and establishes opportunities for relationship building between students, parents/caregivers, and the local community. The new primary school would reduce feelings of isolation by enhancing social cohesion and capital within the local community by increasing the number or frequency of residents' social contacts, enhancing social network density and diversity, providing an opportunity for develop of quality personal relationships, reducing feelings of loneliness, and facilitating tangible social support within the local community (Wang et al. 2017).

Unenhanced, the health and wellbeing benefit related to mental is assessed as Moderate-8. Assuming the successful construction and operation of the new primary school, the likelihood of mental health benefits is possible. The anticipated positive consequences are minor, as reduced feelings of isolation would realise in the medium term, with benefits linked to improvements mental health, particularly for students and parents/caregivers of the new school. A summary of the assessment is provided in Table 7.17.

7.5.6 Health and wellbeing related to mental health – enhanced

To further enhance local health and wellbeing related to mental health and feelings of isolation, there is an opportunity to develop a sense of community beyond the students and parents/caregivers of the new primary school. This could realise in the form of providing adult learning or language classes outside of school hours, hiring school facilities to local community groups, hosting fairs or markets that are open to the local community on weekends, or establishing community gardens.

There is an additional opportunity to extend benefits associated with reduced isolation and improved mental health outcomes to the wider study area by exploring and implementing initiatives which connect primary school students with persons living in aged care facilities throughout the wider study area. However, this will require additional resources and coordination to plan and realise and may benefit from exploring partnerships with Liverpool City Council, local health providers, and local aged care service providers.

Enhanced, the community benefit related to health and wellbeing related to mental health is assessed as Significant-14. With the implementation of the recommended enhancement measure, the likelihood of community benefit becomes likely, with the positive consequences increasing to highly desirable as benefits would result in improvements to both social services and social cohesion in the local area and wider study area. A summary of the assessment is provided in Table 7.17.

Table 7.17 Summary of health and wellbeing related to mental health

Social impact	Issue	Affected parties	Duration	Extent	Unenhanced	Enhanced
Health and wellbeing	Mental health benefits related to reduced isolation	Local residents and wider area residents, particularly students and aged populations in care facilities	Operation	Local area and wider study area	Moderate-8	Significant-14

7.5.7 Public safety related to operation traffic – unmitigated

Public safety impacts related to operation traffic was a significant concern raised during consultation, both during in-depth interviews and the online survey. Stakeholders expressed that traffic is a particular issue during school pick-up and drop-off times, with multiple stakeholders identifying a heavy reliance on personal vehicles for transportation in the local area and a preference for parents/caregivers to drive their children to school instead of walking or cycling. This could result in a significant number of vehicles moving within the vicinity of the new primary school during school dop-off and pick-up hours, increasing the vulnerability of pedestrians travelling to and from the school, and generally through the area.

Although motorists in NSW are required to drive no faster than 40 km/h through school zones on gazetted school days between 8:00 am–9:30 am and 2:30 pm–4:00 pm (NSW Government nd), the potential for injury or even death resulting from pedestrian motor vehicle collision is still possible if proper road safety and pedestrian safety infrastructure and processes are not integrated into the operation of the new primary school.

The unmitigated impact of public safety issues due operation traffic is assessed as Unacceptable-16 as the likelihood of impact is possible, and the negative consequences are intolerable due to potential loss of life and the broad impact it has on residents. The duration of this impact would be long-term as the grief and loss is not limited to the time of the accident and loss. A summary of the assessment is provided in Table 7.18.

7.5.8 Public safety related to operation traffic – mitigated

Road safety measures will be incorporated as part of a TMP for the operation of the Project (PTC 2021a). Measures included in the TMP to mitigate public safety impacts related to operation traffic include:

- facilitating or hosting online carpooling forums to encourage use of fewer vehicles during pick-up and drop-off times;
- installing marked pedestrian crossings and road signage in strategic locations on roads adjacent to the new school site and surrounding roads within a kilometre of the new primary school;
- engaging traffic control personnel (either parents/caregivers volunteers or paid) during peak drop-off and pick-up hours to help facilitate safe crossings of roads;
- providing safe travel campaigns to both students and parents/caregivers to increase safety awareness from both a pedestrian and vehicle point of view; and

- adequate provision of “kiss and drop” infrastructure to facilitate ease of student drop-off and pick-up using personal vehicles.

In addition to the mitigation measures outlined above, an “active travel initiative” will be integrated into the operation of the school as part of the Transport Encouragement Programs within the School Travel Plan to encourage walking or cycling to reduce the number of vehicles present during pick-up and drop-off times (PTC 2021b). Successful implementation of the mitigation measures would reduce the likelihood of impacts to public safety related to operational traffic on students, teachers and nearby neighbours to unlikely. The potential consequences would also be reduced to major as it is anticipated that they severity of consequences would also be reduced with successful implementation of the identified mitigation measures. The residual risk of public safety related to operation traffic is assessed as Medium-11. Due to the seriousness of the potential consequences, diligence around the ongoing management and monitoring of this risk will be important.

Table 7.18 Summary of public safety related to operation traffic

Social impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Public safety	Traffic generated by the operation of the Project	Local residents, particularly students, staff, and caregivers accessing the school, and pedestrians within the vicinity of the site	Operation	Local area	Unacceptable-16	Medium-11

7.5.9 Public safety and health related to heat – unmitigated

Public safety and health related to heat was a significant concern for several stakeholders during consultation. The issue of heat was associated with the urban heat island effect. The urban heat island effect occurs when “urban areas become significantly warmer than surrounding areas when there is less green cover and more hard surfaces which absorb, store, and radiate heat” (AdaptNSW nd). Ecologist Dr Sebastien Pautsch has measured urban temperatures in Western Sydney and suggests that schools are often large contributors to local urban heat islands, with surfaces such as softfall rubber and Astroturf warming to between 80 and 90 degrees Celsius on mid-30-degree days (Pfautsch 2021). In the same study, Pautsch (2021) found a surface temperature of 105 degrees Celsius in a rubber tyre woven with metal. High temperatures in schools are of particular concern as children are more susceptible to overheating and heat-related illnesses than adults as they generate more heat during exercise and sweat less, reducing their bodies’ ability to cool down (NSW Health 2020; Pfautsch et al. 2020). Children are also less aware of the risks of touching hot surfaces such as playground equipment and groundcover.

In NSW there is a long-term trend of increasingly warmer air temperatures, with 11 of the hottest years recorded in Australia’s history occurring in the past 15 years (BOM in Pfautsch, Wujeska-Klause & Rouillard 2020). Increasing temperatures are likely to be exacerbated by heat islands in urban built-up areas causing health problems for children and adults in such areas.

The unmitigated impact of public safety and health related to heat is assessed as Low–6 as the likelihood of impact is possible, and the negative consequences are marginal due to the risk of overheating, heat-related illnesses, injury from hot surfaces and considering school’s policies regarding outdoor activities during hot days. The duration of the impact unmitigated would be medium to long-term as trees planned in the design of operation could take a long time to provide cooling and shading effects and there is a lot of hard surfaces to absorb, store, and radiate heat (including rooftops). A summary of the assessment is provided in Table 7.19.

7.5.10 Public safety and health related to heat – mitigated

There are several actions that can be taken to mitigate the impact on public safety and health related to heat, ranging from planting trees and installing shade awnings to minimising hard surfaces with green facades.

The design of the school provides includes covered outdoor learning areas, as well as tree canopy cover which will provide protection from the sun (Oculus 2021). There is a need to incorporate extensive greenery and shade into the design of the school to ensure that the Project mitigates public safety impacts relating to heat. Pfautsch, Wujeska-Klause and Rouillard (2020) report, following analysis of tree canopies of 100 schools in Western Sydney, that urban heat island effects were reduced when the area of shade provided by tree canopies was increased. They note that in schools with fairly small surface areas, trees are often growing along the boundaries of the school and as such will provide minimal shade and cooling for the inner school areas. It is recommended that the design of the school incorporates:

- clusters of trees and vegetation within the school boundaries to provide shade to various areas, not just along boundaries;
- a combination of advanced and juvenile trees, and specific "…tree species that represent minimal risk of dropping green limbs, produce allergenic or poisonous materials, are free of thorns and spikes", such as:
  - Jacaranda and Sweet Gum (as tall trees); and
  - Lilly Pilly, bottle brushes, Queensland Brush Box or paperbarks (as shorter trees) (Pfautsch, Wujeska-Klause & Rouillard 2020); and
- sufficient irrigation for both newly planted and existing trees to ensure best cooling effects are achieved, with water encouraging canopy expansion to shade larger areas in less time, and "supporting high rates of transpiration and associated air cooling" (Pfautsch, Wujeska-Klause &Rouillard 2020); water can be sourced from rainwater tanks collecting rooftop runoff.

In addition to planting of trees to form canopies for shading and cooling effects, and potentially compensating for tree growth in the beginning of the operation phase, the design should also incorporate awnings or shade sails to provide shade over hard surfaces in the school and reduce surface temperatures.

Successful implementation of trees, greenery, and shade sails, particularly near play areas, in the design of the school would reduce the impact of public safety and health related to heat and contribute to reducing the temperature of the surrounding area. The benefit to the school and nearby area would be likely, while the consequence would be minimal, and as such, is assessed as a Limited–4 benefit. The Project's trees and vegetation would require ongoing maintenance in the form of access to water to promote expansion and support transpiration and associated air cooling. A summary of the assessment is provided in Table 7.19.

Table 7.19 Summary of public safety related to heat

Social impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Public safety	Urban heat	Local residents, particularly students	Operation	Local area	Low-6	Limited-4

7.6 Cumulative impacts

There are several concurrent state significant development projects operating or intended to operate in and around the study area. These projects may contribute cumulative impacts to the Project. A summary of State significant development projects which may contribute cumulative impacts, as identified through the NSW DPIE Major Projects website, including workforce forecasts in construction and operational phases, is given in Table 7.20. Workforce numbers identified as 'NA' are either not available or not expected to further contribute concurrently to the Project and are not included in the cumulative population impacts below. These projects have either already concluded their construction phase or entered their operations phase and have reached their peak operational workforce. As such, an in-migration of the associated construction and operational workforces will have already occurred.

Within the wider study area, 13 state significant development projects were identified consisting of five approved projects and the remaining eight still within the planning and approvals phase. Concurrent development Projects yet to commence in the local area may contribute to pressures for construction workforce and changes to population resulting in increased housing pressures, particularly for rental properties. However, improvements to road infrastructure, health facilities and education facilities could further contribute to improved health and wellbeing outcomes, increased community cohesion, social capital, and resilience, and accessibility to social infrastructure.

Table 7.20 Concurrent development projects

LGA	Project name	Anticipated timeframe/ project life	Development type	Status	Determination date	Construction workforce	Operational workforce
Liverpool City	Fifteenth Avenue Commercial Hub	Not stated	Residential & Commercial	Approved	12/10/2016	NA	NA
Liverpool City	Liverpool Hospital Multi-storey Carpark	2021-2026	Hospitals, medical centres and health research facilities	Approved	30/11/2020	592	420
Liverpool City	Emergent Cold, Cold Storage Warehouse and Distribution Facility	Not stated	Warehouse or distribution centres	Prepare EIS	—	NA	100
Liverpool City	Liverpool West Public School Redevelopment	Not stated	Educational establishments	Prepare EIS	—	NA	NA
Liverpool City	Middleton Grange Medical Centre	Not stated	Hospitals, medical centres and health research facilities	Prepare EIS	—	NA	NA
Liverpool City	New Liverpool Primary School	Not stated	Educational establishments	Prepare EIS	—	NA	NA
Liverpool City	Prestons Waste treatment Facility	Not stated	Waste collection, treatment and disposal	Prepare EIS	—	20	10
Liverpool City	Private Hospital, Liverpool	Not stated	Hospitals, medical centres and health research facilities	Prepare EIS	—	NA	NA
Liverpool City	Moorebank Avenue Realignment	Not stated	Road transport facilities	Response to Submissions	—	83	NA

Table 7.20 Concurrent development projects

LGA	Project name	Anticipated timeframe/ project life	Development type	Status	Determination date	Construction workforce	Operational workforce
Liverpool City	Redevelopment and Expansion of Al-Faisal College, Liverpool	Not stated	Educational establishments	Response to Submissions	—	NA	392
Liverpool City	Mainsbridge School for Specific Purposes	Not stated	Educational establishments	Approved	27/02/2019	NA	NA
Liverpool City	St Francis Catholic College & Early Learning Centre	Not stated	Educational establishments	Approved	12/02/2019	NA	NA
Liverpool City	Edmondson Park Residential Subdivision	Not stated	Residential & Commercial	Approved	18/08/2011	NA	NA

Source: DPIE 2020, Major Projects.

8 Mitigation and management

This section provides a summary of the identified social impacts along with the corresponding perceived stakeholder risk rankings and mitigated technical risk rankings. In addition, key potential stakeholder partners have been identified to participate in the monitoring and management of impacts, along with a range of proposed social impact mitigation and management strategies. Note that not all potential impacts will be the responsibility of the proponent to mitigate or manage, their role may be to cooperate or inform the mitigation, provide data and information, through to direct responsibility for mitigation and management of the identified potential social impacts and the opportunity for partnerships. A summary is provided in Table 8.1.

This section also provides a monitoring and management framework.

Table 8.1 Summary of mitigation and management strategies

Social impact/ benefit	Issue	Unmitigated/ Unenhanced	Mitigated/ Enhanced	Responsibility	Potential partners	Proposed mitigation and management
Way of life	Amenity issues related to noise and dust during construction	Impact: Low-6	Impact: Negligible-4	SINSW Construction contractors	—	CMP includes noise, dust and traffic mitigation measures such as work restricted to daylight hours, respite periods, and public notification of proposed works. Maintenance of community grievance mechanism as per standard SSDA requirements, including a dedicated Project phone number, email, and complaints register.
Way of life	Amenity issues related to traffic generated by the construction of the Project	Impact: Medium-8	Impact: Negligible-3	SINSW Construction contractors	—	TMP will incorporate traffic mitigation measures, including avoidance of transport within school pick-up and drop off hours, public notification of proposed works and associated traffic changes, and provision of alternative access options (if required). Maintenance of community grievance mechanism as per standard SSDA requirements.
Way of life	Amenity issues related to traffic generated by the operation of the Project/School	Impact: Medium-8	Impact: Negligible-3	SINSW Executive staff of the new primary school	Transport for NSW Liverpool City Council	Implementation of an “active travel initiative” as part of Transport Encouragement Programs as per the School Travel Plan integrated into the operation of the school that includes provision of pedestrian crossings, signage, end of trip cycling facilities such as bicycle parking, facilitated carpooling, bus stops and local road upgrades.
Way of Life	Amenity issues related to intensity of use of education facility, including PA system and outdoor learning/play areas	Impact: Negligible-3	Impact: Negligible-2	SINSW	—	Maintenance of community grievance mechanism beyond the construction phase. Implementation of less severe sounds in notification sound systems and positioning of speakers to face away from neighbouring residences be considered in the Project design.

Table 8.1 Summary of mitigation and management strategies

Social impact/ benefit	Issue	Unmitigated/ Unenhanced	Mitigated/ Enhanced	Responsibility	Potential partners	Proposed mitigation and management
Way of life	Provision of shared community facilities and green space	Benefit: Moderate-7	Benefit: Moderate-8	SINSW Executive staff of the new primary school	Local community Liverpool City Council	The school hall will be open for community use outside of school hours. The school hall, library and sports facilities will also be open to the local community outside of school term. Explore the potential to open the outdoor play area, including green space and recreation spaces, outside of school hours. Incorporate additional security arrangements such as security cameras to reduce the potential of school grounds being damaged. Alternative community use arrangements may also include payment of bond or a nominal fee to use school facilities, designated persons of contact to maintain responsibility for use of the facilities, and fencing with key access for approved parties. Partnership with Liverpool City Council to manage community use of outdoor school facilities. Further consultation, liaison, and assessment is required to determine the feasible opportunities available.
Community	Community related to social cohesion, capital and resilience	Benefit: Significant-12	Benefit: Significant-15	SINSW Executive staff of the new primary school	Local community P&C association	Providing volunteering opportunities to parents, caregivers and local friends of the school. Hosting or facilitating a language school or language classes outside of school operating hours for the local community members, particularly for the communities with non-English background and with largest representation. Offering School facilities for community uses, this would require adding design features to ensure areas can be isolated for community use and security is included to prevent facilities being vandalised. Operation of the Project.

Table 8.1 Summary of mitigation and management strategies

Social impact/ benefit	Issue	Unmitigated/ Unenhanced	Mitigated/ Enhanced	Responsibility	Potential partners	Proposed mitigation and management
Community	Sense of place	Benefit: Moderate-7	Benefit: Moderate-8	SINSW School administration	Local community	Incorporating visual character building into the design of the new primary school to enhance the community's sense of ownership. Engaging local residents in this process through the application of the SINSW consultation strategy to further investigate the values of the local community and ask questions surrounding design aspects that can be influenced by the local community
Accessibility	Access to and use of primary education infrastructure, services and facilities	Benefit: Significant-11	Benefit: Significant-12	SINSW	Principal of the new primary school	Involving teaching staff in the design and opening of the new primary school to maximise learning outcome through staff engagement and input in design. This will require the hiring processes to be well in advance to the opening of the school. Ensuring OSHC will meet capacity. Early provision of information to prospective parents/caregivers regarding enrolments.
Accessibility	Access to and use of preschool education infrastructure, services and facilities	Benefit: Moderate-7	Benefit: Moderate-8	SINSW	Principal of the new primary school OSHC provider/ manager Liverpool City Council	Incorporating integration programs such as "buddy program" or mentoring program, to give preschool children the opportunity to interact and engage with primary school children, enhancing their familiarity and comfort with a primary school setting. Explore additional integration opportunities in partnership with representatives and teams operating the preschool.
Accessibility	Exceeding the student capacity of the school	Impact: Medium-10	Impact: Negligible-2	SINSW	Landcom	Investigating and assessing allocation of land owned by SINSW, including considerations regarding potential installation of demountable classrooms which can be accommodated on and around the Project site when additional capacity may be required.
Livelihood	Teaching and school staff career and job opportunities	Benefit: Significant-11	Benefit: Significant-12	SINSW	Principal of the new primary school	Implement a Local Employment/Recruitment Strategy and Plan to increase the number of employed persons from the local and wider study area.
Health and wellbeing	Construction dust exacerbating existing health	Impact: Medium-9	Impact: Negligible-3	SINSW	—	CMP includes dust mitigation measures such as covering of vehicles to and from the site carrying loads; installation, operation, and maintenance of dust control measures

Table 8.1 Summary of mitigation and management strategies

Social impact/ benefit	Issue	Unmitigated/ Unenhanced	Mitigated/ Enhanced	Responsibility	Potential partners	Proposed mitigation and management
	issues and vulnerable persons			Construction contractors		and/or equipment on all processing equipment, disturbed areas, truck loading areas, and stockpiles; and water spraying of unsealed roads to suppress dust when in use. Maintenance of community grievance mechanism as per standard SSDA requirements, including a dedicated Project phone number, email, and complaints register.
Health and wellbeing	Childhood obesity	Benefit: Limited-3	Benefit: Moderate-7 – Significant-11	SINSW	Principal of the new primary school	Promoting "active travel initiatives" as part of Transport Encouragement Programs as per the School Travel Plan to further increase students' daily active time. This could include: • installing bicycle locking facilities to encourage cycling to and from school; • installing signage and marked pedestrian crossings to increase pedestrian safety and encourage walking; • encouraging carpooling or "walk-pooling" arrangements through hosting or facilitating an online carpooling forum; and • providing informative materials to both parents and students which outline the health benefits of active travel (through newsletter, emails, assemblies, or information nights). Offering Project facilities to non-school recreation groups on the weekend and incorporating healthy eating initiatives into school programming.
Health and wellbeing	Mental health benefits related to reduced isolation	Benefit: Moderate-8	Benefit: Significant-14	Principal of the new primary school	Liverpool City Council Local health providers and local aged care service providers	Providing adult learning or language classes outside of school hours, hiring school facilities to local community groups, hosting fairs or markets that are open to the local community on weekends, or establishing community gardens to improve mental health outcomes in the community. Implementing initiatives which connect primary school students with persons living in aged care facilities throughout the wider study area

Table 8.1 Summary of mitigation and management strategies

Social impact/ benefit	Issue	Unmitigated/ Unenhanced	Mitigated/ Enhanced	Responsibility	Potential partners	Proposed mitigation and management
Public safety	Traffic generated by the operation of the Project	Impact: Unacceptable-16	Impact: Medium-11	SINSW Principal of the new primary school	Transport for NSW Liverpool City Council Parents/ caregivers	Measures for the operation of the school as outlined in the School Transport Plan, including: • facilitating or hosting online carpooling forums to encourage use of fewer vehicles during pick-up and drop-off times; • installing marked pedestrian crossings and road signage in strategic locations on roads adjacent to the new school site and surrounding roads within a kilometre of the new primary school; • engaging traffic control personnel (either parents/caregivers volunteers or paid) during peak drop-off and pick-up hours to help facilitate safe crossings of roads; • providing safe travel campaigns to both students and parents/caregivers to increase safety awareness from both a pedestrian and vehicle point of view; and • adequate provision of "kiss and drop" infrastructure to facilitate ease of student drop-off and pick-up using personal vehicles. Implementing active travel programs.
Public safety	Urban heat	Impact: Low-6	Benefit: Limited-4	SINSW	Principal of the new primary school	Incorporating in the school design: • inclusion of clusters of trees and vegetation within the school boundaries to provide shade to various areas, not just along boundaries; • a combination of advanced and juvenile trees, and specific "…tree species that represent minimal risk of dropping green limbs, produce allergenic or poisonous materials, are free of thorns and spikes"; and • sufficient irrigation for both newly planted and existing trees to ensure best cooling effects are achieved, with water encouraging canopy expansion to shade larger areas in less time, and "supporting high rates of transpiration and associated air cooling" (Pfautsch, Wujeska-Klause &Rouillard 2020). Incorporating awnings or shade sails to provide shade over hard surfaces in the school and reduce surface temperatures.

8.1 Monitoring and management framework

It is proposed that a monitoring and management framework be developed to ensure that the identified positive and negative impacts are monitored over time to measure the effectiveness or otherwise of the proposed management measures, including the changing conditions and trends in the Liverpool region over the same period.

It is proposed that the monitoring and management framework identifies the following key aspects:

- track progress of mitigation and management strategies;
- assess actual project impacts against predicted impacts;
- identify how information will be captured for reporting to impacted stakeholders including landholders, communities and government on progress and achievements;
- key performance indicators, targets and outcomes;
- responsible parties; and
- mechanisms for ongoing adaption of management measures when and if required.

To ensure the effectiveness of the management measures for the identified positive and negative impacts, it is recommended that a continuous improvement approach be adopted allowing for the review and adaption of impacts, management measure and outcomes.

An approach that ensures stakeholders from various sections of the community are regularly informed and given the opportunity to participate and collaborate is recommended. This approach is used successfully to manage social impacts from infrastructure operations throughout Australia and around the world.

SINSW uses a range of standard community engagement channels, tools, and activities on an as needs basis across all of their projects to ensure opportunities for the community to provide feedback.

These include:

- school community engagement – Project Review Group, meetings, workshops, school tours, and Design User Group sessions;
- community information sessions;
- virtual information rooms;
- communications – project webpage, information pack, project updates, and works notifications;
- contact channels – emails and 1300 project information number; and
- school community communication – newsletter input and meetings.

The community consultation strategy will consider all options and will apply the instruments that best fit the overall needs of the Project. However, the approach will ensure that mechanisms for both information dissemination and feedback collection are incorporated.

Acronyms

ABS	Australian Bureau of Statistics
ACARA	Australian Curriculum, Assessment and Reporting Authority
ACECQA	Australian Children's Education and Care Quality Authority
ADHD	Attention Deficit Hyperactivity Disorder
AHMAC	Australian Health Ministers' Advisory Council
AHURI	Australian Housing and Urban Research Institute
AIHW	Australian Institute of Health and Welfare
ALP	Australian Labour Party
BOCSAR	Bureau of Crime Statistics and Research
CBD	Central Business District
CMP	Construction Management Plan
COLA	Covered Outdoor Learning Area
Cr	Councillors
CSP	Community Strategic Plan
DAWE	Department of Agriculture, Water and the Environment
DOE	Department of Education
DPIE	Department of Planning, Industry and Environment
Draft SIA Guideline	Draft Social Impact Assessment Guideline: State Significant Projects, October 2020
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMM	EMM Consulting Pty Ltd – author of the SIA report
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
FTE	Full-time equivalent
ha	Hectare
IAIA	International Association for Impact Assessment
IEO	Index of Education and Occupation
IER	Index of Economic Resources
IFC	International Finance Corporation
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
IRSD	Index of Relative Socio-Economic Disadvantage
K10	Kessler 10
LEIP	Liverpool Education Improvement Plan
LGA	Local Government Area
LHD	Local Health District

LSPS	Local Strategic Planning Statement
NSW	New South Wales
OECD	Organisation for Economic Co-operation and Development
OSHC	Outside of school hours care
PA	Public address system
PM	Particulate matter
SASS	School administrative and support staff
SEARs	Secretary's Environmental Assessment Requirements
SEIFA	Socio-Economic Indexes for Areas
SES	State Emergency Service
SIA	Social impact assessment
SIA Guideline	Draft Social impact assessment guideline 2020
SINSW	School Infrastructure NSW
SSC	State suburb
SSDA	State Significant Development Application
STE	State/Territory
the Project	The new primary school in Edmondson Park
the site	Corner of Buchan Avenue and Faulkner Way
VIR	Virtual Information Room

References

ABS 2002, *Social Capital and social wellbeing,* Commonwealth of Australia, https://www.oecd.org/innovation/research/2380806.pdf.

ABS 2006, *Census of Population and Housing: General Community Profiles*, Australian Bureau of Statistics.

ABS 2011, *Census of Population and Housing: General Community Profiles*, Australian Bureau of Statistics.

ABS 2016a, *Census of Population and Housing: General Community Profiles*, Australian Bureau of Statistics.

ABS 2016b, *Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016*, Australian Bureau of Statistics.

ABS 2016c, *Census of Population and Housing: Estimating homelessness, 2016,* Australian Bureau of Statistics.

ABS 2019, *8165.0—Counts of Australian Businesses, including Entries and Exists, June 2015 to June 2019*, Australian Bureau of Statistics.

ABS 2019, *3218.0 – Regional Population Growth, Australia 2018-19*, Australian Bureau of Statistics.

ACARA 2021, *My school, find a school*, Australian Curriculum, Assessment and Reporting Authority, https://myschool.edu.au/.

ACECQA 2021, *Service search*, Australian Children's Education & Care Quality Authority, viewed 14 April 2021, https://www.acecqa.gov.au/resources/national-registers/services?s=oak%20park&field_service_id=&f%5B0%5D=service_state%3ANSW.

AdaptNSW nd, *Urban Heat*, NSW Government, https://climatechange.environment.nsw.gov.au/Impacts-of-climate-change/Heat/Urban-heat

AHMAC 2017, Aboriginal and Torres Strait Islander Health Performance Framework 2017 Report, Australian Health Ministers' Advisory Council, Canberra. https://www.niaa.gov.au/sites/default/files/publications/2017-health-performance-framework-report_1.pdf

AHRC 2015, *Building social cohesion in our communities*, Australian Human Rights Commission, https://humanrights.gov.au/sites/default/files/document/publication/WEB_Building_social_cohesion_A4_brochure.pdf.

AHURI 2019, *Understanding the 30:40 indicator of housing affordability stress*, Australian Housing and Urban Research Institute, viewed 11 May 2020, https://www.ahuri.edu.au/policy/ahuri-briefs/3040-indicator.

AIHW 2019, *Deaths in Australia*, Australian Institute of Health and Welfare, viewed 11 May 2020, https://www.aihw.gov.au/reports/life-expectancy-death/deaths-in-australia/contents/life-expectancy.

AIHW 2020, *Social determinants of health*, Australian Institute of Health and Welfare, https://www.aihw.gov.au/reports/australias-health/social-determinants-of-health.

Ask Izzy 2021, *Ask Izzy*, https://askizzy.org.au/

Barrett, P et al., 2019, *The Impact of School Infrastructure on Learning : A Synthesis of the Evidence*, Washington, DC: World Bank, https://files.eric.ed.gov/fulltext/ED604388.pdf

Bell, L, Audrey, S, Gunnell, D, Cooper, A & Campbell R 2019, 'The relationship between physical activity, mental wellbeing and symptoms of mental health disorder in adolescents: a cohort study' *International Journal of Behavioural Nutrition and Physical Activity*, 16(138).

Birrell, B & Healy, E 2018, *Immigration and the Housing Affordability Crisis in Sydney and Melbourne*, The Australian Population Research Institute, https://apo.org.au/sites/default/files/resource-files/2018-07/apo-nid187861.pdf

BOCSAR 2019, *NSW Recorded Crime Statistics July 2015-June 2020*, NSW Bureau of Crime Statistics and Research, viewed 15 April 2021, https://www.bocsar.nsw.gov.au/Pages/bocsar_crime_stats/bocsar_latest_quarterly_and_annual_reports.aspx.

Crawford, M 2021, *Delivering School Infrastructure: NSW Auditor-General's Report*, Audit Office of NSW, https://www.audit.nsw.gov.au/sites/default/files/documents/FINAL%20REPORT%20-%20Delivering%20school%20infrastructure_0.pdf

DECCW 2011, *NSW Road Noise Policy*, Department of Environment, Climate Change and Water.

DIPNR 2004, *Guideline for the preparation of environmental management plans*, Department of Infrastructure, Planning and Natural Resources, NSW Government, viewed 18 February 2021, https://www.planning.nsw.gov.au/~/media/Files/DPE/Guidelines/guideline-for-the-preparation-of-environmental-management-plans-2004.ashx?la=en.

DPIE 2019, *Population projections*, Department of Planning, Industry and Environment, viewed 15 May 2021, https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections.

DPIE 2020, *Major Projects*

DPIE 2020, *Social Impact Assessment Guideline State Significant Projects,* NSW Department of Planning, Industry and Environment, https://shared-drupal-s3fs.s3-ap-southeast-2.amazonaws.com/master-test/fapub_pdf/00+-+Planning+Portal+Exhibitions/SIA/SIA+Publication+for+Publication+Online+20201022.pdf.

DPIE 2020, *Technical supplement,* NSW Department of Planning, Industry and Environment, https://shared-drupal-s3fs.s3-ap-southeast-2.amazonaws.com/master-test/fapub_pdf/00+-+Planning+Portal+Exhibitions/SIA/Technial+Supplement+for+Publication+Online+20201022.pdf

EMM 2020, Moorebank Avenue Realignment: Preliminary Aboriginal Heritage Assessment, EMM Consulting Pty Ltd.

Engel, LC, Kington, A & Mleczko, A 2013, 'The influence of education on community cohesion: Adaptation of Policy to Practice', *The Journal of Educational Research*, 106, pp. 408 – 418.

Engler-Stringer, R 2020, *Health Benefits of School Food Programs: An Overview of Canadian Research*, The Coalition for Healthy School Food, https://www.healthyschoolfood.ca/post/health-benefits-of-school-food-programs-an-overview-of-canadian-research

Environment NSW nd, *Local government air quality toolkit – air quality guidance note: construction sites*, NSW Government, viewed 18 February 2021, https://www.environment.nsw.gov.au/resources/air/mod3p3construc07268.pdf.

EPA 2013, *Noise Guide for Local Government,* https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/noise/20130127nglg.pdf

Erwin, H, Fedewa, A, Beighle, A & Soyeon, A 2012, 'A quantitative review of physical activity, health and learning outcomes associated with classroom-based physical activity interventions', *Journal of Applied School Psychology*, 28(1), pp. 14 – 36.

Erwin, H, Weight, E & Harry, M 2021, '"Happy, healthy, and smart": Student responses to the Walking Classroom education program aimed to enhance physical activity', *Journal of School Health*, 91(3), pp. 195 – 203.

Ethos Urban 2020, *Social impact assessment: Westmead Catholic Campus*, report prepared for Catholic Education Diocese of Parramatta, retrieved 10 February 2021 from https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-10383%2120200327T063330.405%20GMT.

Fridman, L, Ling, R, Rothman, L, Cloutier, M, Macarthur, C, Hagel, B & Howard, A 2020, 'Effect of reducing the posted speed limit to 30 km per hour on pedestrian motor vehicle collisions in Toronto, Canada – a quasi experimental, pre-post study', *BMC Public Health*, 20(56), pp. 1 – 8.

Greater Sydney Commission 2018, *Greater Sydney Region Plan: A Metropolis of Three Cities – connecting people*, NSW Government, https://gsc-public-1.s3-ap-southeast-2.amazonaws.com/greater-sydney-region-plan-0618.pdf?pMbPYxwen5IHg4GSB6td4yKiKVogFi4c

Harris, M 2018, 'The relationship between physical inactivity and mental wellbeing: Findings from a gamification-based community-wide physical activity intervention', *Healthy Psychology Open*, 5(1).

Healthdirect 2019, *Exercise and mental health*, https://www.healthdirect.gov.au/exercise-and-mental-health

Healthdirect Australia 2020, National Health Services Directory, https://about.healthdirect.gov.au/nhsd

JHA 2021, *Noise and Vibration Assessment for SSDA (SSD-10224): New Primary School in Edmondson Park*, JHA.

Kragt, D & Holtrop, D 2018, Volunteering research in Australia: A narrative review, *Australian Journal of Psychology* 71(4), pp. 342-360.

Kuehn, BM 2013, 'Institute of medicine report advises schools to prioritize physical activity to promote health and learning', *Journal of American Medical Association*, 310(2), pp. 131 – 132.

Liverpool City Council nd, *Innovation Liverpool,* report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/trim/documents?RecordNumber=041303.2019

Liverpool City Council 2017, *Our Home, Liverpool 2027: Community Strategic Plan,* Liverpool City Council.

Liverpool City Council 2017, *Four-Year Delivery Program 2017 – 2021*, report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/trim/documents?RecordNumber=236643.2020

Liverpool City Council 2017, *Our Home, Liverpool 2027*, report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/__data/assets/pdf_file/0014/120380/Our-Home-Liverpool-2027-approved-by-Council-26-April-2017.pdf

Liverpool City Council 2017, *Community Facilities Strategy,* report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/trim/documents?RecordNumber=236725.2019#:~:text=The%20aim%20of%20this%20strategy,well%2Dbeing%20of%20our%20residents.

Liverpool City Council 2017, *Resourcing Strategy,* report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/trim/documents?RecordNumber=117690.2017

Liverpool City Council 2017, *Cultural Strategy,* report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/trim/documents?RecordNumber=357859.2017#:~:text=The%20Cultural%20Strategy%20is%20a,investment%20in%20culture%20in%20Liverpool.&text=Celebrates%20Liverpool's%20unique%20identity%20and,cultural%20heritage%20of%20our%20communities.

Liverpool City Council 2017, *Disability Inclusion Action Plan,* report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/__data/assets/pdf_file/0011/112520/FINAL-Disability-Inclusion-Action-Plan-DIAP-2017-2021-Approved-28-June-2017.pdf

Liverpool City Council 2018, *Destination Management Plan,* report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/trim/documents?RecordNumber=028853.2019

Liverpool City Council 2018, *Recreation, Open Space and Sports Strategy,* report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/trim/documents?RecordNumber=349920.2020#:~:text=Our%20vision%20is%20to%20create,fastest%2Dgrowing%20parts%20of%20Australia.

Liverpool City Council 2019, *City Activation Strategy,* report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/trim/documents?RecordNumber=304463.2018#:~:text=The%20City%20Activation%20Strategy%20gives,with%20events%2C%20activities%20and%20initiatives.&text=Our%20goal%20is%20to%20make,clear%20path%20towards%20that%20goal.

Liverpool City Council 2019, *Connected Liverpool 2040: Local Strategic Planning Statement 2020*, report prepared by Liverpool City Council, https://www.liverpool.nsw.gov.au/development/liverpools-planning-controls/local-strategic-planning-statement-lsps-connected-liverpool-2040#:~:text='Connected%20Liverpool%202040'%20is%20Council's,spaces%20and%20the%20natural%20environment

Liverpool City Council 2020, *Community*, https://www.liverpool.nsw.gov.au/community

Liverpool City Council 2021, *Liverpool Education Improvement Plan 2021,* report prepared by Liverpool City Council, https://www.liverpoolcamhs.com/ed-imp-plan-4-dec2020/

Madden, A, Arora, V, Holmes, K & Pfautsch, S 2018, *Cool Schools*, Western Sydney University, pp. 1 – 56.

Manca, AR 2014, *Social Cohesion*, Encyclopedia of Quality of Life and Well-Being Research, https://link.springer.com/referenceworkentry/10.1007%2F978-94-007-0753-5_2739.

Martin, R & Murtagh, E 2017, 'Effect of active lessons on physical activity, academic, and health outcomes: A systematic review', *Research Quarterly for Exercise and Sport*, 88(2), pp. 149 – 168.

NSW Department of Education (2018), *Strategic Plan 2018–2022*, NSW Government, https://education.nsw.gov.au/content/dam/main-education/about-us/strategies-and-reports/media/documents/NSW-Department-of-Education-Strategic-Plan-2018-2022.pdf

NSW Government 2021, *Edmondson Park*, https://www.planning.nsw.gov.au/Plans-for-your-area/Priority-Growth-Areas-and-Precincts/South-West-Growth-Area/Edmondson-Park

NSW Government nd, *School Zones in* NSW, https://www.service.nsw.gov.au/transaction/school-zones-nsw

NSW Government nd, *NSW 2021 A Plan to Make NSW Number One,* New South Wales Government https://www.ipc.nsw.gov.au/sites/default/files/file_manager/NSW2021_WEBVERSION.pdf.

NSW Government 2020, *Start Strong*, https://education.nsw.gov.au/early-childhood-education/operating-an-early-childhood-education-service/grants-and-funded-programs/start-strong

NSW Health 2017, *Mine dust and you*, viewed 3 December 2020, https://www.health.nsw.gov.au/environment/factsheets/Pages/mine-dust.aspx.

NSW Health 2019, *Healthstats NSW*, NSW Ministry of Health, viewed 11 February 2021, http://www.healthstats.nsw.gov.au/.

NSW Health 2019, *Children's Active Travel*, NSW Government, https://www.health.nsw.gov.au/heal/schools/Pages/children-active-travel.aspx

NSW Health, *Babies and Children in the Heat*, NSW Government 2020, https://www.health.nsw.gov.au/environment/beattheheat/Pages/babies-children-hot-weather.aspx#:~:text=Babies%20and%20children%20need%20to,also%20make%20existing%20illnesses%20worse

Oculus 2021, *New Primary School in Edmondson park Landscape Drawings*, Oculus.

OECD 2018, *Valuing our Teachers and Raising their Status: How Community Can Help*, Organisation for Economic Cooperation and Development, https://www.oecd-ilibrary.org/education/valuing-our-teachers-and-raising-their-status/schools-at-the-centre-of-their-communities_9789264292697-4-en;jsessionid=-YVKTr0DJ2dXQ3dbbCVi8zzy.ip-10-240-5-169

Pfautsch, S, Rouillard, S, Wujeska-Klause, A, Bae, A & Vu, L 2020, *School Microclimates*, Western Sydney University, pp. 1 – 56.

Pfautsch, S, Wujeska-Klause, A & Rouillard, S 2020, *Benchmarking tree canopy in Sydney's hot schools*, Western Sydney University, pp. 1 – 40.

Pfautsch 2021, *"Hot Playgrounds" and designing for thermal comfort*, Playscape Creations, https://www.playscapecreations.com.au/hot-playgrounds-and-designing-for-thermal-comfort/

Pradhan, R & Sinha, N 2017, 'Impact of commuting distance and school timing on sleep of school students', *Sleep and Biological Rhythms*, 15, pp. 153 – 158.

PTC 2021a, *Transport and Traffic Assessment: New Primary School in Edmondson Park*, PTC Consultants.

PTC 2021b, *School Transport Plan: New Primary School in Edmondson Park*, PTC Consultants.

Richard Crookes Constructions 2021, *New primary School in Edmondson Park: Construction Management Plan*, Richard Crookes Constructions.

RPS 2020, Bankstown North Public School upgrade: social impact assessment, prepared for School Infrastructure NSW, retrieved 10 February 2021 from https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-10290%2120200930T114625.858%20GMT.

Smith, K 2011, *The relationship between residential satisfaction, sense of community, sense of belonging and sense of place in a Western Australian urban planned community*, Edith Cowan University.

South Western Sydney LHD 2019, *Growing Healthy Kids in South West Sydney*, South Western Sydney Local Health District, https://www.swslhd.health.nsw.gov.au/pdfs/SWSLHD_Plan_Brochure.pdf

Sun, D, El-Basyouny, K, Ibrahim, S & Kim, A 2018, 'Are school zones effective in reducing speeds and improving safety?', *Canadian Journal of Civil Engineering*, 45, pp. 1084 – 1092.

TfNSW 2020, *Responsibilities: Managing Safety Around Schools*, Transport for NSW, https://roadsafety.transport.nsw.gov.au/stayingsafe/schools/authorities.html#lawenforcement

Tigre, R, Sampaio, B & Menezes, T 2017, 'The impact of commuting time on youth's school performance', *Journal of Regional Science*.

UN 2015, *ESAF's urban agriculture practice in educational institutions across 3 States of India and how it helped to bring changes at the policy level*, United Nations Sustainable Development, https://sustainabledevelopment.un.org/partnership/?p=30648

Urbis 2019, *Social impact assessment St Anthony of Padua Catholic School Austral,* report prepared for Sydney Catholic Schools by Urbis Pty Ltd, retrieved 12 February, https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=EXH-849%2120191118T024351.680%20GMT.

Urbis 2019, *Market Outlook: Edmondson Park*, Frasers Property Australia, https://issuu.com/frasersproperty/docs/per0740_edmondson_park_market_outlo

Usher, K, Bhullar, N & Jackson, D 2020, 'Life in the pandemic: Social isolation and mental health', *Journal of Clinical Nursing*, 29, pp. 2756 – 2757.

WA Health 2020, *Health effects of dust*, Western Australia Department of Health, https://healthywa.wa.gov.au/Articles/F_I/Health-effects-of-dust.

Wade, M 2018, *Sydney young and old: Which age group is most common in your area?*, The Sydney Morning Herald, https://www.smh.com.au/national/nsw/sydney-young-and-old-which-age-group-is-most-common-in-your-area-20181206-p50kqk.html

Wang, J, Llyod-Evans, B, Giacco, D, Forsyth, R, Nebo, C, Mann, F & Johnson, S 2017, 'Social isolation in mental health: a conceptual and methodological review', *Social Psychiatry and Psychiatric Epidemiology*, 52, pp. 1451 – 1461.

Wujeska-Klause, A & Pfautsch, S 2020, 'The best urban trees for daytime cooling leave nights slightly warmer', *Forests*, 11, pp. 945 – 959.

Appendix A

Social baseline

A.1 Overview

A social baseline study is a requirement of the New South Wales (NSW) Department of Planning, Industry, and Environment's (DPIE 2020) *Draft Social impact assessment guideline 2020* (SIA Guideline). The baseline study describes the existing population and social conditions of potentially affected communities within the social impact assessment (SIA) study area which form the benchmark against which the social impacts are assessed. The Guideline states that a social baseline is crucial to understand the relevant pre-existing social pressures (DPIE 2020). Although all social indicators assessed in the social baseline study will not necessarily be impacted, it is imperative to obtain a thorough understanding of the social conditions and trends in the study area. Gaining a broad understanding of the study area allows us to differentiate between, and measure, a change that is likely to occur as a result of the project as opposed to what would have likely occurred without the project (IAIA 2015). Accordingly, this social baseline identifies the study area for the New Primary School in Edmondson Park (the Project) and its existing known and predicted social conditions for its community.

A.2 Study area

The Project is located within the state suburb (SSC) of Edmondson Park and may directly impact landowners, residents, and businesses within the vicinity of the Project site. While the site itself is localised, direct and indirect impacts may be farther reaching. As such, the Project is considered to have two key study areas: a local study area and a wider study area.

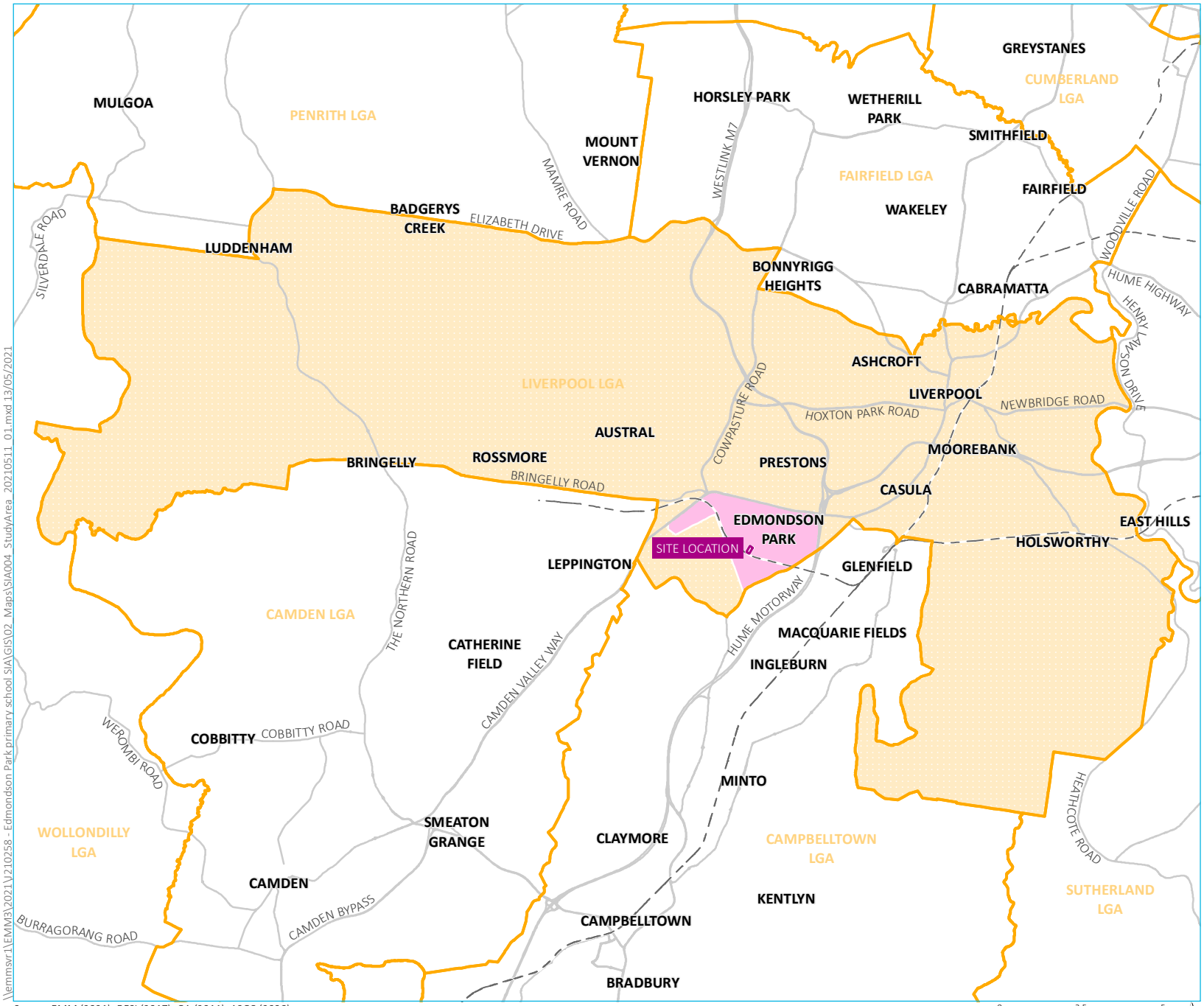
The Project may have direct and indirect impacts within Edmondson Park SSC related to local social infrastructure and services, local workforce, local business and industry, local housing and accommodation, and community health and wellbeing. Furthermore, the student catchment is anticipated to predominantly comprise the Edmondson Park postcode, with most intake from the north-west of school location. Accordingly, Edmondson Park SSC comprises the local study area for the Project.

The Project is likely to have a broader reach due to use of infrastructure, supply chains, haulage routes, transportation of goods, materials and equipment, and the movement of its workforce (DPIE 2020). These factors require the study area to include wider areas likely to be impacted by the Project which will extend to Liverpool Local Government Area (LGA), forming the wider study area.

These communities have been mapped to the Australian Bureau of Statistics (ABS) categories used for data collection (Table A.1) and the local and wider study areas (hereto referred to as local area or wider study area), illustrated in Figure A.1.

Table A.1 Study area

Study area	Geographic area	ABS data category	Referred to in report as:
Local study area	Edmondson Park	Edmondson Park SSC	Local area
Wider study area	Liverpool City Council area	Liverpool LGA	Wider study area
State of New South Wales	State of New South Wales	New South Wales STE	NSW



\\emmsvr1\EMM3\2021\P210258 - Edmondson Park primary school SIA\GIS\02_Maps\SIA004_StudyArea_20210511_01.mxd 13/05/2021

Source: EMM (2021); DFSI (2017); GA (2011); ASGC (2006)

Study area

New Primary School in Edmondson Park
Social Impact Assessment
Figure 4.1

EMM
creating opportunities

A.3 Demographic profile

According to the 2016 Census of Population and Housing, the local area has a total population of 2,271 people (ABS 2016a). The wider study area had a 2016 population of 204,326 (ABS 2016a) with an estimated 2019 population of 227,585 (ABS 2019). Analysis of ABS data shows that the population of the local area experienced extremely high population growth between 2011–2016 (436.9%), much higher than the rate of growth in the wider study area (13.4%) and NSW (8.1%).

The high rate of growth in the local area may be attributed to the suburb's proximity to the Sydney CBD as well as recent housing and lifestyle developments in the suburb (NSW Government 2021). With prices and demand for housing in Sydney continuing to grow, urban sprawl is causing growth in outer suburbs such as the local area (Greater Sydney Commission 2018). The local area is also particularly attractive for population growth as it has a pre-existing train station connecting it to Liverpool and the Central Business District (CBD), unlike other new housing developments in the wider study area (Forbes 2021).

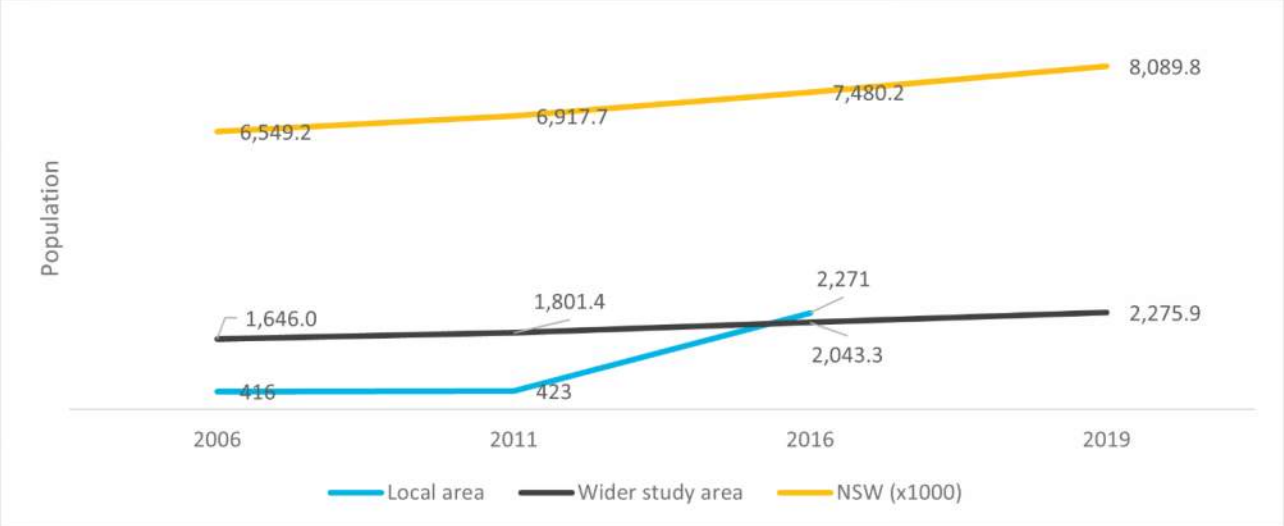
The population trends within the study area are presented in Table A.2 and Figure A.2.

Table A.2 Population trends, 2006 – 2019

Location	2006	2011	2016	2019[1]	Total % change 2006–2011	Total % change 2011–2016
Local area	416	423	2,271	--	1.7%	436.9%
Wider study area	164,603	180,143	204,326	227,585	9.4%	13.4%
NSW	**6,549,174**	**6,917,656**	**7,480,228**	**8,089,817**	**5.6%**	**8.1%**

Source: ABS 2006; ABS 2011; ABS 2016a, Census of Population and Housing: General Community Profiles; ABS 2019, 3218.0 – Regional Population Growth, Australia 2017-18.

Notes: 1. The population indicated in 2019 is a rebased estimate of the resident population of provided by the ABS, while the population data for 2006, 2011, and 2016 is provided from the 2016 Census.



Source: ABS 2016, Census of Population and Housing: General Community Profiles

Figure A.2 Population trends, 2006–2019

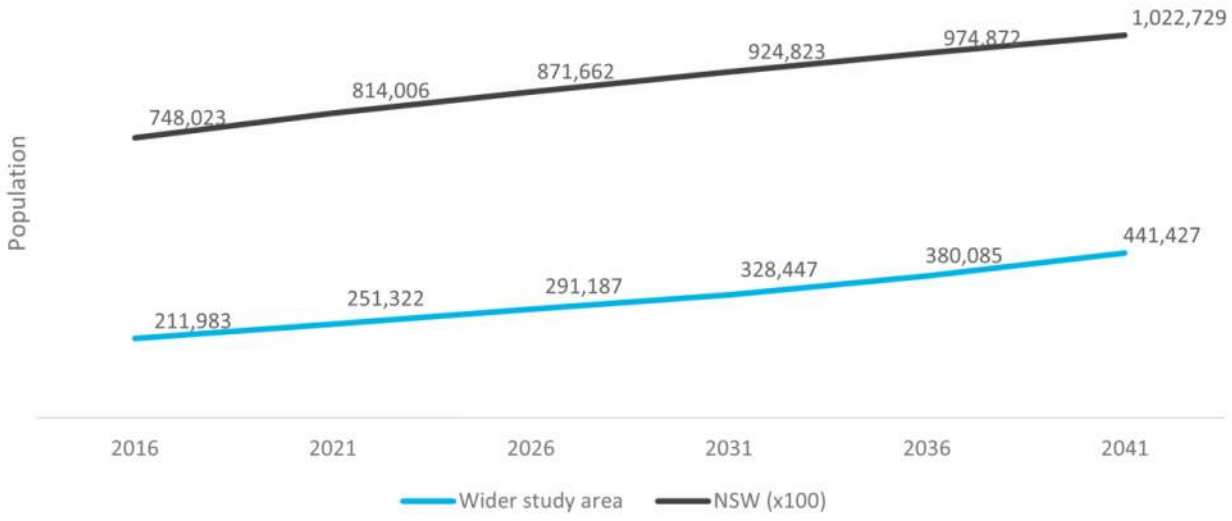
Projected population data is not available for the local area. However, trends are expected to be similar to the wider study area. Population projections published by DPIE (2019) suggest that the projected population of the wider study area is estimated to increase by 229,450 people from 2016–2041, representing a total change of 108.2% and an average annual growth rate of 3.0% (DPIE 2019). The growth rate of the wider study area is much higher than NSW, which is projected to increase by 2,839,838 people, representing a total change of 36.7% and an average annual growth rate of 1.5%. The high growth in the wider study area reflects the trends discussed above with growth in outer Sydney suburbs attributable to high prices and demand in Sydney forcing the population to be housed further out from the CBD (NSW Government 2021; Greater Sydney Commission 2018). The Greater Sydney Region Plan (Greater Sydney Commission 2018) is planning for extreme growth in the Greater Sydney region in the next 40 years. Population projections for the wider study area are presented in Table A.3 and Figure A.3.

Table A.3 Projected population, 2016 – 2041

Area	2016	2021	2026	2031	2036	2041	Total change 2016–2041	Total % change 2016–2041	Average annual growth rate 2016–2041
Wider study area	211,983	251,322	291,187	328,447	380,085	441,427	**229,450**	**108.2%**	**3.0%**
NSW	74,802	81,401	87,166	92,482	97,487	102,273	**2,747,061**	**36.7%**	**1.5%**

Source: NSW Department of Planning 2019, NSW 2019 Population Projections: ASGS 2019 LGA projections

Notes: 1. Population projection data was not available at the SSC level.
2. The projected population has been determined by using the ABS ERP population count which takes Census counts of people where they usually live (accounting for interstate visitors and removing overseas visitors), adjusts for Census undercount and overcount using the Census Post Enumeration Survey (PES), adds in Australians who are temporarily overseas, and applies further demographic adjustments.



Source: DPIE 2019, NSW 2019 Population Projections: ASGS 2019 LGA projections

Figure A.3 Projected population, 2016–2041

A.3.1 Population by age and sex

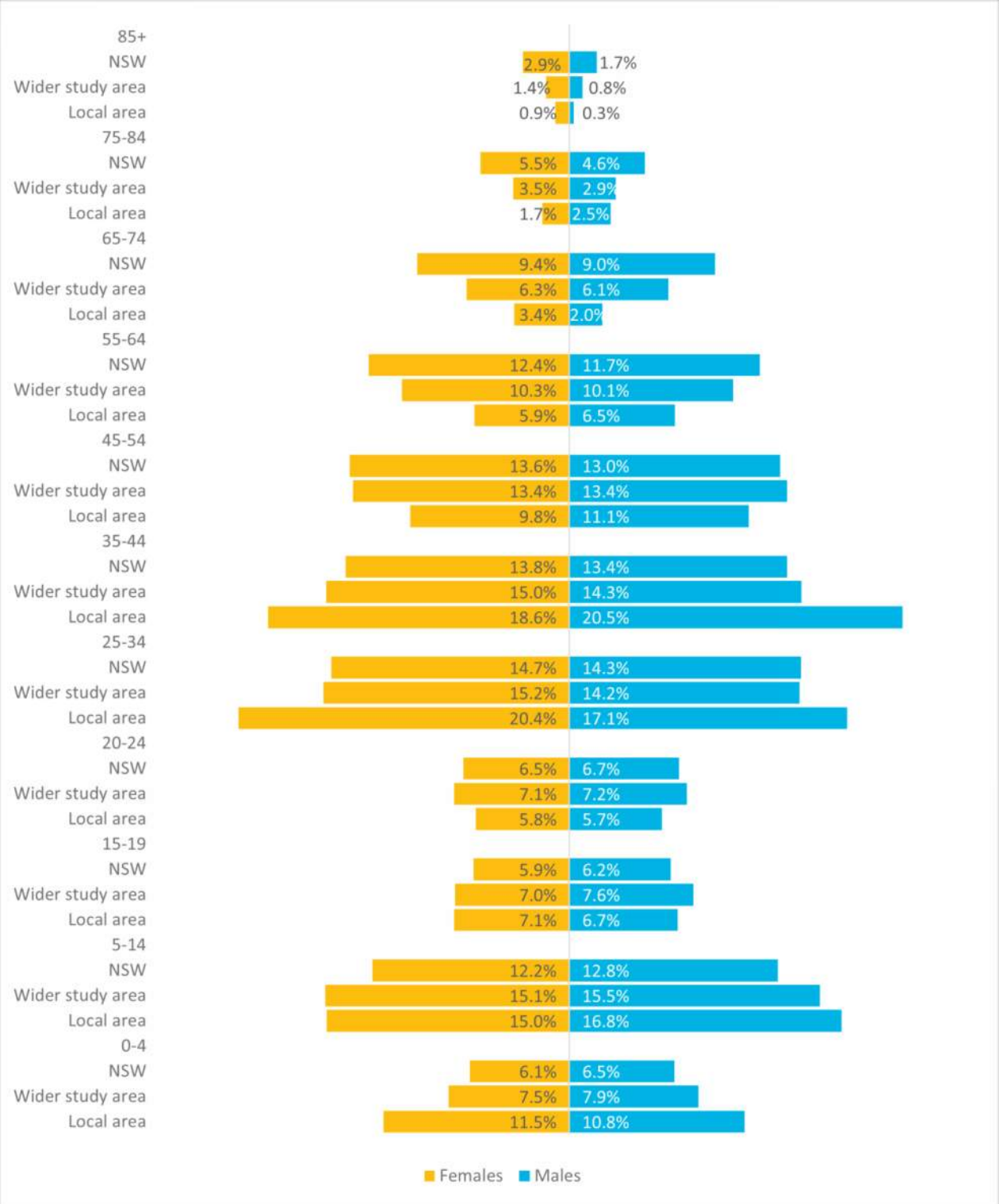
In the local area, the largest age group is persons aged 35–44 years (19.6%), followed by 25–34 years (18.8%), and 5–14 years (15.9%), suggesting a significantly younger population in the local area compared to NSW. This is also reflected in the smaller proportion of persons aged 55 years and older in the local area (11.6%). This is also reflected in the median ages of the local area (31 years) and wider study area (33 years), which are significantly younger than the median age across NSW (38 years). The younger population in the study area is likely reflective of trends of young families migrating to outer suburbs after having children as larger housing options are more affordable in these areas (Wade 2018). Outer Sydney suburbs are particularly attractive for young migrant families for similar reasons of affordability (Birrell and Healy 2018) (see Section A.3.2). The age group distribution and median age for the study area is presented in Table A.4.

Table A.4 Aged group distribution and median age, 2016

	0–4 years	5–14 years	15–19 years	20–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65–74 years	75–84 years	85 years and older	Median age of persons 2016
Local area	11.2%	15.9%	6.9%	5.8%	18.8%	19.6%	10.5%	6.2%	2.7%	2.1%	0.6%	31
Wider study area	7.6%	15.1%	7.3%	7.1%	14.6%	14.5%	13.3%	10.1%	6.2%	3.1%	1.1%	33
NSW	**3.3%**	**12.3%**	**6.0%**	**6.5%**	**14.3%**	**13.4%**	**13.1%**	**11.9%**	**9.1%**	**5.0%**	**2.2%**	**38**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

The distribution of males and females in the local area is 49.6% male and 50.4% female (ABS 2016a). The largest demographic in the local area is males aged 35–44 (20.5%), followed by 25–34-year-old females (20.4%) and 35–44-year-old females (18.6%). This is reflective of the median age in the local area (31). The large proportion of females aged 25–44 is likely attributable to the trend of families with children migrating to outer suburbs as the median age of mothers in NSW is 31.5 years old, and more than half of all mothers in Australia are aged between 25–34 years (Kelly 2021; AIHW 2018) The distribution of the population by age and sex is presented in see Figure A.4.



Source: ABS 2016, Census of Population and Housing: General Community Profiles

Figure A.4 Population distribution, 2016

A.3.2 Aboriginal and Torres Strait Islander population

At the time of the 2016 Census, 0.3% of the total population within the local area and 1.5% of the wider study area population identified as Aboriginal and/or Torres Strait Islander. This proportion is significantly lower than the proportion of the population who identify as Aboriginal and/or Torres Strait Islander in NSW (3.0%), particularly within the local area. The proportion of Aboriginal and/or Torres Strait Islander persons in the study area is presented in Table A.5.

Table A.5 Indigenous persons as percentage of population, 2016

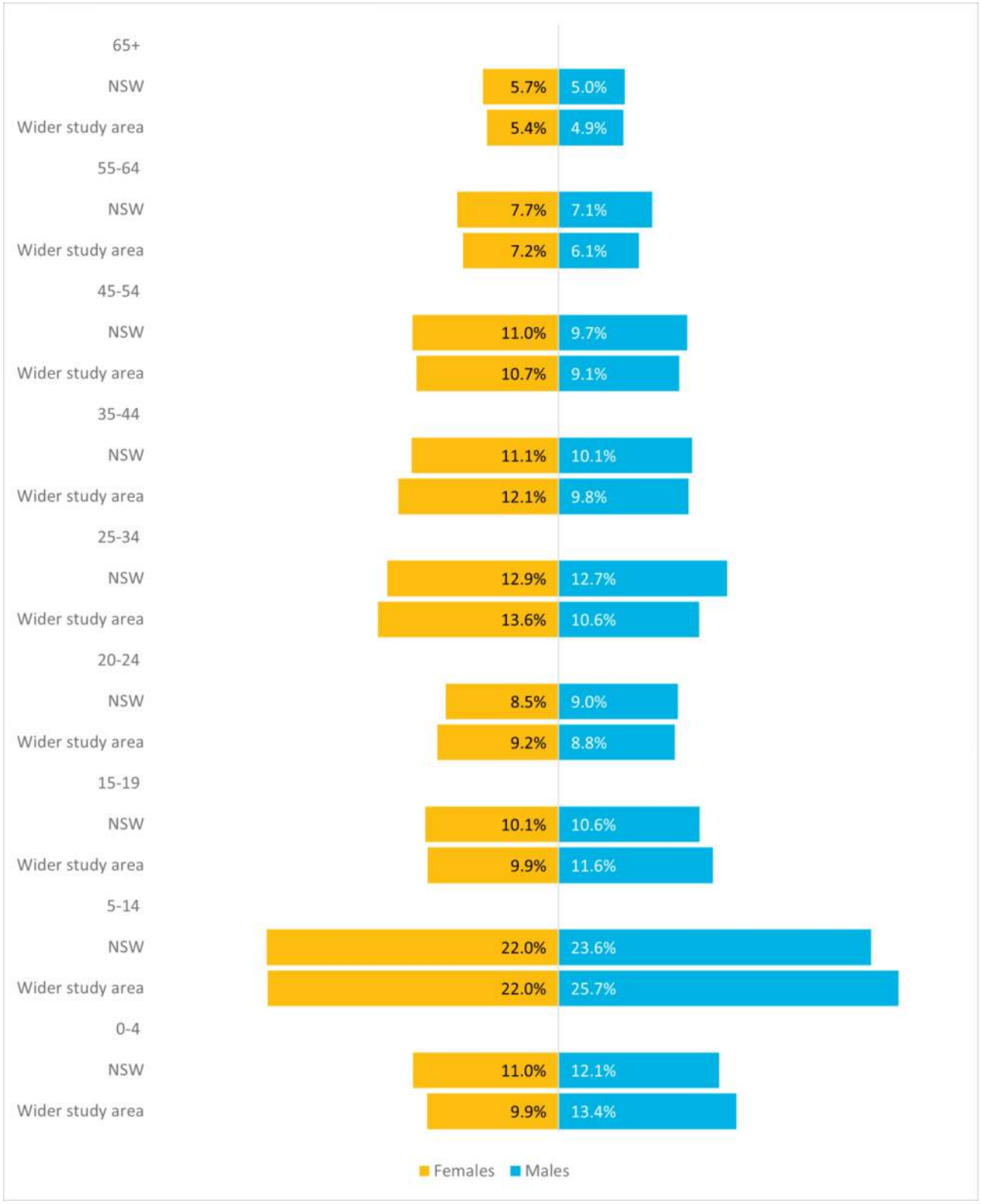
Location	Indigenous population
Local area	0.3%
Wider study area	1.5%
NSW	**3.0%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

Overall, the distribution of Indigenous males and females in the local area is even (50% males and 50% females). However, data relating to the age distribution and sex of persons who identify as Aboriginal and/or Torres Strait Islander is not available for the local area.

The distribution of Indigenous males and females in the wider study area is relatively even as well. However, there is some slight variation amongst age distributions. The largest demographic in the Indigenous community in the wider study area is children (aged 5–14 years). Compared to the total population of the wider study area, there is a much smaller proportion of persons aged 65 years and older who identify as Aboriginal and/or Torres Strait Islander, as well as a stark decrease in persons aged 15–24 years. The Indigenous population's smaller proportion of the population (both males and females) living beyond 65 years aligns with the lower life expectancy among Indigenous Australian's nationally that is particularly acute in Indigenous males (AIHW 2019), with much of this gap is explained by the relationships between increased socio-economic disadvantage, worsened mental health outcomes, and related health risk behaviours, including greater proportions of smoking and alcohol use (AHMAC 2017).

The distribution of persons who identify as Aboriginal and/or Torres Strait Islander within the wider study area and NSW is presented in Figure A.5.



Source: ABS 2016, Census of Population and Housing: General Community Profiles

Figure A.5 Population distribution of Aboriginal and/or Torres Strait Islander persons, 2016

A.3.3 Socio-economic advantage and disadvantage

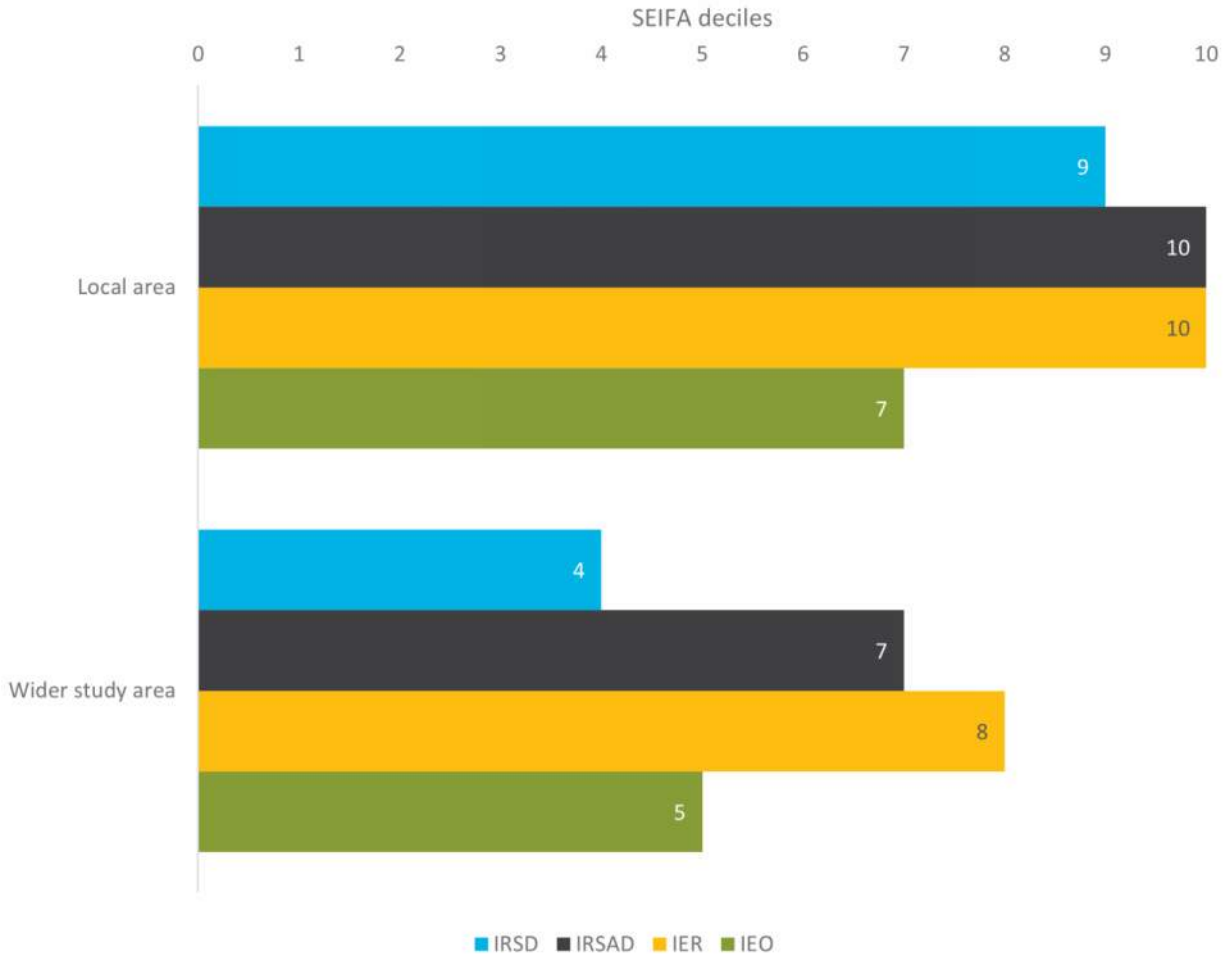
The level of disadvantage or advantage in the population is indicated in the Socio-Economic Indexes for Areas (SEIFA) which focuses on low-income earners, relatively lower education attainment, high unemployment and dwellings without motor vehicles. SEIFA is a suite of four summary measures that were created from Census data, including:

- the Index of Relative Socio-Economic Disadvantage (IRSD);
- the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD);
- the Index of Education and Occupation (IEO); and
- the Index of Economic Resources (IER).

Each index is a summary of a different subset of Census variables and focuses on a different aspect of socio-economic advantage and disadvantage. Low rankings are deemed most disadvantaged and high rankings least disadvantaged within a decile ranking system where the lowest 10% of areas are given a decile number of 1 and the highest 10% of areas are given a decile number of 10. The rankings of the communities within the study area for each of the four summary measures are demonstrated in Figure A.6.

According to the 2016 SEIFA, there is some variation in terms of socio-economic advantage and disadvantage between communities within the local area and wider study area. The local area is at least in the top 70% of suburbs in NSW in terms of advantage, as Edmondson Park is in the 7th or higher decile for all indexes (ABS 2016b). The local area falls within the 9th decile for IRDS, the 10th decile for IRSAD and IER, and the 7th decile for IEO. Decile rankings of 9 and 10 for IRDS and IRSAD (respectively) means that compared to other suburbs across NSW, there are likely a higher proportion of households with high income, people with qualifications, and people in skilled occupations in the local area, as well as a smaller proportion of households with low incomes, or a smaller proportion of people in low-skilled occupations. This is evidenced in findings in Section A.5 and Section A.6. Ranking in the 10th decile for IER suggests that compared to other suburbs across NSW, there are a greater proportion of households in the local area with high income or households paying high rent, as reflected in a higher weekly median rent in the local area compared to NSW (see Section A.7). This also suggests a larger proportion of households with high income, as is the case in the local area (see Section A.6). Ranking in the 7th decile for IEO suggests that there may be more people with qualifications and more people in skilled occupations, as well as fewer people without qualifications or in low-skilled occupations. This is consistent with data shown in Section A.5 and A.6. The rankings of the communities within the study area for each of the four summary measures are demonstrated in Figure A.6.

Within the wider study area, the SEIFA scores indicate that these areas experience a medium amount of overall socio-economic disadvantage and advantage, with rankings of 4–8 across each of the SEIFA indexes. This could indicate that these areas likely have a medium amount of people with higher education qualifications and working in skilled occupations, and a more equal amount of people with high and low incomes. However, a ranking of 8 for the IER in the wider study area indicates that there is relatively greater access to economic resources in the overall area, which could indicate more households earning higher incomes and owning their own homes compared to other LGAs within NSW.



Source: ABS 2016, 2033.0.55.001 – Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA)

Figure A.6 SEIFA deciles in the study area, 2016

A.3.4 Cultural diversity

Compared to NSW averages, the local area and wider study area have a higher level of cultural diversity. In 2016, 46.7% of the local area population was Australian born. Australian-born persons also constitute a much lower proportion of the population in the wider study area (51.7%) compared to NSW (65.5%). The local area and wider study area also have a much lower proportion of intergenerational Australians, with only 13.8% of people in the local area and 21.4% of people in the wider study area with both parents born in Australia, compared to 45.4% across NSW (ABS 2016a). The local area has a high proportion of first- and second-generation persons from India, Fiji, and the Philippines (ABS 2016a). A significantly larger proportion of households in the local area (67.0%) and wider study area (52.2%) speak a non-English language at home compared to 26.5% in NSW. The high proportion of migrants in the local area and wider study area is representative of the preference of migrants within Australia to settle in major cities and surrounding suburbs over regional areas (Australian Government 2019). The preference of migrants for settlement in outer Sydney areas is largely driven by the long-term multicultural history of the region, with new migrants choosing to settle in areas with existing migrant communities. Cultural diversity in the study area is presented in Table A.6.

Table A.6 Country of birth, 2016

	Born in Australia	Both parents born in Australia	English only spoken at home	Households where a non-English language is spoken
Local area	46.7%	13.8%	36.1%	67.0%
Wider study area	51.7%	21.4%	41.4%	57.2%
NSW	**65.5%**	**45.4%**	**68.5%**	**26.5%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

A.3.5 Vulnerable groups

i Disability

The population within the local area generally requires less assistance than that in the rest of NSW, while the population within the wider study area has a greater need for assistance compared to NSW. In the local area, 3.3% of the of people have a need for assistance in one or more of the three core activities of self-care, mobility and communication due to a long-term health condition (lasting 6 months or longer), a disability (lasting 6 months or longer), or old age. The reduced need for assistance in the local area is likely attributable to its younger population compared to NSW. There is an abundance of social infrastructure available in the local area, including disability services and aged care facilities with high level care available (Liverpool City Council 2020; Healthdirect 2021; Ask Izzy 2021). Core activity need for assistance in the study area is demonstrated in Table A.7.

Table A.7 Core activity need for assistance, 2016

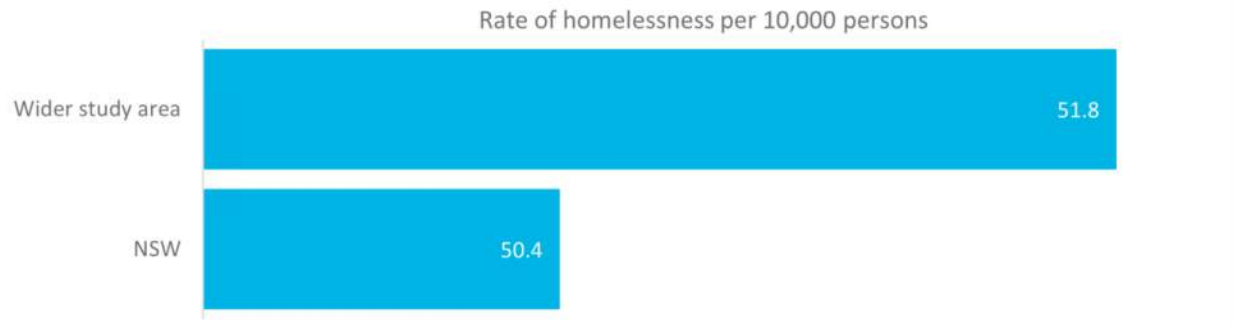
	Has need for assistance	Does not have need for assistance
Local area	3.3%	89.6%
Wider study area	6.2%	86.3%
NSW	**5.4%**	**87.7%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

ii Homelessness

Homelessness can be caused by existing poor physical or mental health reducing a persons' ability to earn an adequate income to support themselves (AHRC 2021). Homelessness can also lead to health problems including poor nutrition, depression, substance abuse, poor dental health, and mental health conditions (AHRC 2021). For homeless persons, hardships with finances, transport, identification, Medicare, and difficulty with appointment maintenance/treatment plans make accessing health care services more difficult than the average person (AHRC 2021). As such, homeless persons are at greater risk of being negatively affected by potential impacts on livelihoods and health and wellbeing.

Rates of homelessness are not available for the local area. According to the 2016 Census estimations on homelessness, rates of homelessness in the wider study area are slightly higher than NSW rates, with a rate of 51.8 persons per 10,000 in Liverpool LGA. Although these rates are higher than the NSW average of 50.4 persons per 10,000, they are not significantly higher. Rates of homelessness in the study area are presented in Figure A.7.



Source: ABS 2016, 2049.0 – Census of Population and Housing: Estimating Homelessness

Figure A.7 Rates of homelessness per 10,000 persons, 2016

A.4 Community culture, values, and aspirations

The community vision as described by Liverpool City Council is for Liverpool City to be "rich in nature, rich in opportunity, and creating community". There is a dedication to values that promote cooperation and equity, the sustainable ecological and economic development of the region, and civic leadership (Liverpool City Council 2017).

A.4.1 Indigenous history

The Darug and Tharawal Aboriginal peoples are recognised as the traditional owners of the area known as Liverpool LGA.

The study area lies at the border of the land formerly occupied by the Darug and Tharawal indigenous people, where the Georges River formed a natural border between these groups. Tharawal country extended from Botany Bay in the north and as far south as the Shoalhaven River and east from Campbelltown to the coast, and Darug country encompassed Parramatta through to the Blue Mountains and from the Hawkesbury River in the north to Appin in the south, respectively. The many rivers acted as natural demarcation of the areas and the flat terrain of the Cumberland Plain was favourable to the livelihood of the indigenous peoples (EMM 2020).

The central location and ease of movement through this area thanks to suitable topography meant that this country was a frequented by travelling groups and used as a place of meeting. The Cumberland Plain was a point of first contact between many Aboriginal people and the European colonisers, the same environmental factors that supported Aboriginal people also made for favourable lands for settlement and agriculture (EMM 2020).

The region is a key centre of contact history including the Cumberland Plain War and Appin Massacre. The area was not only a site of conflict but also served as an important reconciliation place even as early as 1805 during a meeting organised by the Reverend Samuel Marsden and the local tribes in a bid to cease the hostilities between settlers and Aboriginals (EMM 2020).

In the late eighteenth-century, smallpox and other European diseases are likely to have wiped out a significant percentage of Aboriginal people (>50%). Traditional burial practices broke down and clans merged as entire communities were taken by the virus (Hunter 1793). This large-scale decrease in population accounts for the discrepancies seen between the distribution of archaeological remains and the ethnographic accounts of Aboriginal populations.

The Tharawal Local Aboriginal Land Council manages the range of support services and serves the Aboriginal and Torres Strait Islander communities in the study area.

A.4.2 Non-Indigenous history

The Georges River was first mapped by James Cook in 1770 (Mulhearn 2015) and land grants in the Liverpool region were released from 1798 after Bass, Flinders and William Martin mapped the River up to Casula in 1795. By around 1808 two large landholdings had been claimed along the River, one from Voyager Point to Prestons, and the other around Salt Pan Creek (Mulhearn 2015). One of the largest holdings of the district was granted to Thomas Moore in 1809. Moore's holding, later becoming the suburb of Moorebank, functioned as a pastoral and agricultural property. Moore's property was subdivided after his death in 1840, however, constant flooding and bad soils meant the area was not heavily occupied.

Edmondson Park was rezoned for urban development in 2008. It was one of the first areas to be planned in the NSW Government's South West Growth Area (Liverpool City Council). Over the next 10–15 years, the suburb is anticipated to become home to approximately 25,000 new residents, who will live in about 8,200 homes (Liverpool City Council). According to Liverpool City Council, Edmondson Park will offer an urban lifestyle with plenty of open green spaces to encourage cycling and walking. The area is well supported by public transport with several regional bus routes and direct train services from Edmondson Park Station, connecting to key regional job hubs of Liverpool and Parramatta, as well as direct services to the Sydney CBD.

The privately developed town centre, known as Ed.Square, will include a fresh food market hall and supermarket, eat street, shops, a cinema and medical centre (Liverpool City Council).

A.5 Social Infrastructure

A.5.1 Childcare and early learning

In the local area there are four childcare services available providing a total of 344 places for enrolment (ACECQA 2021). The services available include long day care, preschool, and outside of school hours care (OSHC). All of the available services are centre-based service providers. Residents within the local area would also access childcare services available in the wider study area. The childcare services available in the local area are presented in Table A.8.

Table A.8 Childcare services, 2019

Area	Service name	Type	Service	Number of places
	Edmondson Park Education and Care Pty Ltd	Centre	Long day care/Preschool	60
	Organic Seedlings Education	Centre	Long day care/Preschool	45
	St Francis College Out of School Hours Edmondson Park	Centre	OSHC	150
	The Grove Academy – Edmondson Park	Centre	Long day care	89

Source: ACECQA 2021

A.5.2 Education

Within the local area in 2016 there was a larger proportion of persons attending preschool (6.7%) and primary school (31.8%) compared to the wider study area (5.0% and 27.6% respectively) and the whole of NSW (5.7% and 26.1% respectively) (ABS 2016a). The larger proportion of preschool and primary school students likely reflects the younger population of the local area compared to NSW (see Section A.3), and the higher proportion of family households within the local area (see Section A.7.1). However, the proportion of students attending secondary school was relatively even throughout the study area.

Within the local area, there was a slightly smaller proportion of persons attending both technical or further education (4.5%) and university or other tertiary institution (15.9%) compared to NSW (6.2% and 16.2% respectively). Educational institution attendance in the study area, as a percentage of total attendees, is demonstrated in Table A.9.

Table A.9 Educational institution attendance, 2016

	Preschool	Infants/primary	Secondary	Technical or further educational institution	University or other tertiary institution	Other type of educational institution
Local area	6.7%	31.8%	21.8%	4.5%	15.9%	18.1%
Wider study area	5.0%	27.6%	22.8%	5.9%	13.5%	22.6%
NSW	**5.7%**	**26.1%**	**20.1%**	**6.2%**	**16.2%**	**23.0%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

i Primary and secondary

There is one combined non-government school in the local area. The school ranges from kindergarten to Year 10, with 867 student enrolments. It is assumed that residents within the local area currently access primary and secondary school services outside of the local area. Information on primary and secondary schools in the local area is presented in Table A.10.

Table A.10 Schools in the local area, 2018

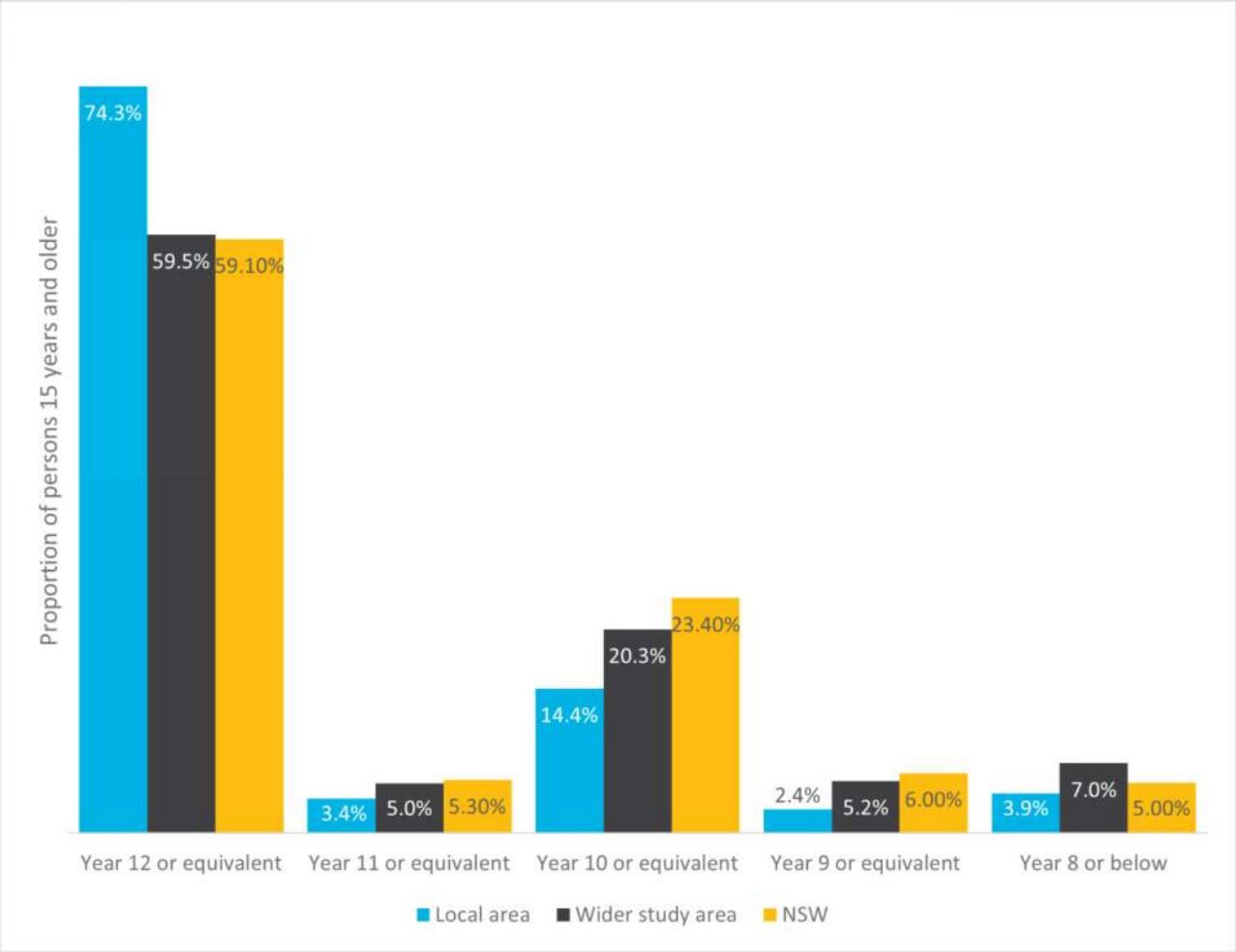
Area	School	Sector	Type	Year range	Student enrolments	Full-time equivalent teaching staff
Local area	St Francis Catholic College	Non-government	Combined	K – 10	867	65.0

Source: myschool.edu.au

The local area has a significantly larger proportion of persons who have completed Year 12 or equivalent (74.3%) compared to the wider study area (59.5%) and NSW (59.1%). The highest level of schooling completed within the study area is presented in Table A.11 and Figure A.8.

Table A.11 Highest level of schooling completed for persons 15 years and over, 2016

	Year 12 or equivalent	Year 11 or equivalent	Year 10 or equivalent	Year 9 or equivalent	Year 8 or equivalent
Local area	74.3%	3.4%	14.4%	2.4%	3.9%
Wider study area	59.5%	5.0%	20.3%	5.2%	7.0%
NSW	**59.1%**	**5.3%**	**23.4%**	**6.0%**	**5.0%**



Source: ABS 2016, Census of Population and Housing: General Community Profiles

Figure A.8 Highest level of schooling completed for persons 15 years and older, 2016

ii Tertiary

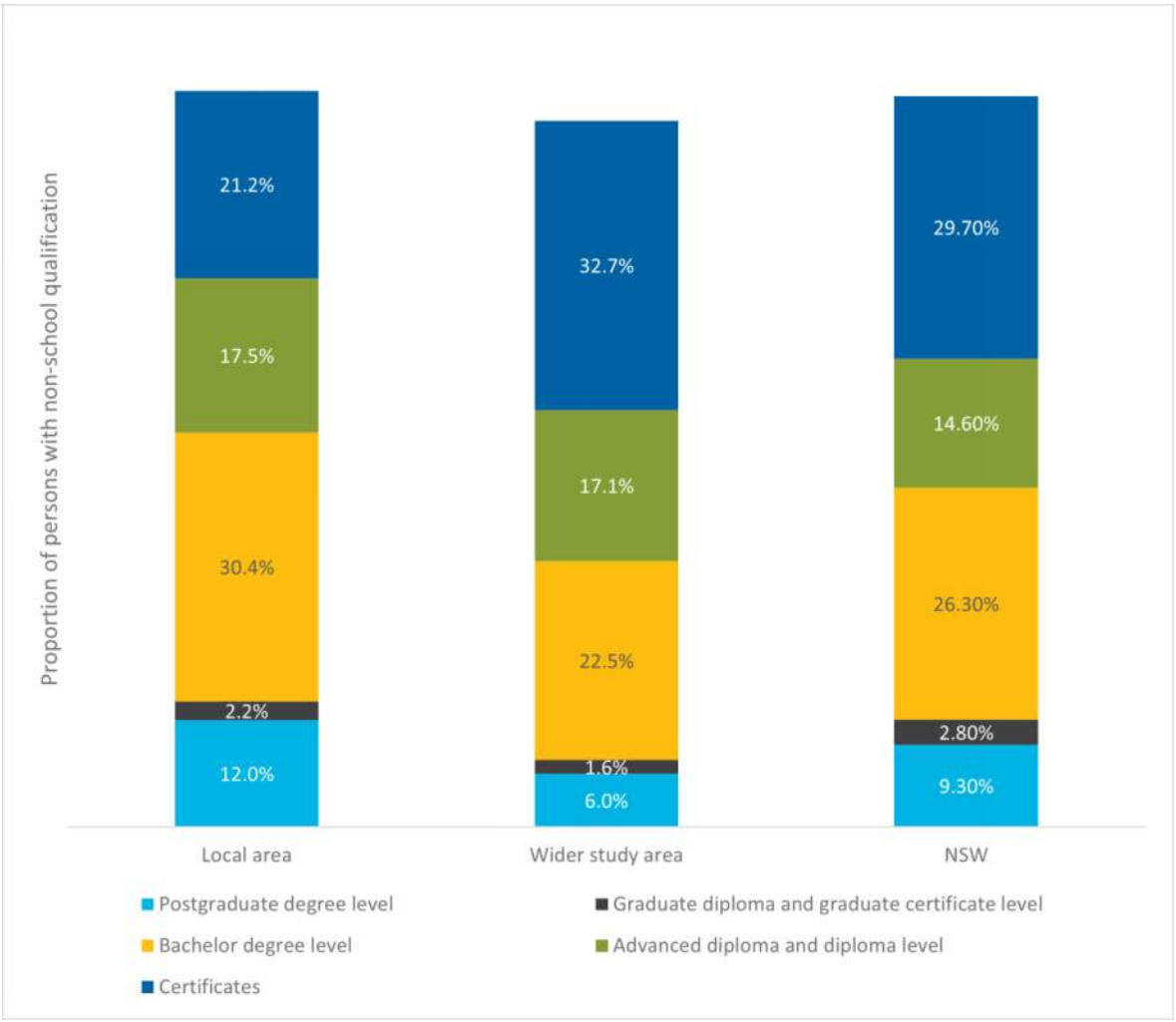
There is no University or TAFE located within in the local area. However, there are tertiary institutions in surrounding suburbs within Liverpool LGA and Campbelltown LGA. They include:

- Western Sydney University Liverpool City Campus – Liverpool;
- University of Wollongong South Western Sydney Campus – Liverpool;
- Western Sydney University Campbelltown Campus – Campbelltown;
- TAFE NSW – Liverpool;
- TAFE NSW – Miller;
- TAFE NSW – Macquarie Fields; and
- TAFE NSW – Campbelltown.

Bachelor degree level qualifications comprise the largest proportion of non-school qualifications held by people over 15 years in the local area (30.4%). This may be reflective of a trend of mostly skilled migrants who have arrived in Australia through a skilled migration visa, who have intended to migrate near a capital city and have settled in a more affordable surrounding suburb. Non-school qualifications in the study area are presented in Table A.12 and Figure A.9.

Table A.12 Proportion of persons over 15 with a non-school qualification, 2016

	Postgraduate degree level	Graduate diploma and graduate certificate level	Bachelor degree level	Advanced diploma and diploma level	Certificates
Local area	12.0%	2.2%	30.4%	17.5%	21.2%
Wider study area	6.0%	1.6%	22.5%	17.1%	32.7%
NSW	**9.3%**	**2.8%**	**26.3%**	**14.6%**	**29.7%**



Source: ABS 2016, Census of Population and Housing: General Community Profiles

Figure A.9 Proportion of persons over 15 with a non-school qualification, 2016

A.5.3 Health services

The local area and wider study area are located within the South Western Sydney Local Health District.

i Hospital service

The South Western Sydney Local Health District (LHD) looks after all public hospitals and healthcare facilities provisions in south western Sydney, which covers a population of approximately 966,450 people from Bankstown to Bowral.

The District also operates 14 major health centres providing prevention, early intervention and community-based treatment, palliative care and rehabilitation services. The public hospital services within the South Western Sydney LHD are:

- Bankstown-Lidcombe;
- Bowral & District;
- Camden;
- Campbelltown;
- Fairfield; and
- Liverpool.

The closest public hospital service to the local area is Liverpool Hospital. It is located approximately 50 minutes from the Sydney CBD and is a major health service for south-western Sydney, providing "23 operating theatres, capacity for 877 beds, diagnostic and imaging services, emergency and trauma care, maternity, paediatric, cancer care, mental health, ambulatory care, allied health and medical and surgical services from birth to aged care" (South Western Sydney Local Health District 2018). There are also three private hospitals close to the local area, two located in Liverpool and one in the surrounding suburb of Chipping Norton. The details of the closest hospitals to the local area are presented in Table A.13.

Table A.13 Hospitals, 2021

Hospital	Location	Type	Number of beds
Liverpool Hospital	Liverpool	Public	877
Liverpool Eye Surgery	Liverpool	Private	13
Sydney Southwest Private Hospital	Liverpool	Private	87
Liverpool Day Surgery	Chipping Norton	Private	23

Source: myhospitals.gov.au

As shown in Table A.14, the total number of patients admitted to Liverpool Hospital has increased each financial year from 2011–2012 to 2016–2017, growing from 68,596 to 86,624. Although there is variation in the trends (increase or decrease) in the number of admissions for each admission category, the average trend for each is an increase in the number of admissions (excluding slight decreases in rehabilitation and other acute non-emergency). The most significant increases have been in the number of patients admitted for mental health, medical emergency, and palliative. The increases in number of admissions aligns with the trends of increasing population within the local area and wider study area (see Section A.3).

Table A.14 Number of admissions to Liverpool Hospital, 2011–2017

Admission category	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017
Childbirth	3,098	3,134	3,224	3,349	3,498	3,336
Surgical (emergency)	4,254	4,459	4,251	4,539	4,552	4,497
Surgical (non-emergency)	8,196	8,290	7,896	7,737	8,274	8,496
Medical (emergency)	21,441	24,971	27,980	29,895	31,239	35,090
Medical (non-emergency)	26,687	25,134	25,065	27,091	29,077	28,619
Other acute (emergency)	1,179	1,146	1,120	1,168	1,341	1,488
Other acute (non-emergency)	1,724	1,781	1,742	1,574	1,572	1,639
Mental health	1,057	1,126	1,444	1,720	1,527	2,182
Rehabilitation	664	776	1,187	567	445	459
Palliative	137	227	124	499	524	536
Other subacute and non-acute	159	205	203	201	277	282
Total	**68,596**	**71,249**	**74,236**	**78,340**	**82,326**	**86,624**

Source: myhospitals.gov.au

ii Primary health care services

a General practitioner services

Within the South Western Sydney Local Health District, there are 1,045 general practitioners (GP) and 431 GP practices which serves a current population of 966,450 people across seven LGAS.

There are not any community health services located within the local area. However, there are community health services in the wider study area which service the local area. These include:

- Budyari (Miller) Community health Centre – Miller;
- Hoxton Park Community Health Centre – Hoxton Park;
- Liverpool Community Health Centre – Liverpool; and
- Liverpool Sexual Health Clinic – Liverpool.

These centres offer a range of community health services, including: child, youth & family services, Aboriginal services, community health nurse services, community Paediatrics, psychology, community nutrition, counselling, and sexual assault services (South Western Sydney Local Health District 2018). Persons living in Liverpool LGA can also access services from the Fairfield Community Health Centre in Fairfield LGA.

Although there are not any GP services immediately located the local area, there are many GPs and community health services available in surrounding suburbs and in the wider study area which offer Aboriginal health services, maternal, child and family health services, aged care services, mental health services, and other specialist services. There are also many additional GPs and community health centres in surrounding suburbs outside of the study area, but still within the South Western Sydney Local Health District, as well as an abundance of mental health and specialist health services.

A.5.4 Emergency services

The number of available emergency services in the local area is shown in Table A.15. The local area is serviced by the emergency services located in the wider study area. There are two police stations servicing the local area which are located in the wider study area. There is also one NSW Ambulance Superstation in Liverpool within the wider study area. There is also one fire and rescue stations and one SES local unit which service the local area.

Table A.15 Emergency services in the local area, 2021

	Police station	Ambulance station	Fire and rescue station	State Emergency Service
Local area	x	x	x	x
Wider study area	2	1	1	1

Source: police.nsw.gov.au; ambulance.nsw.gov.au; fire.nsw.gov.au; ses.nsw.gov.au

A.5.5 Transport infrastructure

Transportation in the local area is facilitated through the provision of four movement networks: a public transport network, a bike network, a pedestrian network, and a road network.

i Modes of travel

Based on the 2016 Census the predominant mode of travel to work in the local area is by car, either as the driver or as a passenger (72.7%), which is greater than the NSW average (64.6%), but consistent with the wider study area (74.4%). Public transport as a mode of travel is higher within the local area (19.9%) in comparison to greater NSW (16.0%) which is likely indicative of the availability of public transport services within the Project area and surrounding comprehensive public transport system compared to more regional and remote areas across NSW. Modes of travel to work in the study area are summarised in Table A.16.

Table A.16 Modes of travel, 2016

	By car (as driver, as passenger)	By public transport (train, bus, ferry, tram)
Local area	72.7%	19.9%
Wider study area	74.4%	13.9%
NSW	**64.6%**	**16.0%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

ii Public transport

In the local area there is a train station from which residents and visitors can access train, bus, and taxi services. Edmondson Park station is equipped with Opal card top up or single ticket machine, payphone, toilets, baby change table, wheelchair accessible car space, commuter car park, bike racks, emergency help point, taxi rank, and kiss and ride stopping area. The commute time from Edmondson Park Station is between 46 minutes with one transfer and 1 hour and 9 minutes on one line. The Station is wheelchair accessible and has a hearing loop, tactile surfaces, and PA for announcements.

The Edmondson Park Station provides three train routes travelling to and from Parramatta or Leppington to the Sydney CBD, Leppington to Richmond, and Macarthur to the Sydney CBD via the Airport or Sydenham (TfNSW 2021a). The bus routes running from Edmondson Park Station include Edmondson Park to/from Ingleburn, Edmondson Park to Carnes Hill, Liverpool to/from Ingleburn via Prestons and Edmondson Park, and Liverpool to/from Leppington (night service) (TfNSW 2021a).

The local area is roughly an 18-minute drive to Liverpool Station, from which there are 3 different train routes travelling to and from Campbelltown to Richmond, Parramatta or Leppington to the Sydney CBD, or Liverpool or Lidcombe to the City (TfNSW 2021b). The commute time from Liverpool Station to Central Station is approximately 56 minutes. Long distance services to Brisbane and Melbourne can be accessed from Sydney Central Station.

iii Road network

The local area is bordered by three main arterial roads: Camden Valley Way/Hume Highway runs along the northern side of the suburb, providing access north-east to Liverpool and south-west to Narellan; South Western Freeway/Hume Motorway runs along the eastern side, providing access south to Campbelltown; and Campbelltown Road runs along the south-eastern side, providing access south to St Andrews and north-east to Hume Highway towards Liverpool. Edmondson Park Station is accessible via Bernera Road to Soldiers Parade from Camden Valley Way in the north or Campbelltown Road south.

iv Air

Sydney Kingsford Smith Airport is located approximately 25 km from the local area. Sydney Kingsford Smith Airport offers both domestic and international services. Transport options to and from the airport include a bus and train line, rental car services, taxis, ride-sharing services (eg Uber), and Jayride shared shuttle and private shuttle services.

A.5.6 Community services

Community services located in the wider study area service the local area. These services are mainly concentrated in Liverpool in Liverpool LGA. They include aged care and senior services, children's services, youth services, disability and accessibility services, housing and homelessness services, domestic violence services and family services, Aboriginal services, migrant and refugee services, and employment services (Liverpool City Council 2020; Healthdirect 2021; Ask Izzy 2021). A summary of community services that service the local area is presented in Table A.17.

Table A.17 Community services, 2020

	Aboriginal services	Child and family services	Youth services	Housing and homelessness services	Employment services	Disability services	Aged care services	Domestic violence services
Wider study area	✓	✓	✓	✓	✓	✓	✓	✓

Source: Liverpool City Council 2020; Healthdirect 2021; Ask Izzy 2021.

A.5.7 Recreation services

Recreational services in the local area are limited to one council park (Clermont Park). There is also one national park (Edmondson Regional Park) located just beyond the suburb border in Denham Court along with several other council parks in surrounding suburbs.

The wider study area offers a multitude of sport and recreation services. These include leisure and aquatic centres, a variety of sports fields and tennis courts, parks and playgrounds, waterways and lakes, sport stadiums, and golf clubs. Citywide events are also held in the wider study area.

There are also a range of recreation and outdoor areas available in the wider study area and surrounding. These include additional scenic walking tracks and lookouts, The Bellbird Walking Track, Anzac Creek, and the Georges River.

A.6 Workforce and income

A.6.1 Employment

At the time of the 2016 Census the unemployment rate in the local area (6.1%) was fairly consistent with (though slightly lower than) the NSW rate of 6.3%. However, the unemployment rate in the wider study area (7.5%) was higher than both the local area and NSW (ABS 2016a). The labour force participation rate in the local area is also higher than the rates in the wider study area and NSW. Youth unemployment in the local area (17.5%) and wider study area (15.3%) is also higher compared to the NSW average of 13.6%. Unemployment and labour force participation rates are presented in Table A.18.

Table A.18 Unemployment and labour force participation rates, 2016

	Unemployment rate	Youth unemployment rate	Labour force participation rate (15 years and older)
Local area	**6.1%**	**17.5%**	**67.2%**
Wider study area	7.5%	15.3%	57.4%
NSW	**6.3%**	**13.6%**	**59.2%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

In the local area the top three occupations are professionals (23.9%), clerical and administrative workers (14.2%), and technicians and trades workers (11.8%). The high proportion of professional in the local area is consistent with NSW trends, and reflects the high proportion of Bachelor degree level qualifications and postgraduate degree qualifications in the local area (see Section A.5.2ii) as 75% of professions within Australia hold a Bachelor degree or higher qualification (National Skills Commission 2020). Occupations within the study area are presented in Table A.19.

Table A.19 Occupations, 2016

Location	Managers	Professionals	Technicians and trades workers	Community and personal service workers	Clerical and administrative workers	Sales workers	Machinery operators and drivers	Labourers
Local area	11.4%	23.9%	11.8%	8.7%	14.2%	9.8%	9.7%	7.7%
Wider study area	10.0%	17.0%	14.6%	10.0%	16.1%	9.2%	10.4%	10.4%
NSW	13.5%	23.6%	12.7%	10.4%	13.8%	9.2%	6.1%	8.8%

Source: ABS 2016, Census of Population and Housing: General Community Profiles

A.6.2 Income

The individual median weekly income of persons in the local area ($820) is significantly higher than the wider study area ($584) and NSW ($664) (ABS 2016a). Median weekly household income follows the same trend at $2,275 in the local area compared to $1,550 in the wider study area and $1,486 in NSW. The higher median weekly household and individual incomes in the local area is reflective of the area's SEIFA scores, which suggest higher levels of advantage and lower levels of disadvantage compared to other suburbs across NSW (see Section A.3.3). Median incomes in the study area are presented in Table A.20.

Table A.20 Median income, 2016

	Individual (median income $ weekly)	Household (median income $ weekly)
Local area	820	2,275
Wider study area	584	1,550
NSW	664	1,486

Source: ABS 2016, Census of Population and Housing: General Community Profiles

A.7 Housing and accommodation

A.7.1 Housing type and structure

The most common housing type and structure within the study area in 2016 was separate houses (97.6%), followed by semi-detached, row, terrace, or townhouse (1.6%) (ABS 2016a). The high proportion of occupied dwellings in the local area (92.5%) is consistent with the wider study area (95.2%) and greater NSW (90.1%), and reflects trends of urban sprawl in the outer suburbs of Sydney. Housing type and structure is presented in Table A.21.

Table A.21 Housing type and structure, 2016

	Separate house	Semi-detached, row or terrace house, townhouse	Flat or apartment	Other dwelling	Total private dwellings	Total occupied dwellings
Local area	97.6%	1.6%	0.0%	0.5%	623	92.5%
Wider study area	75.5%	10.5%	13.2%	0.2%	61,741	95.2%
NSW	**66.4%**	**12.2%**	**19.9%**	**0.9%**	**2,889,057**	**90.1%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

In 2016, most households were family households in the local area (94.5%), wider study area (82.7%), and NSW (72.1%) (ABS 2016a). Household composition in the study area is presented in Table A.22.

Table A.22 Household composition, 2016

Household type	Family households	Group households	Lone person households
Local area	94.5%	0.0%	**5.0%**
Wider study area	82.7%	1.8%	15.5%
NSW	**72.1%**	**4.2%**	**23.7%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

A.7.2 Tenure

At the time of the 2016 Census most dwellings in the local area were owned with a mortgage (55.4%). The significantly higher proportion of homes owned with a mortgage compared to the wider study area (38.1%) and NSW (32.2%). The proportion of homes owned outright throughout the local area is significantly lower compared to the wider study area (22.9%) and NSW (32.2%) (ABS 2016a). This reflects the newly developed nature of the local area, as young families moving to the area are likely recently established and have not had the time to pay off the mortgages that they have entered into to secure their housing. Tenure within the study area is presented in Table A.23.

Table A.23 Tenure (based on total private dwellings), 2016

	Owned outright	Owned with a mortgage	Rented	Other tenure
Local area	13.5%	55.4%	22.0%	0.0%
Wider study area	22.9%	38.1%	30.5%	0.7%
NSW	**32.2%**	**32.3%**	**31.8%**	**0.9%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

A.7.3 Mortgage repayment and rent

Rent and mortgage repayments constitute a significant proportion of household costs. The local area paid more for mortgage repayments ($2,643) each month in 2016 than the wider study area ($2,123) and NSW ($1,986) (ABS 2016a). Rent repayments were also more expensive in the local area ($560) than the wider study area ($370) and NSW ($380). Mortgage and rent repayments are presented in Table A.24.

Table A.24 Mortgage repayment and rent, 2016

	Mortgage repayments (median mortgage repayments $ monthly)	Rent payments (median rent $ weekly)
Local area	2,643	560
Wider study area	2,123	370
NSW	**1,986**	**380**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

Housing stress is considered to occur when households in the lower 40% of income distribution spend more than 30% of their income in housing costs (rents or mortgage repayments) (AHURI 2019). This can mean that local people who are not employed in high-paying jobs may be unable to afford local rents which can be pushed up by higher salaries. Housing affordability in the study area is demonstrated in Table A.25.

In the local area in 2016, a smaller proportion of persons (7.5%) had rent payments greater than or equal to 30% of household income than in the wider study area (12.0%) and NSW (12.9%) (ABS 2016a), which is likely reflective of the lower proportion of rental tenures in the local area (see Section A.7.2) as well as the oversupply of rental housing (see A.7.4). However, mortgage affordability was lower in the study area, with more households with mortgage repayments greater than or equal to 30% of household income in the local area (20.1%) and wider study area (12.2%) than in NSW (7.4%). This is indicative of the very high levels of home ownership with a mortgage within the local area (see A.7.2), as well as the increasing costs of housing in the local area (see Section A.7.4). Housing affordability in the study area is demonstrated in Table A.25.

Table A.25 Housing affordability, 2016

	Households where rent payments are greater than or equal to 30% of household income (%)	Households where mortgage payments are greater than or equal to 30% of household income (%)
Local area	7.5%	20.1%
Wider study area	14.5%	12.2%
NSW	12.9%	7.4%

Source: ABS 2016, *Quickstats*

A.7.4 Housing and rental market trends

i Mortgage repayment and rent trends

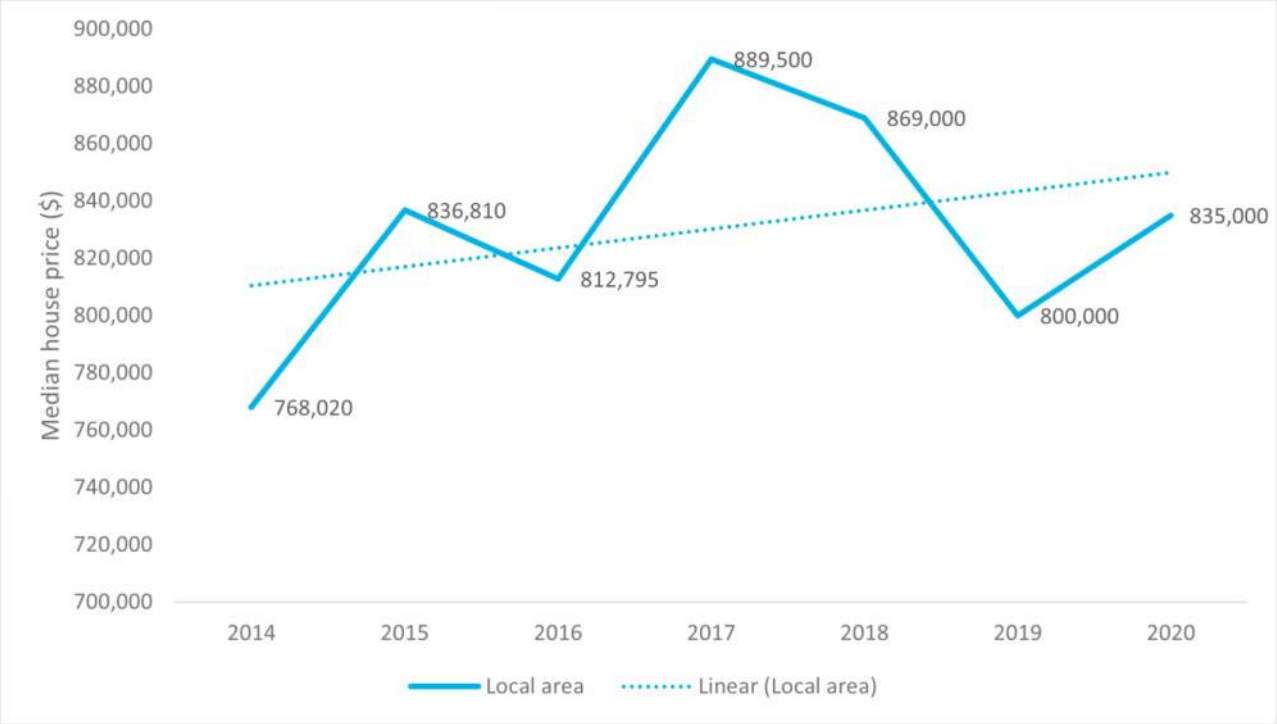
Mortgage repayment data for the local area was only available for 2006 and 2016. From 2006–2016 mortgage and repayment growth was significantly higher in the local area (82.3%) than in the wider study area (22.5%) NSW (30.9% and 81.0%) (ABS 2016a). From 2006–2011 the local experienced smaller growth in rent payments (20.0%) compared to the wider study area (51.3%) and NSW (42.9%). However, rent repayments in the local area increased significantly from 2011–2016, which reflects the rezoning of the local area for urban development in 2008 (see Section A.4) and subsequent increases in the population (see Section A.3). Mortgage and rent repayment growth rates in the study area are presented in Table A.26.

Table A.26 Mortgage repayment and rent growth rates, 2006 – 2016

	Mortgage repayments			Rent repayments	
	2006–2011	2011–2016	2006–2016	2006–2011	2011–2016
Local area	NA		82.3%	20.0%	86.7%
Wider study area	25.0%	-0.2%	22.5%	51.3%	25.4%
NSW	**31.4%**	**-0.4%**	**30.9%**	**42.9%**	**26.7%**

ii Median property price trends

Housing prices in the local area have generally been increasing from 2014–2020. Median housing price trends for the local area are demonstrated in Figure A.10.



Source: realestate.com.au/neighbourhoods

Figure A.10 Median house price, 2014–2020

iii Residential vacancy rates

On 14 April 2021, there were 190 properties for sale and 31 properties for rent in the local area (realestate.com.au 2020). Properties for sale in selected suburbs within the local area are presented in Table A.27

Table A.27 Properties for sale and rent in the local area, 14 April 2021

	Number of properties for sale	Number of properties for rent
Local area	190	31

According to REINSW, rental vacancy rates are traditional market indicators that "measure the proportion of residential properties vacant and available for rent at any point in time" (REINSW 2019). A higher vacancy rate indicates that there are a higher proportion of vacant (unoccupied) units, based on the total number of units in an area. Vacancy rates under 3% are low and indicate a tight rental market with an undersupply rental options while vacancy rates above 3% indicate an oversupply of rental options. A rental market with a vacancy rate of 3% is considered at equilibrium (Brewsters Property Group).

From March 2018–March 2021 the residential vacancy rate has been quite variable and consistently significantly above the equilibrium level of 3.0%. This indicates that there has been an extreme oversupply of rental housing in the local area, particularly from March 2018–January 2020 where vacancy rates had been above 15.0%. An oversupply of rental options in the area may be indicative of the rapid development of the local are, particularly since 2016 (see Section A.7.5). However, as the residential vacancy rate has generally been decreasing, this indicates increasing use of rental housing, which aligns with the trends of increasing population in the local area (see Section A.3). The residential vacancy rate trends for the local area (postcode 2147) are available in Figure A.11.

Source: SQM Research 2021, Residential Vacancy Rates, Postcode 2174.

Figure A.11 Residential vacancy rate trends, 2018–2021

A.7.5 New housing and rental supply

Housing forecasts for the wider study area predict a total increase of 87,220 required dwellings from 2016–2041 in response to population growth and shifting patters in household structure and number (DPIE 2019). Household requirements and population growth forecasts in the wider study area are presented in Table A.28.

Table A.28 Household requirement and population growth forecasts for the wider study area, 2016–2041

	2016	2021	2026	2031	2036	2041
Total population	211,983	251,322	291,187	328,447	380,085	441,427
Total households	66,436	80,626	95,176	108,857	127,510	149,744
Average household size	3.16	3.08	3.02	2.98	2.94	2.90
Required dwellings	69,556	NA	NA	NA	NA	156,776
Total dwelling change (required new dwellings)	--	--	--	--	--	87,220

Source: DPIE 2019, NSW 2019 Population projections

Notes: 1. The projected population has been determined by using the ABS ERP population count which takes Census counts of people where they usually live (accounting for interstate visitors and removing overseas visitors), adjusts for Census undercount and overcount using the Census Post Enumeration Survey (PES), adds in Australians who are temporarily overseas, and applies further demographic adjustments.
2. Average household size is taken from NSW DPIE 2019 but there is a mathematical discrepancy – average household size is not equal to the total population divided by the total number of households.

Recent growth in housing supply can be estimated from residential building approval figures for the wider study area. In the year ending June 2020, there were 1,160 approvals for new houses and 875 approvals for other residential buildings (equalling a total of 2,035 new residential building approvals for the year) in the wider study area. This represents a total decrease of 651 from the previous year. There have also been 1,534 residential buildings approved to be built in the local area in the financial year 2020–2021 as of February 2021 fiscal year-to-date (FYTD). Total residential building approvals in the wider study area are presented in see Table A.29.

Table A.29 Total residential building approvals in the wider study area, 2009–2020

Year (ending June 30)	Number			Changes on prior year		
	Houses	Other	Total	Houses	Other	Total
2020 – 2021 Feb FYTD	842	692	1,534	--	--	--
2019 – 2020	1,160	875	2,035	-222	-429	-651
2018 – 2019	1,382	1,304	2,686	-81	-352	-433
2017 – 2018	1,463	1,656	3,119	-156	-1,114	-1,270
2016 – 2017	1,619	2,770	4,389	-41	1,796	1,755
2015 – 2016	1,660	974	2,634	329	124	453
2014 – 2015	1,331	850	2,181	51	-53	-2
2013 – 2014	1,280	903	2,183	231	742	973
2012 – 2013	1,049	161	1,210	304	-127	177

Table A.29 Total residential building approvals in the wider study area, 2009–2020

Year (ending June 30)	Number			Changes on prior year		
	Houses	Other	Total	Houses	Other	Total
2011 – 2012	745	288	1,033	61	180	241
2010 – 2011	684	108	792	-7	-267	-274
2009 – 2010	691	375	1,066	306	275	581

Source: ABS 2021, 8731.0 – Building Approvals, Australia

To determine if residential building approvals in the local area will adequately support expected demand for new dwellings, the median of the total residential building approvals from 2009–2020, equalling 2,108 approvals per year, is used to create a reasonable estimation of residential building approvals into the future. The median of the total number of residential approvals from 2009–2020 provides a conservative estimate of the expected trends for building approvals in the local area into the future, as it takes into account the fluctuations present in the previous approval rates. Although it is possible that actual residential approval totals could be higher or lower, without complete certainty in the factors that are driving approval decisions year on year, the median provides a reasonable degree of confidence in these estimations. The projected residential building approvals from 2016–2041 are demonstrated in Table A.30 .

Table A.30 Estimates of future building approvals in the wider study area, 2016–2041

	2016–2021[1]	2021–2026[2]	2026–2031	2031–2036	2036–2041
Estimated average required new dwellings[3]	--	17,444	17,444	17,444	17,444
Estimated residential building approvals	13,763	10,540	10,540	10,540	10,540

Notes: 1. 2016–2021 includes number of actual approvals from 2016– 2020, and an estimate of 2,533 residential approvals per year from 2020–2021.
2. Projections from 2021–2041 are based on an estimate of 2,108 residential approvals per year.
3. Estimated average required new dwellings are calculated by dividing the difference between total required dwellings in the wider study area in 2016 and 2041 into four 5-year timeframes.

Based on the above calculations, estimated future residential building approvals in the wider study area may not accommodate estimated required new dwellings in the wider study area.

A.7.6 Tourist accommodation

There is abundant tourist accommodation available surrounding the local area within the wider study area. These accommodation options include hotels, motels, rental homes and apartments, bed and breakfasts, and caravan parks. Most short-stay accommodation options servicing the local area are located in the suburb of Liverpool.

A.8 Local business and industry

In the local area, the top industries of employment are healthcare and social assistance (18.8%%), transport, postal and warehousing (10.0%), and retail trade (9.1%). The significant number of healthcare providers and community/social service providers within the local area, as well as a large number of local shops operating within the area, is indicative of a more urban area. The industries of employment within the study area are available in Table A.31.

Table A.31 Industry of employment, 2016

Industry	Local area	Wider study area	NSW
Agriculture, Forestry and Fishing	0.7%	0.8%	**2.1%**
Mining	0.0%	0.2%	**0.9%**
Manufacturing	8.7%	9.3%	**5.8%**
Electricity, Gas, Water and Waste Services	1.0%	0.8%	**0.9%**
Construction	8.4%	9.9%	**8.4%**
Wholesale Trade	4.0%	3.9%	**3.1%**
Retail Trade	9.1%	10.1%	**9.7%**
Accommodation and Food Services	4.0%	5.6%	**7.1%**
Transport, Postal and Warehousing	10.0%	7.8%	**4.7%**
Information Media and Telecommunications	2.5%	1.5%	**2.2%**
Financial and Insurance Services	7.4%	4.6%	**4.9%**
Rental, Hiring and Real Estate Services	1.7%	1.3%	**1.8%**
Professional, Scientific and Technical Services	4.9%	4.8%	**8.1%**
Administrative and Support Services	2.8%	3.4%	**3.5%**
Public Administration and Safety	6.8%	6.3%	**6.0%**
Education and Training	6.0%	6.7%	**8.4%**
Health Care and Social Assistance	13.5%	11.4%	**12.5%**
Arts and Recreation Services	0.4%	1.2%	**1.5%**
Other Services	2.5%	3.8%	**3.7%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

Registered business information is only available at the LGA level and above. In 2019, there were 17,508 registered businesses in the wider study area, none of which employed more than 200 employees. Of these registered businesses, 40.3% were classed as small businesses employing fewer than 20 people, with an additional 57.7% classed as sole operators/non-employing. Additionally, 6.2% of businesses turned over $2 million or more, with the greatest proportion of businesses operating within the $50 k to $2 m range. Registered businesses by employment size and turnover range are provided in Table A.32 and Table A.33.

Table A.32 Registered businesses by employment size, 2019

Area	Non-employing	1–19 employees	20–199 employees	200+ employees	Total
Wider study area	57.7%	40.3%	1.9%	0.0%	17,508

Source: ABS 2020, 8165.0—Counts of Australian Businesses, including Entries and Exists, June 2015 to June 2019

Table A.33 Registered businesses by turnover range, 2019

Area	$0 to less than $50k	$50k to less than 200k	$200k to less than $2m	$2m or more	Total
Wider study area	22.9%	38.2%	32.7%	6.2%	17,508

Source: ABS 2020, 8165.0—Counts of Australian Businesses, including Entries and Exists, June 2015 to June 2019

Of the 17,508 registered businesses in the wider study area, 24.1% were in the construction industry. The industry with the next highest proportion of registered businesses was transport, postal and warehousing (17.1%), followed by rental, hiring and real estate services (7.8%) and professional, scientific and technical services (7.7%). Registered businesses by industry in the wider study area are presented in Table A.34.

Table A.34 Registered businesses by industry, 2019

Industry	Wider study area
Agriculture, forestry and fishing	1.7%
Mining	0.0%
Manufacturing	4.6%
Electricity, gas, water and waste services	0.4%
Construction	24.1%
Wholesale trade	4.1%
Retail trade	5.7%
Accommodation and food services	3.0%
Transport, postal and warehousing	17.1%
Information media and telecommunications	0.6%
Financial and insurance services	5.1%
Rental, hiring and real estate services	7.8%
Professional, scientific and technical services	7.7%
Administrative and support services	4.7%
Public administration and safety	0.8%
Education and training	1.1%
Health Care and Social Assistance	5.6%
Arts and recreation services	0.8%

Table A.34 Registered businesses by industry, 2019

Industry	Wider study area
Other services	5.0%
Total number	**17,508**

Source: ABS 2020, 8165.0—Counts of Australian Businesses, including Entries and Exists, June 2015 to June 2019

Notes: Excludes businesses with industry 'not stated'.

A.9 Health and community well-being

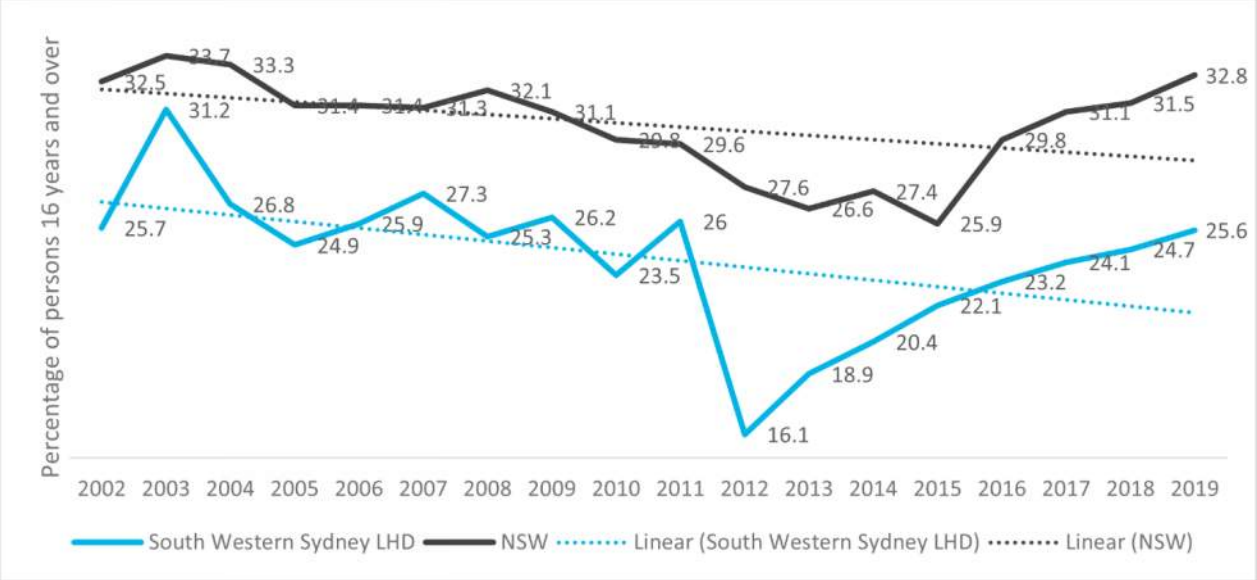
A.9.1 Community health

Social determinants of health, described as "the circumstances in which people grow, live, work, age, and the systems put in place to deal with illness…which are shaped by political, social, and economic forces" (AIHW 2020), indicate the health of a population. These include factors such as conditions of employment, provision of social services and support, and socioeconomic position. Although the local area and wider study area have only a slightly higher level of unemployment, and adequate provision of social infrastructure and social services, there are relatively more households with low income and fewer people in high-skill occupations compared to the rest of NSW, suggesting higher rates of socioeconomic disadvantage.

i Physical health

There are three major health risk factors that can be used as an indicator of population health: alcohol consumption, smoking, and obesity. South Western Sydney LHD, which encompasses the local and wider study area, has consistently had a lower proportion of the population who consumed alcohol at levels considered to be a high risk to health[2] compared to NSW from 2002–2019 (NSW Health 2019). However, trends in relation to the number of people who consume alcohol at levels posing a long-term health risk in the South Western Sydney LHD are decreasing at a similar rate compared to NSW (see Figure A.12).

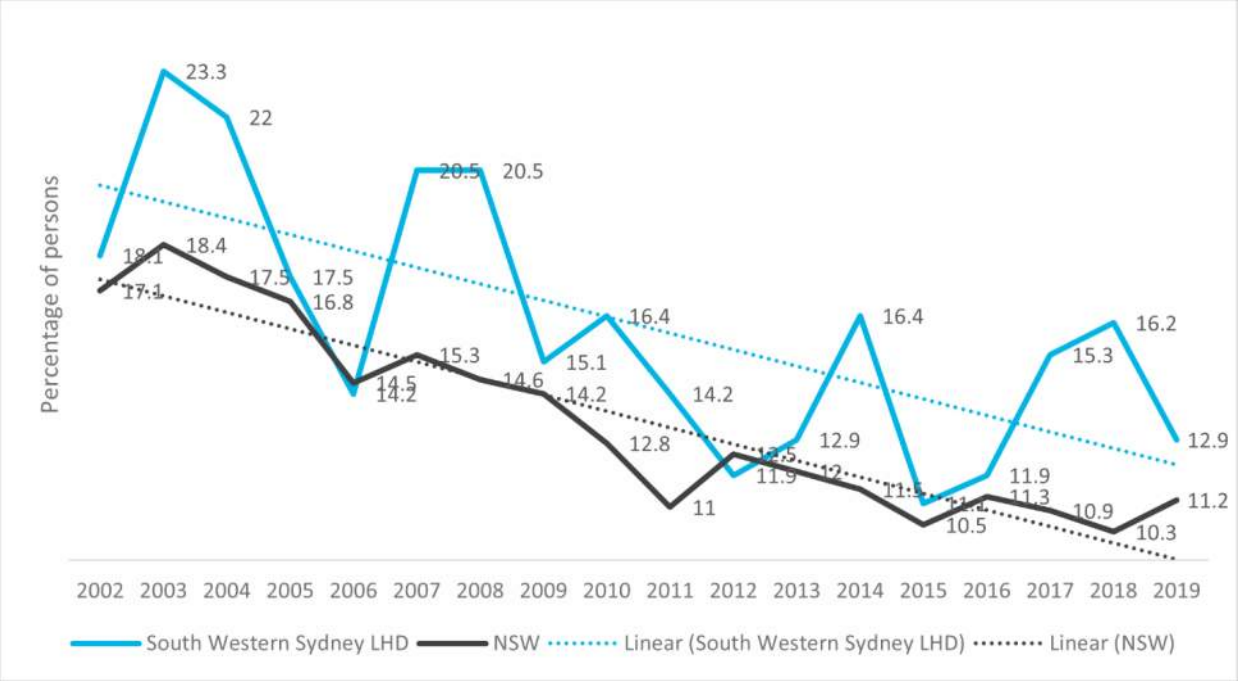
[2] High risk drinking is defined as the consumption of more than 2 standard drinks per day.



Source: NSW Health 2019, *Health Statistics NSW*.

Figure A.12 Alcohol consumption at levels posing a long-term health risk (proportion of persons aged 16 years and older), 2002–2019

The proportion of persons who smoke in South Western Sydney LHD were also generally above the state average from 2002–2019. Although there has been considerable fluctuation in the proportion of smokers in South Western Sydney LHD over this time, the overarching trend reflects the results seen across NSW (NSW Health 2019) (Figure A.13).



Source: NSW Health 2019, *Health Statistics NSW*.

Figure A.13 Daily smoking in adults (proportion of persons), 2002–2019

Physical inactivity and overweight and obesity are significant public health problems in NSW which have been generally increasing since 2002–2019. The instances of overweight and obese persons have also been increasing in South West Sydney LHD, with a higher proportion of overweight and obese persons on average compared to the rest of NSW (NSW Health 2019) (see Figure A.14).

Source: NSW Health 2019, *Health Statistics NSW*.

Figure A.14 Overweight or obese adults (proportion of persons aged 16 years and older), 2002–2019

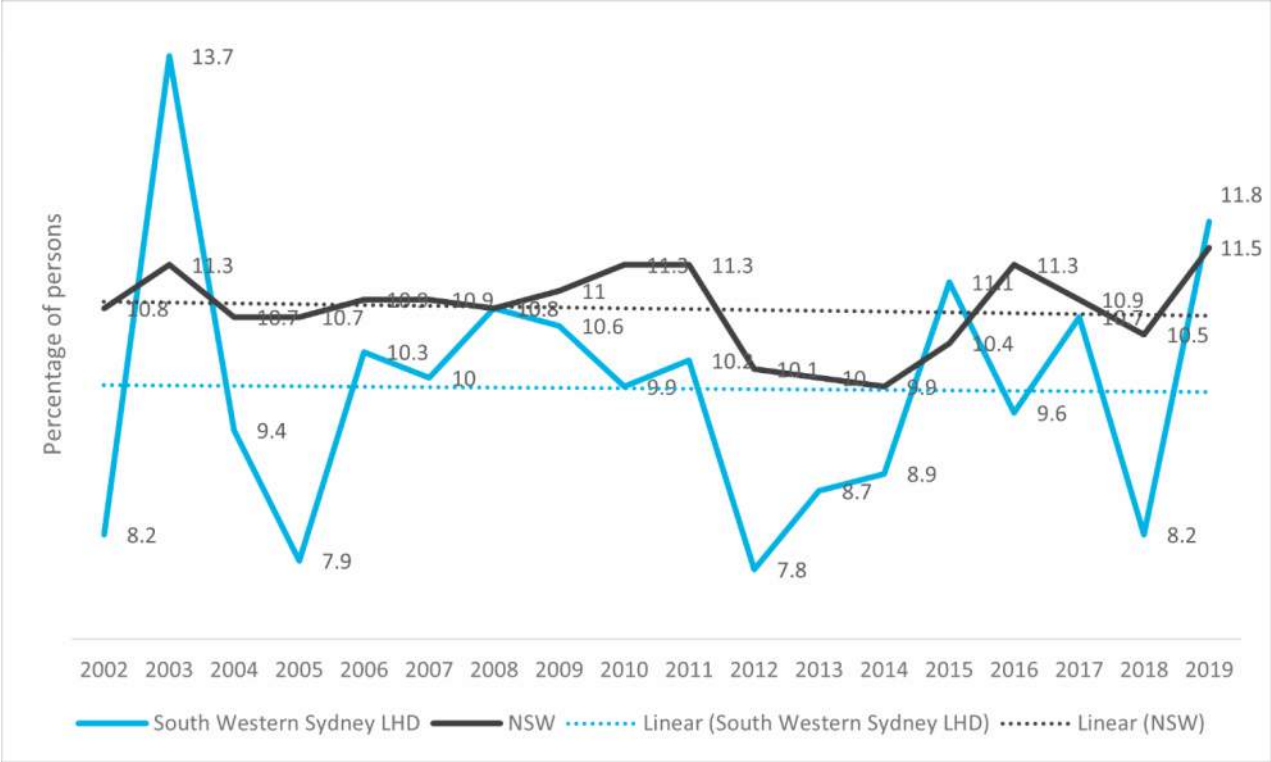
ii Asthma

NSW health data concerning prevalence of asthma is only available at the Local Health District (LHD) level. As such, the local area falls within the South Western Sydney LHD. Prevalence of asthma within the South Western Sydney LHD varied between persons aged 16 years and older and children aged 2–15 years (NSW Health 2019). For children aged 2–15, the prevalence of current asthma cases was lower between 2005–2007 and 2014–2019 in comparison to the whole of NSW. The percentage of current asthma cases in South Western Sydney LHD has generally been decreasing from 2002–2019. Data for children aged 2–15 with asthma in the South Western Sydney LHD is presented in Figure A.15.

Data for prevalence of asthma in the South Western Sydney LHD indicates that asthma has been slightly less prevalent in the South Western Sydney LHD compared to the whole of NSW from 2002–2019 (NSW Health 2019). However, approximately 11.8% of adults within South Western Sydney LHD still reported prevalence of asthma in 2019. Data for asthma in persons aged 16 years and over is presented in Figure A.16.

Source: NSW Health 2019, *Health Statistics NSW*.

Figure A.15 Prevalence of asthma in children aged 2 – 15 years, 2002–2019



Source: NSW Health 2019, *Health Statistics NSW*.

Figure A.16 Prevalence of asthma in persons aged 16 years and older, 2002 – 2019

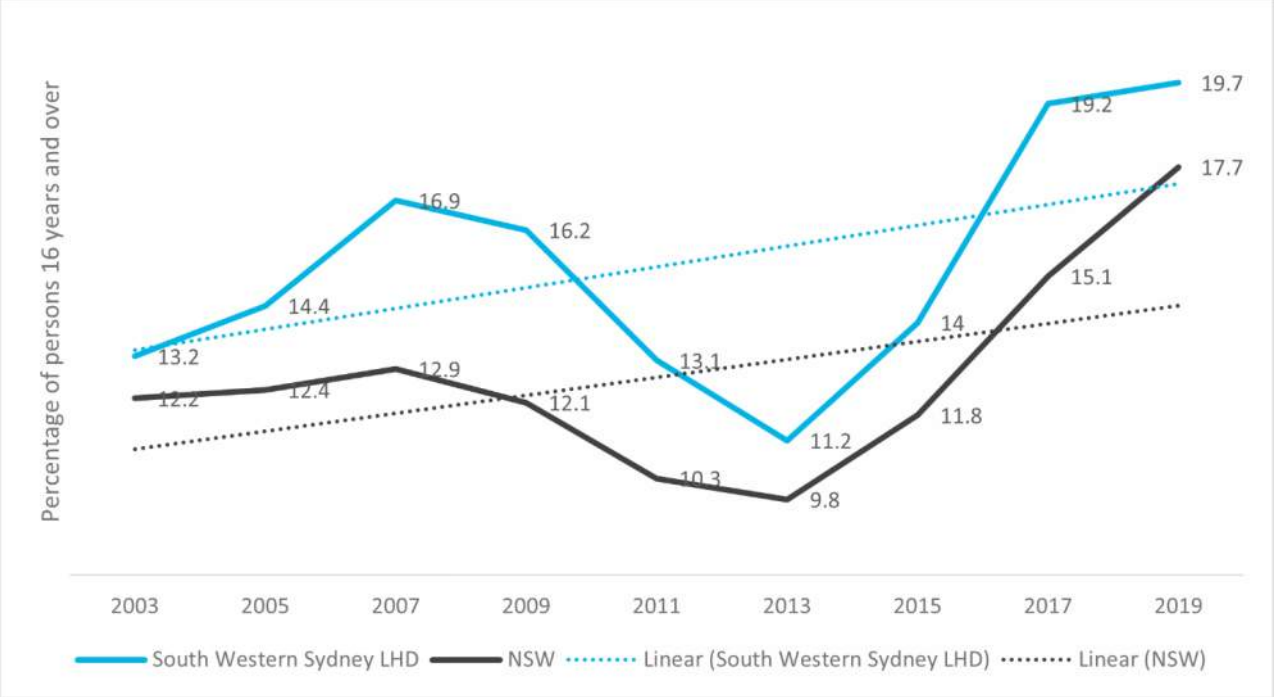
iii Mental health

Data relating to the number of people that have been hospitalised as a result of self-harm is indicative of very poor and/or poorly managed mental health. Intentional self-harm hospitalisations trends in South Western Sydney LHD have been improving compared to NSW trends, with a significant decline from 2012–2013 to 2018–2019. However, there is significant variability in the trends for rates of hospitalisations due to intentional self-harm in South Western Sydney LHD. Data for intentional self-harm hospitalisations is presented in Figure A.17.

Source: NSW Health 2019, *Health Statistics NSW*.

Figure A.17 Intentional self-harm hospitalisations (rate per 100,000 persons of all ages), 2001–2002 to 2018–2019

Data is also collected by NSW Health regarding the level of psychological distress using the Kessler 10 (K10) approach. This approach uses a 10-item questionnaire that measures anxiety, depression, agitation, and psychological fatigue in the most recent 4-week period and has been adopted by NSW Health as an indicator of mental health. The trend data is only available at the LHD level and indicates that trends of psychological distress rated between high and very high in the South Western Sydney LHD have been in line with those seen across NSW. However, the proportion of persons with high and very high levels of psychological distress have consistently remained above NSW averages (see Figure A.18 for more detail).



Source: NSW Health 2019, *Health Statistics NSW*.

Figure A.18 High and very high levels of psychological distress based on Kessler 10 scale (proportion of persons aged 16 years and older), 2003–2019

A.9.2 Voluntary work

Volunteering rates can give an indication of social cohesion in a community, and the willingness of people to help each other. Rates of volunteering in 2016 were lower in the study area compared to NSW, where 11.2% of persons in the local area and 11.0% in the wider study area had done voluntary work in the last 6 months compared to 18.1% in NSW (ABS 2016a). The proportion of persons who volunteered in the study area is presented in Table A.35.

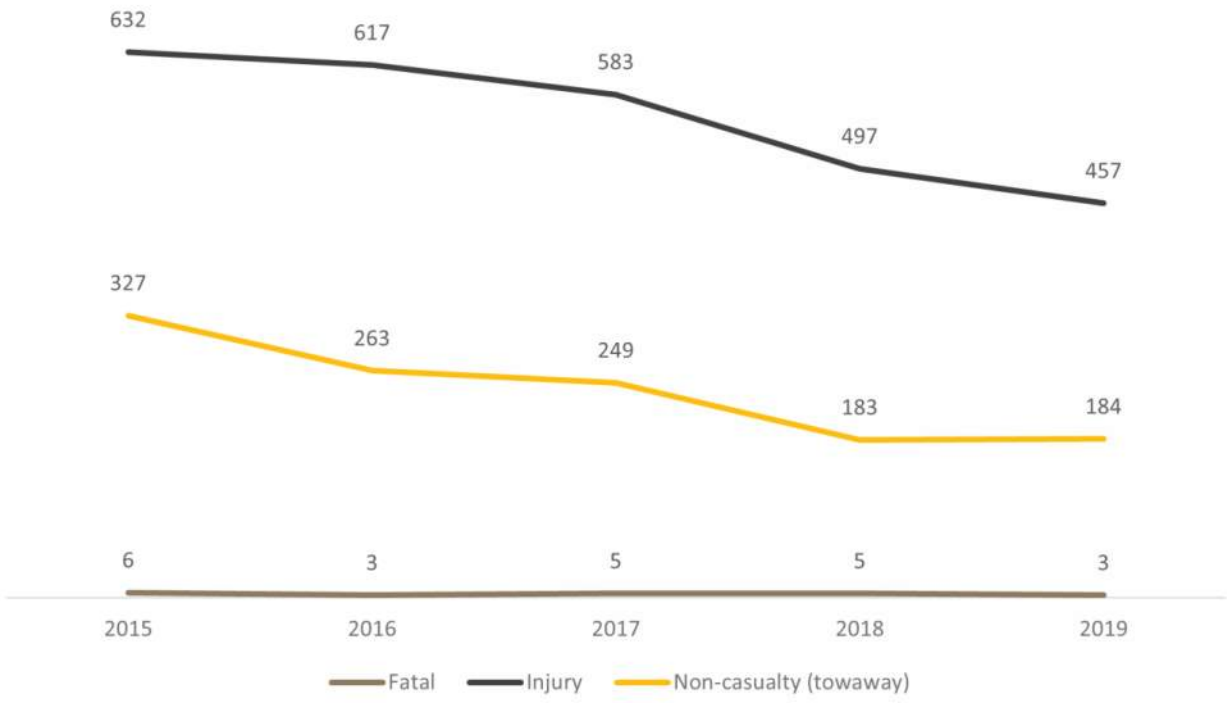
Table A.35 Volunteering rates, 2016

	Did voluntary work through an organisation or group (last 12 months)
Local area	**11.2%**
Wider study area	11.0%
NSW	**18.1%**

Source: ABS 2016, Census of Population and Housing: General Community Profiles

A.9.3 Road incidents

Data concerning road incidences is only available at the LGA level. There is a general downward trend in the number of incidents in Liverpool LGA from 2015–2019. There was a total of 4,014 road incidents including fatalities, injuries, and non-casualty (towaways). The largest proportion of crashes in this time period resulted in injuries (mostly minor) (2,786), followed by non-casualty (towaways) (1,206), and fatalities (22). Crash trends for the wider study area are presented in Figure A.19.



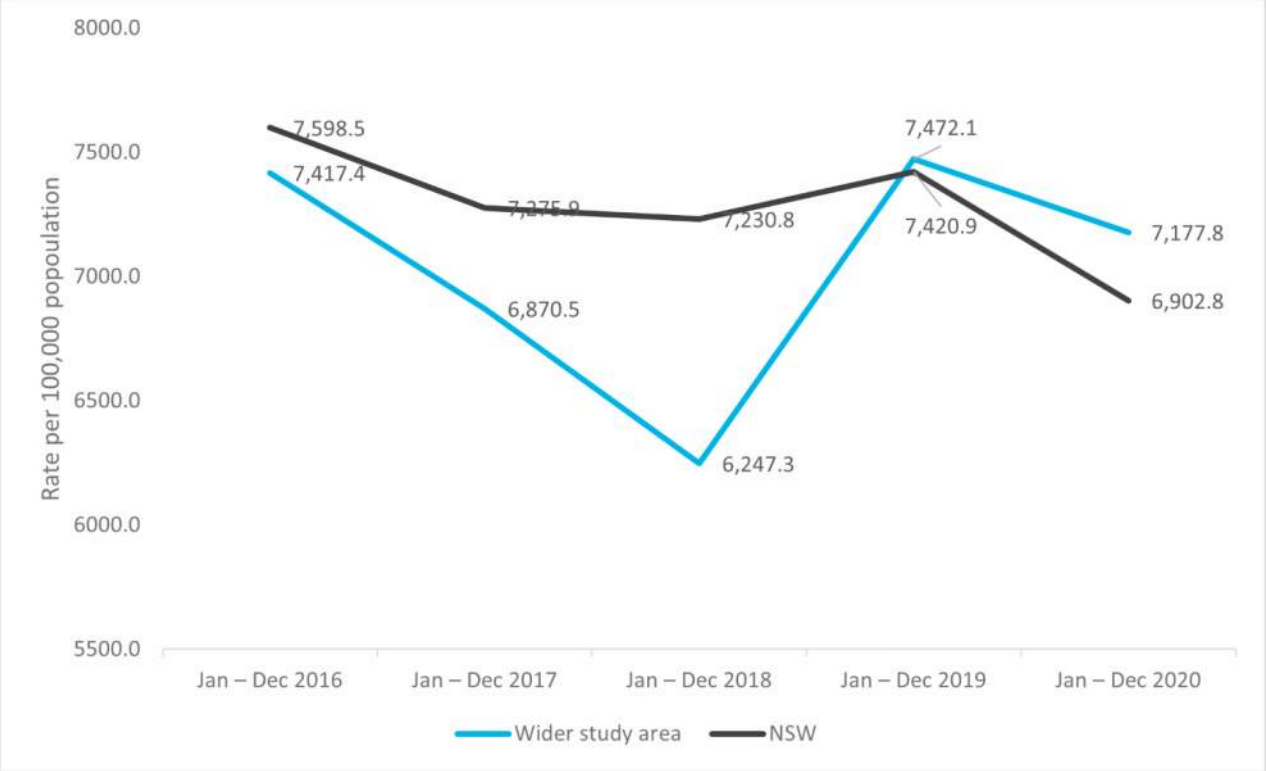
Source: TfNSW 2018, *Interactive Crash Statistics*

Figure A.19 Crash trends in the wider study area, 2015–2019

A.9.4 Community safety and crime

The following data has been sourced from the NSW Bureau of Crime Statistics and Research (BOCSAR). The following data for Liverpool LGA (the wider study area) as it is assumed that the trends in the wider study area will generally reflect those within the local area.

There has been significant variability in offence rates in the local area from 2016–2020, with a decline in total offences from 2016–2018, followed by a general increase since 2018 (with a slight decrease from 2019–2020). The rate of recorded offences per 100,000 people in the wider study area consistently remained below the rate of recorded offences in NSW over the same period, until 2019. The rate of total offences per 100,000 persons in the wider study area is presented in Figure A.20 and Table A.36.



Source: Bureau of Crime Statistics and Research 2020 — NSW Local Government Area excel crime tables

Notes: Total excludes transport regulatory offences.

Figure A.20 Total offences rates per 100,000 population, 2016–2020

Table A.36 Crime trends, 2019

Offence category	Rate per 100,000 population				
	Jan – Dec 2016	Jan – Dec 2017	Jan – Dec 2018	Jan – Dec 2019	Jan – Dec 2020
	Wider study area				
Assault	835.9	765.4	751.0	762.8	809.4
Homicide	2.4	0.9	1.3	2.2	2.2
Robbery	32.5	40.4	36.8	37.8	42.2
Sexual offences	132.9	174.5	152.0	151.4	154.5
Theft	3,339.4	3,062.2	2,664.7	2,900.5	2,306.4
Malicious damage to property	636.8	641.9	586.0	603.7	562.0
Against justice procedures	730.7	660.7	594.1	772.9	933.7
Disorderly conduct	193.4	159.3	156.5	174.9	139.3
Drug offences	575.5	520.2	482.9	1,158.2	1,225.9

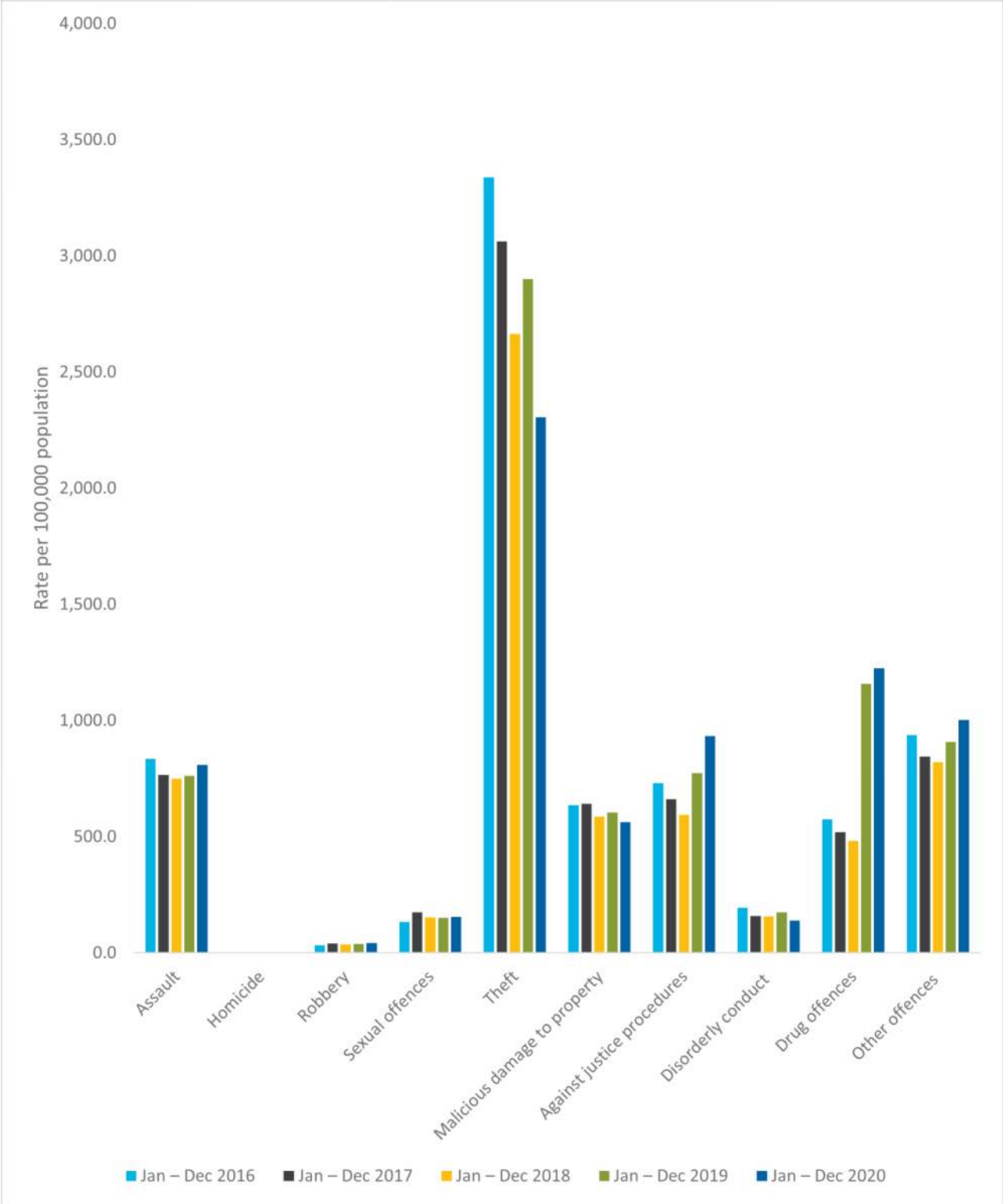
Table A.36 Crime trends, 2019

Offence category	Rate per 100,000 population				
	Jan – Dec 2016	Jan – Dec 2017	Jan – Dec 2018	Jan – Dec 2019	Jan – Dec 2020
Other offences	937.8	844.9	821.9	907.8	1,002.3
TOTAL	7,417.4	6,870.5	6,247.3	7,472.1	7,177.8
			NSW		
Assault	817.7	801.2	803.1	818.2	791.5
Homicide	1.4	1.0	1.3	1.4	1.2
Robbery	30.4	30.9	31.2	31.6	26.2
Sexual offences	158.8	174.9	174.6	182.4	185.6
Theft	3,030.9	2,855.2	2,803.8	2,796.6	2,204.9
Malicious damage to property	812.3	777.7	734.2	706.7	658.3
Against justice procedures	851.3	814.3	828.2	921.4	981.7
Disorderly conduct	282.2	260.3	247.9	251.0	228.5
Drug offences	609.9	580.3	600.3	652.0	641.1
Other offences	1,003.6	980.1	1,006.2	1,059.6	1,183.8
TOTAL	7,598.5	7,275.9	7,230.8	7,420.9	6,902.8

Source: Bureau of Crime Statistics and Research 2020 — NSW Local Government Area excel crime tables

Notes: Total excludes transport regulatory offences.

Recorded offences categories that have consistently had the highest rates in the wider study area are theft, assault, drug offences, against justice procedures, and other offences (see Figure A.21). The offence category with the highest rate in the local area in 2020 was theft (2306.4 per 100,000).



Source: NSW Department of Justice 2020, Bureau of Crime Statistics and Research — NSW Local Government Area excel crime tables

Figure A.21 Offences rates per 100,000 population in Liverpool LGA, 2016–2020

i Youth crime

Juvenile offenders are those persons aged between 10–17 years (inclusive). The following data is for Liverpool LGA (the wider study area) as it is assumed that the trends within the wider study area will generally reflect those within the local area. The proportion of alleged juvenile offenders as a proportion of total alleged offenders proceeded against in the wider study area was below that of NSW for all offences (excluding sexual offences) in 2020 (BOCSAR 2020). In the wider study area, the most common offence types committed by alleged juvenile offenders were robbery (34.7% of offenders), sexual offences (13.9% of offenders), and theft (11.2% of offenders). Alleged juvenile offenders proceeded against as a proportion of total offenders is shown in Figure A.22.

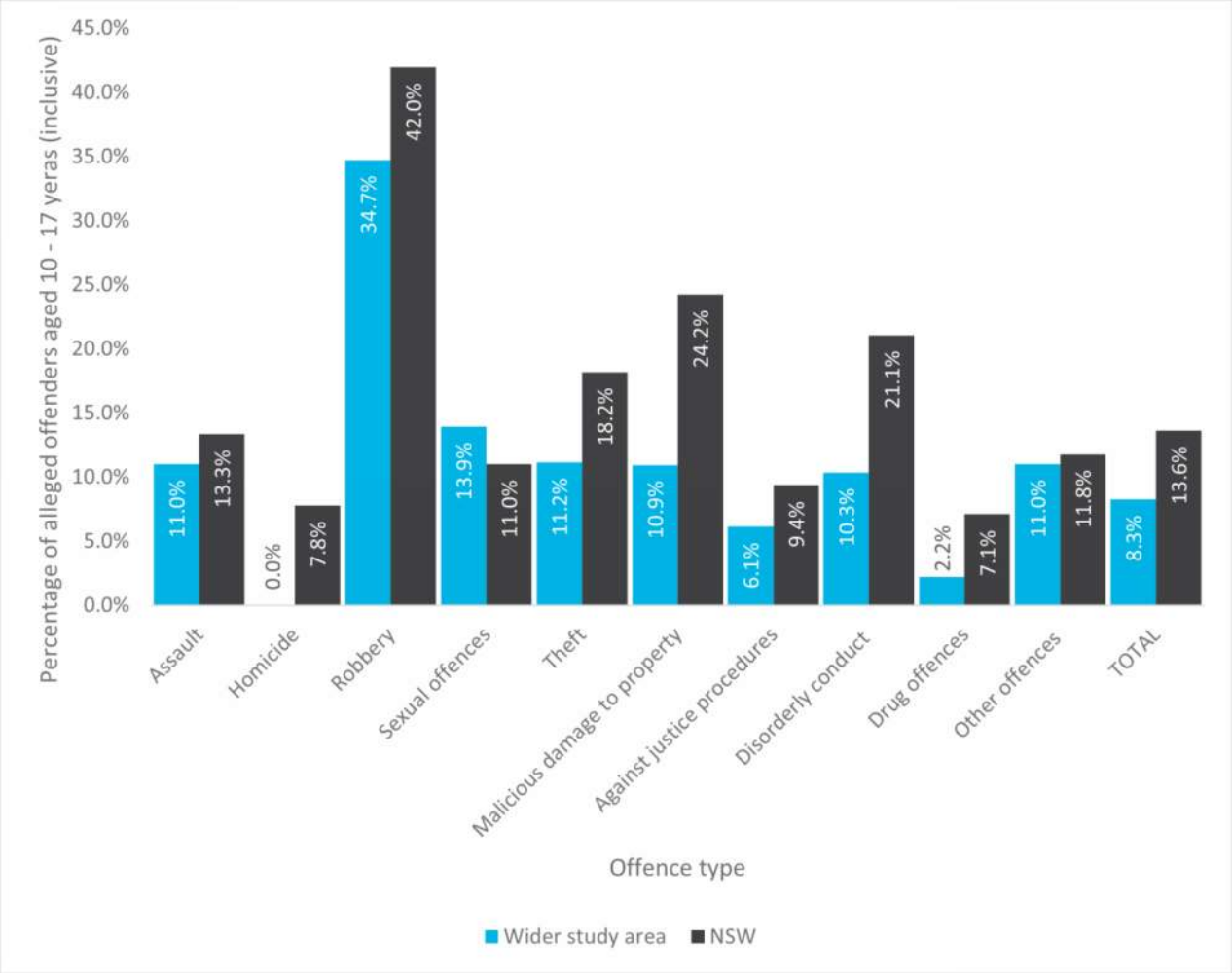


Figure A.22 Alleged offenders proceeded against aged 10–17 years (inclusive) as a proportion of total alleged offenders proceeded against, 2020

A.10 Acronyms

Table A.37 Acronyms

Acronym	
ABS	Australian Bureau of Statistics
ACARA	Australian Curriculum, Assessment and Reporting Authority
ACECQA	Australian Children's Education and Care Quality Authority
AHMAC	Australian Health Ministers' Advisory Council
AHRC	Australian Human Rights Commission
AIHW	Australian Institute of Health and Welfare
BOCSAR	Bureau of Crime Statistics and Research
CBD	Central Business District
DPIE	Department of Planning, Industry and Environment
FYTD	Fiscal year-to-date
GP	General practitioner
IAIA	International Association for Impact Assessment
IEO	Index of Education and Occupation
IER	Index of Economic Resources
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
IRSD	Index of Relative Socio-Economic Disadvantage
K10	Kessler 10
LGA	Local Government Area
LHD	Local Health District
NSW	New South Wales
OSHC	Outside of school hours care
PES	Post Enumeration Survey
PHIDU	Public Health Information Development Unit
REINSW	Real Estate Institute of New South Wales
SEIFA	Socio-Economic Indexes for Areas
SES	State Emergency Service
SIA	Social impact assessment
SIA Guideline	Draft Social impact assessment guideline 2020
SSC	State suburb
TfNSW	Transport for New South Wales
the Project	The New School in Edmondson Park
WHO	World Health Organisation

A.11 References

ABS 2006, *Census of Population and Housing: General Community Profiles*, Australian Bureau of Statistics.

ABS 2011, *Census of Population and Housing: General Community Profiles*, Australian Bureau of Statistics.

ABS 2016a, *Census of Population and Housing: General Community Profiles*, Australian Bureau of Statistics.

ABS 2016b, *Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016*, Australian Bureau of Statistics.

ABS 2016c, *Census of Population and Housing: Estimating homelessness, 2016,* Australian Bureau of Statistics.

ABS 2019, *8165.0—Counts of Australian Businesses, including Entries and Exists, June 2015 to June 2019*, Australian Bureau of Statistics.

ABS 2019, *3218.0 – Regional Population Growth, Australia 2018-19*, Australian Bureau of Statistics.

ACARA 2021, *My school, find a school*, Australian Curriculum, Assessment and Reporting Authority, viewed 14 April 2021, https://myschool.edu.au/.

ACECQA 2021, *Service search*, Australian Children's Education & Care Quality Authority, viewed 14 April 2021, https://www.acecqa.gov.au/resources/national-registers/services?s=oak%20park&field_service_id=&f%5B0%5D=service_state%3ANSW.

AHRC 2021, *Homelessness is a human rights issue,* Australian Human Rights Commission, viewed 14 April 2021, https://humanrights.gov.au/our-work/rights-and-freedoms/publications/homelessness-human-rights-issue#:~:text=These%20include%20depression%2C%20poor%20nutrition,illness%20than%20the%20general%20population.

AIHW 2018, *Australia's Mothers and Babies Data Visualisation*, Australian Institute of Health and Welfare, https://www.aihw.gov.au/reports/mothers-babies/australias-mothers-babies-data-visualisations/contents/demographics-of-mothers-and-babies/maternal-age

AIHW 2020, *Aboriginal and Torres Strait Islander health performance framework 2020: key health indicators – Queensland*, Australian Institute of Health and Wellbeing, retrieved 11 February from https://indigenoushpf.gov.au/.

Ask Izzy 2021, *Find help you need now and nearby,* viewed 15 April 2021, https://askizzy.org.au/.

Australian Government 2019, *Planning for Australia's Future Population*, Department of the Prime Minister and Cabinet, retrieved 11 February 2021, from https://www.pmc.gov.au/resource-centre/domestic-policy/planning-australias-future-population.

Birrell, B & Healy, E 2018, *Immigration and the Housing Affordability Crisis in Sydney and Melbourne*, The Australian Population Research Institute, https://apo.org.au/sites/default/files/resource-files/2018-07/apo-nid187861.pdf

BOCSAR 2019, *NSW Recorded Crime Statistics July 2015-June 2020*, NSW Bureau of Crime Statistics and Research, viewed 15 April 2021, https://www.bocsar.nsw.gov.au/Pages/bocsar_crime_stats/bocsar_latest_quarterly_and_annual_reports.aspx.

Brewsters Property Group nd, *The value of vacancy rates*, viewed 11 February 2021, https://brewsters.com.au/vacancy-rates/.

DPIE 2019, *NSW 2019 Population Projections: ASGS 2019 LGA projections,* Department of Planning, Industry and Environment, NSW Government, viewed 13 April 2021, https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections.

DPIE 2020, *Draft social impact assessment guideline,* Department of Planning, Industry and Environment, NSW Government.

Forbes, K 2021, *5 Unexpected Sydney Areas Primed for Growth*, Metropole, https://metropole.com.au/5-unexpected-sydney-areas-primed-for-growth/

Kelly, R 2021, *Preliminary Fertility Rate Projections for the 2021 NSW Intergenerational Report*, NSW Treasury, https://www.treasury.nsw.gov.au/sites/default/files/2021-01/2021_igr_ttrp_-_preliminary_fertility_rate_projections_for_the_2021_nsw_intergenerational_report.pdf#:~:text=The%20median%20age%20of%20mothers,higher%20than%20all%20other%20groups

Greater Sydney Commission 2018, *Greater Sydney Region Plan: A Metropolis of Three Cities – connecting people*, NSW Government, https://gsc-public-1.s3-ap-southeast-2.amazonaws.com/greater-sydney-region-plan-0618.pdf?pMbPYxwen5IHg4GSB6td4yKiKVogFi4c

Health direct Australia 2020, *National Health Services Directory*, viewed 14 April 2021, https://about.healthdirect.gov.au/nhsd.

NSW Government 2021, *Edmondson Park*, https://www.planning.nsw.gov.au/Plans-for-your-area/Priority-Growth-Areas-and-Precincts/South-West-Growth-Area/Edmondson-Park

NSW Health 2019, *Healthstats NSW*, NSW Ministry of Health, viewed 15 April 2021, http://www.healthstats.nsw.gov.au/.

PHIDU 2021, Social Health Atlas of Australia: Local Government Area, Torrens University Australia.

profile.id 2021, *Liverpool City Council area: residential building approvals*, .id, viewed 15 April 2021, https://profile.id.com.au/port-macquarie-hastings/building-approvals.

REA Group 2020, *Explore Australia's suburbs*, viewed 14 April 2021, https://www.realestate.com.au/neighbourhoods/.

REINSW 2021, Vacancy Rates Survey Results January 2021, Realestate Institute of New South Wales, viewed 13 April 2021, https://www.reinsw.com.au/Web/News/Media_Releases/2021/02_February/Small_fluctuations_in_rental_vacancies.aspx.

TfNSW 2020, *Crash and casualty statistics – LGA view,* Transport for NSW, viewed 17 April 2021, https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/lga_stats.html?tablga=4.

TfNSW 2021a, *Edmondson Park Station*, Transport for NSW, https://transportnsw.info/stop?q=10101447#/

TfNSW 2021b, *Liverpool Station*, Transport for NSW, https://transportnsw.info/stop?q=10101289#/

Wade, M 2018, *Sydney young and old: Which age group is most common in your area?*, The Sydney Morning Herald, https://www.smh.com.au/national/nsw/sydney-young-and-old-which-age-group-is-most-common-in-your-area-20181206-p50kqk.html

WHO nd, *Female life expectancy: situation and trends*, World Health Organisation, viewed 11 February 2021, https://www.who.int/gho/women_and_health/mortality/life_expectancy_text/en/#:~:text=Women%20generally%20live%20longer%20than,differences%20between%20men%20and%20women.

Appendix B

Risk based framework

Risk rating methodology for SIA ®

SIA definitions — Positive Consequences (Benefits)

Extent of the benefit (people & geography)	The local, regional and potentially the national economy will benefit significantly. Improvements on social services and/or social cohesion.	The local and regional economy will benefit. Improvements on social services.	The local economy will benefit. Improvements on social services.	Marginal improvements/ contribution to local economy. Marginal improvements/ contribution to social services and/or social cohesion.	**Level of impact**
Cumulative duration the benefit is experienced	Benefits will realise in the **short term** and will be permanent	Benefits will realise in the **short to medium term** and may or may not be permanent	Benefits will realise in the **medium to long term** and are not permanent	Benefits will realise in the **short term** and are not permanent	**Cumulative duration the impact is experienced**

* Sections shaded in grey need to be customised for each discipline, currently these are for SIA.

Likelihood			4 Higly Desirable	3 Desirable	2 Minor	1 Minimal
Has occurred in the past in this project (or operation) or in similar project OR circumstances could cause it to happen during the project (or operation).	5	Almost certain	Significant (15)	Significant (12)	Moderate (8)	Limited (5)
Has occurred in the life of this project (or similar project*) or in the last few years of operations or circumstances could cause it to occur again in the short term.	4	Likely	Significant (14)	Significant (11)	Moderate (7)	Limited (4)
Has occurred at least once in this project or a similar project (or in the history of this operation).	3	Possible	Significant (13)	Significant (10)	Moderate (6)	Limited (3)
Has never occurred in this project (or operation) but has occurred at other similar projects (operations) with similar risk/benefit profile.	2	Unlikely	Significant (12)	Moderate (9)	Limited (5)	Limited (2)
Is possible, but has not occurred to date in this project or similar projects.	1	Rare	Significant (11)	Moderate (8)	Limited (4)	Limited (1)

Aim to maximise benefits

Benefit assessment and enhancement plan

Promote actions and/or design that realises the benefit with limited inputs. Investigate whether changes in the implementation/design can make the benefit 'moderate' or 'significant'	Limited (1-5)
Actively promote actions and/or design that realises the benefit. Investigate whether changes in the implementation/design can make the benefit 'significant'	Moderate (6-9)
Actively promote and prioritise actions and or design that realises the residual benefit.	Significant (10-15)

Short term __ months/years
Medium term __ months/years
Long term __ month/years

EMM
creating opportunities

Risk rating methodology for SIA ®

SIA definitions

Negative Consequence (Impacts)

Extent of the benefit (people & geography)	No or negligible socioeconomic impact.	Socioeconomic impact that will take small effort to restore and does not threaten livelihood. No exogenous resources are required for recovery.	Socioeconomic impact will require minimal additional external resources to recover.	Socioeconomic impact will depend on reasonable amount of external resources to recover.	Socioeconomic impact will depend on significant external resources to recover and may not be back to how it was before the impact.	**Level of impact**
Cumulative duration the benefit is experienced	Short timeframe impact on livelihood or liveability.	Impacts on the livelihood or liveability are limited to the life of the project.	Impacts on livelihood and/or liveability will survive the life of the project.	Impacts on livelihood and liveability could survive long after the life of the project or can be permanent.	Impacts on livelihood and liveability survive long after the life of the project and are permanent.	**Cumulative duration the impact is experienced**

* Sections shaded in grey need to be customised for each discipline, currently these are for SIA.

Likelihood			1 Negligible	2 Marginal	3 Moderate	4 Major	5 Intolerable
Has occurred in the past in this project (or operation) or in similar project OR circumstances could cause it to happen during the project (or operation).	5	Almost certain	Low (6)	Medium (8)	High (12)	Unacceptable (16)	Unacceptable (16)
Has occurred in the life of this project (or similar project*) or in the last few years of operations or circumstances could cause it to occur again in the short term.	4	Likely	Negligible (4)	Low (7)	Medium (10)	High (14)	Unacceptable (16)
Has occurred at least once in this project or a similar project (or in the history of this operation).	3	Possible	Negligible (3)	Low (6)	Medium (9)	High (13)	Unacceptable (16)
Has never occurred in this project (or operation) but has occurred at other similar projects (operations) with similar risk/benefit profile.	2	Unlikely	Negligible (2)	Low (6)	Medium (8)	Medium (11)	Unacceptable (16)
Is possible, but has not occurred to date in this project or similar projects.	1	Rare	Negligible (1)	Negligible (5)	Low (7)	Medium (10)	High (15)

Aim to minimise impacts

Residual risk assessment and mitigations plan

No major concern - systems and processes managing risks are adequate	Negligible (1-5)	Low (6-7)
Periodic monitoring - improve controls or monitor risk to ensure residual rating does not increase	Medium (8-11)	
Continuous review - confirm adequacy of controls and continued monitoring to maintain or reduce risk	High (12-15)	
Active management - urgent treatment required to allow project to proceed	Unacceptable (16)	

Short term __ months/years
Medium term __ months/years
Long term __ month/years

Appendix C

SIA review questions

C.1 Draft SIA Guideline review questions and responses

The SIA review questions as outlined in the Draft SIA Guideline (DPIE 2020) and corresponding responses are presented in Table C.1.

Table C.1 Draft SIA Guideline – Table 6 Review questions

Reference number	SIA Guideline review question	Response
General		
1	Does the lead author of the SIA Report meet the qualification and experience requirements?	Yes – see Section 1.4
2	Has the lead author of the SIA Report provided a signed declaration certifying that the assessment does not contain false or misleading information?	Yes – see Section 1.4
3	Would a reasonable person judge the SIA Report to be impartial, rigorous, and transparent?	Yes.
Project's social locality and social baseline		
4	Does the SIA Report identify and describe all the different social groups that may be affected by the project?	Yes – see Section 4, 5, 6, 7 and Appendix A
5	Does the SIA Report identify and describe all the built or natural features that have value or importance for people, and explain why people value those features?	Yes – see Section 5 and 7
6	Does the SIA Report identify and describe historical, current, and expected social trends or social changes for people in the locality, including their experiences with this project and other major development projects?	Yes – see Section 3, 4, 5, 7 and Appendix A
7	Does the social baseline study include appropriate justification for each element, and provide evidence that the elements reflect both relevant literature and the full diversity of views and potential experiences?	Yes – see Section 4, 5, 6, 7 and Appendix A
8	Does the social baseline study demonstrate social-science research methods and explain any significant methodological or data limitations?	Yes – see Section 2, 4, 5 and Appendix A
Identification and description of social impacts		
9	Does the SIA Report adequately describe potential social impacts (whether negative, positive, tangible, intangible, perceived, and/or cumulative) from the perspectives of how people may experience them, and explain the research used to identify them? Where the assessment is partially complete, and expected to be completed in Phase 2 SIA, has this been explained?	Yes – see Section 7
10	Does the SIA Report apply the precautionary principle to social impacts, and consider how they may be experienced differently by different people and groups (ie distributive equity)?	Yes – see Section 7
11	Does the SIA Report describe how the preliminary analysis influenced both the project design and EIS Engagement Strategy?	Yes – see Section 7 and 8

Table C.1 Draft SIA Guideline – Table 6 Review questions

Reference number	SIA Guideline review question	Response
Community engagement		
12	Were the extent and nature of engagement activities appropriate and sufficient to canvass all relevant views, including those of vulnerable or marginalised groups?	Yes – see Section 5
13	How have the views, concerns, and insights of affected and interested people influenced both the project design and each element of the SIA Report (eg the social baseline, predicting impacts, and mitigation/enhancement measures)?	Yes – see Section 4, 5, 6, 7 and 8
Predicting and analysing social impacts		
14	Does the SIA Report impartially focus on the most material social impacts at all stages of the project life cycle, without any omissions or misrepresentations?	Yes – see Section 7
15	Does the SIA Report identify the matters to which the precautionary principle could or should be reasonably applied?	Yes – see Section 7
16	Does the SIA Report analyse the distribution of both positive and negative social impacts, and the equity of this distribution?	Yes – see Section 7
17	Does the SIA Report identify its assumptions, and include sensitivity analysis and alternative scenarios (including 'worst-case' and 'no project' scenarios where relevant)?	Yes – see Section 2.2.8, 5, 6, 7 and 8
Evaluating significance		
18	Do the evaluations of significance of social impacts impartially represent how people in each identified social group can expect to experience the project, including any cumulative effects?	Yes – see Section 7
19	Are the evaluations of significance disaggregated to consider the potentially different experiences for different people or groups, especially vulnerable groups?	Yes – see Section 7
Responses, monitoring and management		
20	Does the SIA Report propose responses (ie mitigations and enhancements) that are tangible, deliverable by the proponent, likely to be durably effective, and directly related to the respective impact(s)?	Yes – see Section 8
21	How can people be confident that social impacts will be monitored and reported in ways that are reliable, effective, and trustworthy?	See Section 8
22	How will the proponent adaptively manage social impacts and respond to unanticipated events, breaches, grievances, and non-compliance?	See Section 8

Appendix D

Curricula vitae

Amanda Micallef

Social Planner

Curriculum vitae

Since joining EMM, Amanda has conducted a range of social planning and impact assessment projects, including baseline studies, risk assessments, data analysis, and community and stakeholder engagement. Her community engagement experience includes online community engagement, indigenous engagement, and the co-creation of youth indigenous development programs in Guatemala. Amanda has worked with clients across a range of sectors, including mining and extractives, and water, in New South Wales and Queensland.

Qualifications

- Master of Development Practice, University of Queensland, 2019
- Bachelor of Arts in International Development, University of Guelph, 2017
- Member Planning Institute of Australia

Career

- EMM Consulting, May 2019 – present
- Developmental Economics Tutor, University of Guelph, 2015 – 2017

Representative experience

Social planning and impact assessment

- Hunter Valley Operations (HVO) Continuation Project, technical assistance for social impact assessment and community engagement, Hunter Valley, NSW (Glencore)
- Wongawilli Mod 2, technical assistance for social impact assessment and community engagement, Wongawilli, NSW (Wollongong Coal)
- West Muswellbrook Exploration Project, social assessment and community engagement program, Muswellbrook NSW (Idemitsu Australia Resources)
- Baralaba South Project, baseline study, community engagement, data analysis, social risk assessment, Baralaba Qld (Mount Ramsay Coal)
- Moorebank Avenue Realignment Works, social baseline study, data analysis, social risk assessment Moorebank NSW (Qube Holdings Limited)
- Snowy 2.0 Polo Flat Segment Factory, community engagement, data analysis, social risk assessment, Polo Flat NSW (Snowy Hydro Limited)
- Snowy Hydro 2.0 Pacific Hills Workers Accommodation, community information sheet, Cooma NSW (Snowy Hydro Limited)
- New Cobar Complex Project, social baseline study, community engagement, data analysis, social risk assessment Cobar NSW (Aurelia Metals Ltd)

EMM
creating opportunities

Dubbo Quarry Continuation, social baseline study, community engagement, data analysis, social risk assessment, Dubbo NSW (Holcim Australia Pty Ltd)

- Hume Coal Project, social impact assessment revisions in response to the Independent Planning Commission Assessment Report, Southern Coalfield of NSW (Hume Coal Pty Limited)
- Berrima Rail Project, social impact assessment revisions in response to the Independent Planning Commission Assessment Report, Southern Coalfield of NSW (Hume Coal Pty Limited)
- Burrawang to Avon Tunnel Project, social baseline study including social infrastructure and housing information, Illawarra region of NSW (WaterNSW)
- Dungowan Dam, social impact assessment and engagement, development of community information sheets, community survey development, Tamworth region of NSW (WaterNSW)
- Mole River Dam, social impact assessment, development of community information sheets, community survey development, Tenterfield region of NSW (WaterNSW)
- MacIntyre Windfarm Precinct, technical assistance for social impact assessment and community engagement, 50 km South-West of Warwick, QLD (ACCIONA)

Publications

Micallef, A et al. 2016, ICT and Agriculture in the Global South, paper prepared for World Accord, presented at the University of Guelph.

www.emmconsulting.com.au

EMM
creating opportunities

Servicing projects throughout Australia and internationally

AMANDA MICALLEF
Social Planner

T 07 3648 1200
D 07 3648 1231
E amicallef@emmconsulting.com.au

Level 1, 87 Wickham Terrace
Spring Hill QLD 4000

Santiago Ayala

Associate - Social Scientist MIS-PC, MSPD

Curriculum vitae

Santiago is a social and strategic planning professional with over 21 years' experience in Australia and overseas. His breadth of expertise includes social assessment, policy development, social safeguards and resettlement, stakeholder engagement and management, social performance, and government and community relations.

Santiago has expertise working with and for corporate, government and multilateral organisations across a range of sectors including conventional and renewable energy, water and sanitation management, infrastructure, mining, and oil and gas incorporating engineering solutions as well as behavioural change.

Qualifications

- Master of International Relations/Peace and Conflict Studies, The University of Queensland, 2010
- Master of Social Planning and Development, The University of Queensland, 2005
- Bachelor of Social Anthropology, University of Andes Colombia, 1999
- Negotiation and Leadership, Harvard University, Law School, 2017
- Member International Association of Impact Assessment
- Member Planning Institute Australia - Social Planning Chapter
- Member Australian Evaluation Society

Career

- EMM Consulting, 2020–present
- Principal & Director, Social Performance Pty Ltd. & Ayala Consulting, 2013–2020
- Team Leader & Senior Community Developer, Arrow Energy, 2013–2014
- Principal Consultant, Parsons Brinkerhoff Australia & Pacific (now WSP), 2012–2013
- Manager Service Planning, Queensland Government, Health Department – OCDO, 2011–2012
- Principal Business Analyst, Queensland Government, Health Department – Finance and Legal Division, 2011
- Principal Planner, Queensland Government, Health Department, 2008–211
- Queensland Representative, Australian Government -AusAID, 2010–2012
- Manager, Queensland Government, Health Department– Office of the Chief Nursing Office, 2009–2010
- Seasonal Lecturer, The University of Queensland – School of Social Science, 2008
- Senior Planning Officer, Queensland Government, Health Department – Service Planning Unit, 2007–2008
- United Nations Resident Coordinator Analyst, Australian Youth Ambassador for Development, 2006–2007

EMM
creating opportunities

- United Nations Resident Coordinator Analyst – Conflict Prevention & Recovery, United Nations Development Programme, 2006–2007
- Strategic Consultant, Eco Women Foundation, 2003–2005 Research Consultant, various small research projects for private and government clients, 2001–2002
- Researcher, United Nations Populations Fund & University of the Andes, 1999–2000

Representative experience

Mining

- Cowal Open Pit Mine, social impact assessment, NSW (Evolution Mining)
- Wimmera Project – Technical Lead and project manager for the SIA for the Wimmera Project (Iluka Resources Limited)
- Wongawilli Mod 2, Technical Lead for the social assessment and engagement program (Wollongong Coal)
- New Cobar Mine – Project Manager for the SIA for the expansion of Aurelia Metals zinc / lead Mine in Cobar NSW (Aurelia Metals)
- Porgera Joint Venture Mine Resettlement and Social Safeguards, project management, design and technical advice, Papua New Guinea (Barrick Gold and SMEC)
- Wongawilli Coal Mine Social Impact Assessment, Modification Report 2, NSW (Wollongong Coal Ltd)
- Carmichael Mine, Social Impact Assessment and Management, review and update of social impact assessment, including social safeguards considerations, Qld (Adani Group and WSP-Parsons Brinkerhoff)
- Red Hill Mine, peer review of social impact assessment, stakeholder and community engagement and Aboriginal and Torres Strait Islander population chapters, Central Qld (BHP Billiton Mitsubishi Alliance)

Oil and gas

- Future Gas Supply Area Social Impact Assessment, Central-west to South-west Qld (Santos GLNG)
- Wallumbilla Gas Treatment Facility, social impact assessment, Wallumbilla Qld (Santos GLNG)
- Doyles Creek Coal Mine, social impact assessment studies for four coal mines in the Hunter Valley, NSW.

Governance

- Social Performance/Safeguards Specialist Advisor, social performance and resettlement advisory role for senior government management, Papua New Guinea (Asian Development Bank and Department of Works)
- Gender Equity and Social Inclusion Policy, M&E framework and database advisor, technical advice in the strategic planning, monitoring and evaluation on the implementation of the Gender Equity and Social Inclusion policy nationally across the public service, Papua New Guinea (Governance Facility/Australian **DFAT**)Central City Master Plan Review, development of social needs assessment, Papua New Guinea (Papua New Guinea Central Province Government & SMEC)
- Consultancy Demand and Needs Assessment for the PNG Business Coalition for Women International, evaluation of key opportunities and constraints for women, Papua New Guinea (International Finance Corporation)
- United Nations Development Assistance Framework for the Pacific covering a total of 15 UN agencies, offices and programmes, and between the UN and the governments of 14 Pacific island countries., Fiji Islands (UN RCO and Australian **DFAT**)

Infrastructure

- Cross River Rail social impact assessment for Modification 2, Qld (Cross River Rail Authority and CBGU JV)
- Social and Gender Specialist / Nine Bridges for Sepik and Ramu Highways, social safeguards and gender specialist, Papua New Guinea (European Investment and Department of Works for the Government of PNG)
- Aldoga Rail Yard, social impact assessment and stakeholder engagement, Gladstone Qld (Gladstone Regional Council)

Water and sanitation

- Dungowan Dam Social Impact Assessments for EIS, NSW (WaterNSW)
- Dungowan Dam Review of Environmental Factors Social Impact Assessments, NSW (WaterNSW)
- Ningan and Cobar Drought Water Security Project, stakeholder engagement and consultation, NSW (WaterNSW)
- Nullinga Dam Social Impact Evaluation, social impact evaluation and identification of social performance strategies, Qld (WSP and Building Queensland)

- South Tarawa Water Supply Project, review of social safeguards considerations, community engagement and consultation, Kiribati (Asian Development Bank, World Bank, Global Climate Fund and Government of Kiribati)
- South Tarawa Sanitation Improvement Sector Project, development of National Policy for implantation of tariff, subsidy scheme and establishment of maintenance fund, Kiribati (SMEC, Asian Development Bank, World Bank and Australian **DFAT**)
- Ramu 2, Full Feasibility Study for Hydroelectric Power Station, social impact assessment, social safeguards review, social mapping and stakeholder management advice, Papua New Guinea (PNG Independent Public Business Corporation)

Energy (Conventional and renewable)

- MacIntyre Wind Farm Precinct Social Impact Assessment including housing and accommodation and workforces strategies, Qld (ACCIONA)
- Ergon Energy High Level Engagement Plan, stakeholder engagement, Brisbane Qld (Ergon Energy)
- Town Electrification Investment Program – Tranche 2, social safeguards due diligence review, Papua New Guinea (ADB, SMEC and PNG Power Limited)
- Tuvalu Energy Sector Development, training materials and curriculum in energy efficient methods for households and homebased businesses, Tuvalu (World Bank, Tuvalu)
- Tonga Village Energy Network Upgrade Stage 2 and 3: Customer Value and Quality Assessment in 33+ villages, Tonga (Tonga Power Limited)
- Kiritimati Energy Sector Project, Environmental and social impact assessment and impact management and technical advice, Kiribati (New Zealand Aid Programme)
- Systematisation of the Program "Semilleros Cientificos", director, project design and technical lead for evaluation, systematisation and program re-design, Colombia (CDI & Bogota Energy Group)

Health

- Bowen, Galilee & Surat Mining Basins Plan 2011–2021, review of existing services, and new strategy development, Galilee Basin, Qld (Queensland Government, Health Department)
- Toowoomba, Darling Downs, West Moreton and South Burnett Health Service Plan, social impact assessment and technical planning advice, Toowoomba Qld (Queensland Government, Health Department)
- Queensland Health Statewide Health Services Plan 2011-2026, plan development, Qld (Queensland Government, Health Department)
- South West Health District Plan, plan development for remote and rural areas, Qld (Queensland Government, Health Department)
- Royal Children's Hospital Health, Qld (Queensland Government, Health Department)
- Health Service Planning Handbook, technical advice and handbook development, Qld (Queensland Government, Health Department)

Publications

- Queensland Health Office of the Chief Nursing Branch (forthcoming), *Ethical Principles to underpin and ethical nurse migration in Australia*.
- Queensland Health Planning and Coordination Branch, 2009, *Guide to Health Service Planning*.
- Ayala, S, 2004, Armed Conflict, Involuntary Involvement of Civil Population, *El Malpensante*, No 54, Ed. May-June 2004, pp. 45–49, Bogota, Colombia
- Medina, M & Ayaka, S, 2001, Sexual and Reproductive Health in the Mid-Magdelana River Region: Socio-anthropological Characterization; Studies Centre for Economic Development at University of The Andes, United Nations Population Fund & Mid-Magdalena River Development and Peace Program, Bogata, Colombia
- Ayala S, 1998–2001, *Mestizaje* (Crossbreeding races) and *Dese Adentro* (Insight) sections – Various papers - Revista Cultural SUE (SUE Cultural Magazine) Chia, Colombia
- Garcia, N & Ayala, S, 1997, Effects on the cooperative values of Cuban children as a result of Tourism Arrivals, *Magazine of the Latin American Faculty of Social Science FLACSO-Cuba Program*, La Havana, Cuba
- Ayala, S, 1997, Kids and Tourism: transformation and adaption of cooperative values, a project extension to family level, *Journal of the Faculty of Social Science, University of La Havana*, Cuba
- Ayala, S, 1995–1998, *Daruta Magazine*, publication by the Anthropology Department Students Various papers and edition, The University of The Andes, Bogotá, Colombia

Servicing projects throughout Australia and internationally

SANTIAGO AYALA
Associate - Social Scientist MIS-PC, MSPD

T 07 3648 1200
E sayala@emmconsulting.com.au

Level 1, 87 Wickham Terrace
Spring Hill QLD 4000

Jessica Walker

Social Planner

Curriculum vitae

Jessica is a social planner with experience in applying social research methods to social impact assessment to support planning approvals within NSW and Queensland.

Qualifications

- Bachelor of Arts majoring in Geography, University of Queensland (UQ)
- Bachelor of Social Science majoring in Development, UQ

Career

- Social Planner, EMM Consulting, July 2020 – Present
- Sales Assistant, Liquorland 2016 – 2021
- Detailer/ Office assistant, AP Eagers 2014 – 2016
- Team member, Kmart 2011 – 2015

Representative experience

Social planning and impact assessment - QLD

- Cross River Rail Modification 1 Southern Portal, social impact assessment – baseline study preparation and data analysis, technical studies review, report creation, social risk assessment, Brisbane, QLD (Cross River Rail Delivery Authority)
- MacIntyre Windfarm Project, social impact assessment – assisted baseline study preparation with comprehensive workforce and employment profile, assisted on report creation, south west of Warwick, QLD (ACCIONA)

Social planning and impact assessment - NSW

- Wongawilli Colliery Modification 2 Project, social impact assessment – assisted on baseline study preparation and data analysis, technical studies review, preparation of consultation materials, report creation, Wollongong, NSW (Wollongong Coal)
- Great Cobar Mine New Cobar Complex, social impact assessment – technical studies review, assisted report creation, Cobar, NSW (Peak Gold Mines)
- Moorebank Realignment, social impact assessment – assisted report creation, Sydney, NSW (Qube)
- Dubbo Quarry Continuation Project, social impact assessment – assisted report creation, Dubbo, NSW (Holcim)

EMM
creating opportunities

- Dungowan Dam Project, social impact assessment – assisted on baseline study preparation, telephone consultation with service providers, technical studies review, report creation, Review of Environmental Factors proposal preparation, Dungowan, NSW (WaterNSW)
- Hunter Valley Operations Continuation Project, social impact assessment – data preparation and analysis from scoping consultations, assisted on baseline study preparation, Hunter Valley, NSW (Glencore)
- Cowal Gold Operations Open Cut Expansion Project, scoping phase – meeting agenda and interview guide preparation, online survey development, frequently asked questions preparation, baseline study supplements, report creation, Lake Cowal, NSW (Evolution Mining)
- Hastings Secondary College, Port Macquarie Campus SSDA – baseline study preparation, social research, report creation, Port Macquarie, NSW (Indigeco)

Environmental impact statement

- Great Cobar Mine New Cobar Complex, environmental impact statement – assisted on finalising environmental assessment reports for submission, Cobar, NSW (Peak Gold Mines)

EMM
creating opportunities

Servicing projects throughout Australia and internationally

JESSICA WALKER
Social Planner

T 07 3648 1200
E jwalker@emmconsulting.com.au

Level 1, 87 Wickham Terrace
Spring Hill QLD 4000


FIELD
NOTES