



# Equity-Focused Health Impact Assessment – Riverwood Estate State Significant Precinct

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NSW Land and Housing Corporation  
June 2022



Creating built environments that encourage people to walk, cycle, take part in physical activity, use public transport and interact with community members can contribute to lifelong health and wellbeing.”

– Healthy Built Environment Checklist,  
NSW Government

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**Report title:** Equity-Focused Health  
Impact Assessment - Riverwood Estate  
State Significant Precinct

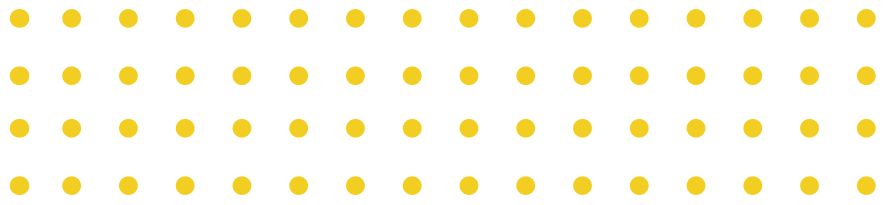
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# Executive Summary

## Background and purpose

Cred Consulting was engaged by the NSW Land and Housing Corporation (LAHC) to prepare an Equity-Focused Health Impact Assessment (EFHIA) relating to a planning proposal for the Riverwood Estate (the Study Area), located within the City of Canterbury-Bankstown Local Government Area (LGA) and bordering the Georges River LGA.

The EFHIA is a requirement of Study Requirements for the Riverwood Estate State Significant Precinct (Riverwood Estate SSP). The Study Requirements are to:

- Outline the likely impacts of the Riverwood planning proposal on health and health infrastructure, including the likely impacts of the proposal on the health of the existing community, future population and neighbouring community, and an assessment of the severity and likelihood of identified positive and negative impacts
- Assess the distribution of impacts, and
- Recommend mitigation measures to address any identified impacts.

The Riverwood SSP is an approximately 30ha area, of which NSW LAHC's landholdings comprise 16.7ha, and currently comprises 1,019 social housing dwellings (including two dwellings owned by Aboriginal Housing Organisation), private dwellings, as well as land owned by Council. The proposal for the redevelopment of the site, as outlined in the master plan, will replace the existing aged social housing dwellings with new and modern dwellings better suited to the needs of tenants and provide for additional private dwellings, new streets and parks and community uses.

## What is EFHIA?

An Equity-Focused Health Impact Assessment (EFHIA) is a specific form of Health Impact Assessment that focuses on the differing needs of population groups to determine unanticipated and systemic health inequities that may arise; in this context, in relation to the proposed redevelopment of the Study Area.

This EFHIA outlines the likely impacts on health and health infrastructure, including the likely impacts of the proposal on the health of the existing community, future population and neighbouring community, including an assessment of the severity and likelihood of identified positive and negative impacts; the distribution of impacts; and recommendations for mitigation measures.

## Study Area context

The Study Area is within 5-15 minutes walking distance of the Riverwood town centre, which provides a range of retail services, medical services and a train station. There are also frequent bus services along Belmore Road. Salt Pan Creek Reserve is located directly to the west of the Study Area and City of Canterbury-Bankstown Council has adopted

a master plan to activate this significant regional open space and improve both physical and visual connections into the site. The Study Area also borders Riverwood Public School, and Riverwood Community Centre, which services the local community, is next to the site. The nearest hospital is the Bankstown-Lidcombe Hospital, which is around 3km from the Study Area.

## Riverwood community and health profile

The Riverwood suburb (SA2) is located in both Georges River and City of Canterbury-Bankstown LGAs, but the Study Area is wholly within the City of Canterbury-Bankstown LGA. In 2016, the Riverwood suburb had a population of around 11,724 people with around 3,112 living within the TZ2646 small area, which includes the Study Area and Washington Park located to the north of the Study Area. In Riverwood suburb, around 27% of all housing is social housing, and subsequently, the Riverwood suburb experiences relatively high levels of socio-economic disadvantage (SEIFA score of 799). The median household income for Riverwood suburb in 2016 was \$741 per week, the second-lowest in the LGA (LGA median is \$1,296). There is a very high proportion of people needing assistance due to disability (10.4%).

The Riverwood suburb is highly culturally diverse, with 63.9% of residents speaking a language other than English at home. There is a lower average household size (2.39 persons per dwelling), and a higher proportion of lone-person households (32.7%) than the LGA median. Riverwood suburb also has high unemployment and a high proportion of disengaged young people with opportunities for employment of local people through construction phases of the project.

NSW Health data indicates that the Riverwood community currently experiences worse health outcomes compared to the LGA and research shows that socioeconomic disadvantage is correlated with relatively poorer health outcomes.

## Social and health infrastructure

Research shows that access to quality social infrastructure and open space can help encourage healthy lifestyles, social cohesion and support health and wellbeing outcomes for local communities.

The Riverwood Estate Social Infrastructure Study (SIS) found that the Study Area is currently well serviced by social infrastructure and open space and made recommendations for forecast community and social infrastructure needs, which have been largely addressed through the master plan.

In addition, our assessment found that the Study Area is currently well serviced by health services and infrastructure within easy walking distance in the Riverwood town centre, with no identified gaps in provision. Ensuring ongoing access to affordable services within walking distance will be important to support access and reduce barriers for more vulnerable community members.

## What's proposed?

The master plan proposes a wide variety of new and improved public spaces that will encourage healthy and active lifestyles and support use for recreation, exercise, play, community activities and social connection for residents of the Study Area, as well as residents of neighbouring areas.

3,900 dwellings are proposed with a total population of approximately 7,500 residents in an integrated mixed community of social and private dwellings.

The renewal of the Study Area will increase and change the make-up of the community, with a mix of social housing and private residents living within high-density dwellings, and an increase in population across all age groups, with highest growth in the population aged 35-49 years (+ 1,015, 224%), and an integrated mixed community of social and private dwellings.

Future population characteristics would include a greater mix of household tenure, a higher median household income (while still a high proportion of low-income households living in social housing with relative disadvantage), higher car ownership, high cultural diversity, a lower median age and lower unemployment.

The proposal includes approximately 1,200m<sup>2</sup> of new community and cultural floor space in response to the needs identified in the Riverwood Estate SIS. The proposal will also improve and increase provision of open space (total open space is 4.78 ha, of which 2.4 ha is new provision) for play, recreation, exercise and social connection. The proposal is for new open space in addition to the existing open space of Salt Pan Gardens 028ha and Kentucky Reserve 2.07ha). New open space includes a 10,000m<sup>2</sup> Roosevelt Park; a new 5,000m<sup>2</sup> pedestrianised Community Greenway designed with people of all ages in mind; a 2,800m<sup>2</sup> community park in proximity to the public school; a 1,600m<sup>2</sup> community garden park adjacent to the existing community garden; a 3,500m<sup>2</sup> civic place with sports courts. This open space is centrally and equitably located to support all future populations. For lower-income and social housing residents in particular, these new and improved open spaces will provide affordable opportunities for recreation, play and socialisation outdoors that will support equitable health outcomes.

The master plan includes the objective for all residents to be within one road crossing and 200m of a park, which will be very important considering residents of the Study Area will be living in high-density dwellings requiring access to space outside the home for recreation, and for older people and people with disability to access. In particular, the new Roosevelt Park (1ha) will help to address an identified lack of open space within the Riverwood town centre, benefiting residents of the Study Area as well as neighbouring areas.

The LAHC has advised that all social housing residents will have the option to return to the redeveloped Study Area if a suitable property is available. It is anticipated that some

residents will be able to move directly from their old home to a newly built home within the Study Area.

A number of social housing residents will need to temporarily relocate into nearby areas. Once the master plan is approved, we will know more about the timing of the project and when residents will need to temporarily relocate. Residents will be provided at least 6 months' notice and be assisted by the LAHC and the NSW Department of Communities and Justice (DCJ).

## Equity-based health impact analysis

Overall, the master plan is providing a healthy built environment that is equitably accessible. There is also existing social infrastructure and services that can provide continued access for residents to affordable social and recreational services and programs.

### Identified equity-focused health impacts

#### Population, health and wellbeing

The current population of the Study Area will change from almost 100% social housing residents to a more socially sustainable mix of social and private housing. This can provide opportunities for the sharing of social capital and bridging opportunities for social housing tenants, but could also impact on access to affordable services and activities and potentially poorer health outcomes. This requires thoughtful consideration and planning for access to affordable health, social and leisure services, public transport, walkability, and accessible built environment that encourages physical activity. It also indicates that there are likely to be health impacts as a result of relocation to the largely older and single household population.

#### Access to social infrastructure and health services

The Study Area is well located near a range of social infrastructure and health services including GPs. In response to the Riverwood Significant Estate Social Infrastructure Study, the master plan proposes increased community facility provision, either through a new space or by contributing to improvements to the Riverwood Community Centre, which currently provides a popular service, particularly for young people and lower income families, older people and people from non-English speaking backgrounds. It also considers replacing the existing SDN child care service with a similarly not-for-profit service that can provide services for lower-income families and better health outcomes.

New links to existing community facilities and services will support and reduce barriers to participation in community activities and encourage the building of social capital that makes communities stronger and more resilient.

To support the health and wellbeing of older people in the area, a new space for the existing Men's Shed (housed in a LAHC building, but coordinated by the Riverwood Community Centre) should be considered a priority.

## Housing

The renewal of the Study Area will replace existing aging social housing dwellings with new and modern dwellings better suited to the needs of tenants, which in turn will support their health and wellbeing.

The proposal will change the make-up of housing and dwellings from almost 100% social housing to a mix of social and private housing.

## Public open space and public domain

The master plan includes the following public open space and public domain improvements that will provide health and wellbeing outcomes for the future population as well as those living nearby. These public open space and public domain improvements deliver more equitable access for all residents as they are designed for comfort and inclusion, provide free spaces and places to connect, and improved access to services in the town centre:

- Increased provision of open space (total open space is 4.78 ha, of which 2.4 ha is new provision) for play, recreation, exercise and social connection. The proposal is for: a new 10,000m<sup>2</sup> Roosevelt Park; a new 5,000m<sup>2</sup> pedestrianised Community Greenway designed with people of all ages in mind; a 2,800m<sup>2</sup> community park in proximity to the public school; a 1,600m<sup>2</sup> community garden park adjacent to the existing community garden; a 3,500m<sup>2</sup> civic place with sports courts as well as the new Salt Pan View (770m<sup>2</sup>). This open space is centrally and equitably located to support all future populations. For lower-income and social housing residents in particular, these new and improved open spaces will provide affordable opportunities for recreation, play and socialisation outdoors that will support equitable health outcomes.
- New and improved connections to open space along tree-lined green streets with wide footpaths and comfortable seating, with all dwellings linked to parks by crossing no more than one road, supporting walkable neighbourhoods promoting a healthier lifestyle, including for older people and people with disability.
- Existing and new trees to create tree canopy cover for approximately 30% of the site, supporting urban cooling,

natural ventilation and providing shade and comfort to support active transport.

- Improved walking and cycling connections to the Riverwood town centre and train station, Riverwood Public School and community facilities to encourage active and public transport and reduce reliance on private vehicles for local trips and improved access to health and other services. These new connections will support older people and people with disability to access services along comfortable and cool streets.
- New dedicated cycleways along key roads as well as extended shared paths along existing and new streets to promote walking and cycling throughout the Study Area.
- Reconnecting the Study Area and Riverwood town centre with Salt Pan Reserve, Riverwood Public School and Washington Park, which will support connectivity for all residents as well as neighbouring areas.
- 50% of all ground-floor frontage will be front doors/ gardens, activating residential streets and providing opportunities for casual interaction between residents/ pedestrians and increasing passive surveillance.
- The master plan builds on existing community strengths such as the Riverwood Community Garden as a focal point of intergenerational connection and positive health outcomes, providing for additional quality and multipurpose public open space in close proximity.

## Healthy built environment checklist

An assessment against the healthy built environment checklist is provided in **Section 5** including a discussion of indicators and, where relevant, recommendations and suggestions to improve health and wellbeing outcomes.

Overall, our assessment has found that the master plan provides for good healthy built environment outcomes across all relevant themes and indicators. Based on our assessment, we have recommended a number of opportunities to further enhance health outcomes for future residents and residents of neighbouring areas through increased consideration of urban heat and universal design principles.

## Potential equity-based health impacts and mitigation measures

A summary of equity-based health impacts is provided in **Section 6**. The proposal itself will overall deliver positive health outcomes for the future population with improved public open space and public domain, improved community facilities for delivery of services and programs, and improved access to services in the town centre. The design takes into consideration the universal needs of children and older people and people with disability. However, existing residents are likely to be impacted by the relocation and renewal process and will need to be engaged and communicated with sensitively to support any

Table 2 - Potential health impacts and recommended mitigation measures

Impact	Likelihood	Distribution	Proposed mitigation measure
<b>Impacts associated with rehousing of current social housing tenants</b>			
<ul style="list-style-type: none"> <li>Some social housing tenants may experience psychological distress associated with any required rehousing and the wait to be rehoused.</li> <li>Tenants who relocate may lose important social ties and supports (e.g. reduced social capital), which may lead to diminished wellbeing and feelings of isolation.</li> <li>In particular, older residents who are relocated away from friends and support networks may become socially isolated and there may be increased dependence on social services for support.</li> </ul>	High	Existing social housing residents	<p>Ongoing and clear communications with existing social housing tenants is recommended, along with support throughout the process to stay connected with community friends and ties.</p> <p>LAHC advises that all social housing residents will have the option to return to the redeveloped Study Area if a suitable property is available. It is anticipated that some residents will be able to move directly from their old home to a newly built home within the Study Area.</p> <p>LAHC also advises that social housing residents will be provided at least six months' notice and be assisted by LAHC and DCJ.</p>
<b>Impacts of changes in tenure mix</b>			
<ul style="list-style-type: none"> <li>A changing tenure mix within the Study Area may lead to higher prices for local health/wellbeing services, which would impact on social housing and lower-income residents.</li> <li>A changing tenure mix within the Study Area, with social housing tenants living alongside private tenants and owners, may expose social housing tenants to stigma or experiences of social marginalisation.</li> </ul>	High	Existing and future residents	<p>Community building should be implemented from the earliest stages of development and should focus on programs, events and activities that will:</p> <ul style="list-style-type: none"> <li>Recognise the unique Riverwood identity, including opportunities to build upon this with the new community.</li> <li>Deliver events, groups and gatherings that create opportunities for residents to meet, create and play together, including social, affordable and private housing residents; residents of different ages and residents from different cultural backgrounds, and</li> <li>Support the needs of the disadvantaged social housing community including employment opportunities and social enterprise.</li> </ul>

Impact	Likelihood	Distribution	Proposed mitigation measure
<b>Urban heat</b>			
<p>Urban heat, and the associated elevated daytime temperatures, reduced night-time cooling and higher air pollution, has significant health and wellbeing impacts. The City of Canterbury-Bankstown Urban Heat Study (prepared by Cred Consulting) indicates that the Riverwood suburb experiences some of the hottest land surface temperatures in the LGA.</p> <p>The Study Area is forecast to have a number of population characteristics that will make the community more vulnerable to the impacts of urban heat, including people living alone in social housing and low-income households; people in need of assistance due to disability; households without a car, and old people, as well as young children. As temperatures continue to rise, it will be essential that the redevelopment of the Study Area plans for urban cooling, and free and affordable opportunities to get cool on hot summer days.</p>	High	More likely to impact on social housing residents, older people, children and people with disability, and low-income residents who cannot afford cooling	<p>The master plan proposes approximately 30% urban tree canopy cover, which will support urban cooling and provide vital shade to walkers and cyclists.</p> <p>There may also be a need to consider opportunities to mitigate the impacts of urban heat for more vulnerable residents, including older people, people with disability, children and social housing residents who may not be able to afford air conditioning.</p> <p>Opportunities to do so include through increased water in streets and parks, increased use of cool materials in the built environment and planning for access to 'cool refuges' on hot days, plus quality air-conditioned community rooms.</p> <p>It will also be important to design social housing dwellings that support cooling and, in particular, consider top floors of buildings which may get even hotter.</p>
<b>Universal design and accessibility</b>			
<p>The Riverwood suburb is currently, and will likely be in the future, characterised by a relatively older population with higher rates of disability. To support everyone in the community to get around, participate in the community and access services and public transport, there will be a need to incorporate best-practice universal design principles in planning for public spaces. There is also opportunity to plan for adaptable and flexible housing that allows for people to age in place and stay living in the community.</p>	High	More likely to impact on older people and people with disability	<p>Incorporate best-practice universal design principles in the Study Area, including consulting with local people with disability and older people to understand their priorities for accessibility.</p> <p>Ensure pedestrian areas, streetscapes, open spaces, community facilities and public transport nodes are designed to be universally accessible to support access for people with disability.</p> <p>Allow for gentle exercise opportunities including walking paths, hard surfaces for dancing and tai chi, and outdoor fitness equipment, which will provide affordable access to active recreation for this age group.</p>
<b>Managing the health impacts of construction</b>			
<p>During the construction period, construction noise and pollution may impact on the comfort and wellbeing of residents that move in early, including older people and people working from home.</p>	High	More likely to impact on older people and people working from home	<p>Consider planning to manage noise impacts during the construction period and ongoing communication with residents.</p>



Impact	Likelihood	Distribution	Proposed mitigation measure
<b>Living well in high-density and lone-person households</b>			
The Study Area will be a high-density community with many lone-person households, making it even more important to plan for opportunities for formal and informal social connections to prevent health impacts of social isolation. While the master plan addresses this through public domain principles, there may also be opportunity for community building programs run with local services. There will also be a mix of people renting social and private housing, with a need to encourage connections between people from across different backgrounds.	High	All residents will be living in high-density dwellings, requiring access to spaces outside the home for recreation	Deliver community building programs in partnership with local service providers to support social connection and cohesion as new residents move in. This can also be facilitated through the provision of quality community facilities as identified as needed within the Social Infrastructure Study.
<b>Access to affordable services, programs and activities for lower-income residents</b>			
The Study Area will be home to a mixed-income community, including people living in social housing dwellings and private dwellings. Research shows that living in a mixed-income community can have significant wellbeing benefits for lower-income residents; however, there is a need for ongoing access to a range of affordable services, programs and activities to reduce barriers to participating in the community and accessing services and to ensure community cohesion. While the master plan provides for a good range of free public spaces that will support lower-income residents, affordable community services, programs and activities will continue to play an important role in supporting future residents.	High	More likely to impact on social housing residents and lower-income households	This can be facilitated through LAHC negotiating with City of Canterbury-Bankstown Council regarding upgrades to the Riverwood Community Centre (as proposed in Notes in the Social Infrastructure Study) to support the ongoing provision of quality, affordable programs and services. Communal rooms within future social housing buildings for delivery of community programs can also improve health outcomes of social housing residents.
<b>Diverse housing types</b>			
There is demand for dwellings to support existing families living within the Study Area and to support the inclusion of families in the renewal, including those on the waiting list for social housing, and those families looking for affordable private housing in a convenient location.	High	Likely to impact existing residents	Consideration should be given to providing a mix of social housing dwellings including accommodating family households. Socially sustainable neighbourhoods have a mix of household types.
There is a need for well-designed adaptable housing for people with disability. As of 2018, 9.2% of Riverwood suburb residents have a disability (much higher than the Greater Sydney average of 4.4%).	High	Likely to impact social housing residents	Include the provision of accessible housing for people with disability as part of the controls for future dwelling mix.
<b>Local workforce and employment</b>			
The future population will include around 30% social housing residents who are likely to be low income and have high rates of unemployment and will need access to employment opportunities. This may include Aboriginal and Torres Strait Islander community members.	high	Likely to impact social housing residents.	Opportunities for employment of local residents including existing and future social housing residents should be provided via apprenticeships, training and education during the construction phase.

# 1. Introduction

This report provides a preliminary Equity-Focused Health Impact Assessment relating to a planning proposal for the Riverwood Estate State Significant Precinct, prepared by Cred Consulting for LAHC.

## 1.1. Background and purpose

Cred Consulting was engaged by the NSW Land and Housing Corporation (LAHC) to prepare a preliminary Equity-Focused Health Impact Assessment relating to a planning proposal for the Riverwood Renewal project.

The EFHIA is a requirement of Study Requirements for the Riverwood Estate State Significant Precinct (Riverwood Estate SSP).

### What is an Equity-Focused Health Impact Assessment (EFHIA)?

Health Impact Assessment (HIA) is a practical approach used to judge the potential health effects of a policy, program or project on a population, particularly on vulnerable or disadvantaged groups (World Health Organisation).

An Equity-Focused Health Impact Assessment (EFHIA) is a specific form of HIA that focuses specifically on the differing needs of population groups to determine the unanticipated and systemic health inequities that may exist. As outlined in the Equity-Focused Health Impact Assessment Framework (ACHEIA, 2004), EFHIA seeks to:

- Put concern for equity and the reduction of inequalities in health on the planning and policy agendas where it currently is not considered
- Provide a flexible yet structured approach to routinely and consistently identifying and determining the possible impacts of policies and practices on different population groups, and
- Provide a means for adding evidence about inequalities and the consequences of inequity into decision-making processes at all levels of government.

An equity approach recognises that not everyone has the same level of health nor level of resources to deal with their health problems, and it may therefore be important to deal with people differently in order to work towards equal outcomes (NSW Health, 2004).

### Purpose of this report

The objectives of this EFHIA are to:

- Outline the likely impacts of the Riverwood planning proposal on health and health infrastructure, including the likely impacts of the proposal on the health of the existing community, future population and neighbouring community, and an assessment of the severity and likelihood of identified positive and negative impacts
- Assess the distribution of impacts, and
- Recommend mitigation measures to address any identified impacts.

## 1.2. Methodology

In preparing this EFHIA, we have drawn on relevant frameworks and guidelines including the NSW Government Healthy Built Environment Checklist, updated in 2020.

Our approach to preparing this EFHIA has included:

- Review of current and forecast population characteristics of the Riverwood estate and implications for health infrastructure and services, including a focus on the differing needs of vulnerable population cohorts
- Assessment of current and proposed social infrastructure and services provision within and surrounding the Riverwood estate, including open space, schools, community facilities, libraries, health facilities, primary health care services, child care and other health and wellbeing services
- Assessment of the planning proposal against the NSW Government Healthy Built Environment Checklist
- Assessment and identification of measures to achieve a diverse, inclusive, healthy and socially connected and sustainable precinct
- Identification of potential positive and negative health impacts of the planning proposal and mitigation measures to maximise positive health impacts and minimise negative health impacts of the proposed development, and
- Summary of how the proposal can deliver a healthy built environment and support healthy active lifestyles for residents, including consideration of relevant guidelines.

### 1.3. About the Riverwood Renewal project

#### About the Study Area

The Study Area is located within the City of Canterbury-Bankstown Local Government Area (LGA) and on the border of the Georges River LGA, approximately 18km from Sydney CBD and centrally situated between the district centres of Bankstown and Hurstville.

The Study Area is approximately 30ha, of which LAHC's landholdings comprise 16.7ha, and includes 1,019 social housing dwellings (including two dwellings owned by the Aboriginal Housing Organisation), private dwellings, as well as Council-owned land.

Riverwood town centre is within 5-15 minutes walking distance of the Study Area and provides retail services and a train station. There are also frequent bus services along Belmore Road. Salt Pan Reserve, a significant regional open space, is located directly to the west of the Study Area, as is the Riverwood Public School.

#### About the Riverwood Renewal project

The Riverwood Estate was initially constructed in the 1940s and redeveloped in the 1970s. The Estate consists of a diverse range of housing types from single cottages through to high-rise residential flat buildings.

The renewal of Riverwood Estate is intended to deliver a new community comprised of a mix of low, mid and high-rise residential apartment buildings, which will provide a mix of private and social housing.



Figure 1 - Concept master plan



Figure 2 - Proposed open space in Study Area



Figure 3 - Proposed open space in Study Area



## 1.4. About the master plan

Architectus and a consultant team have been working with the LAHC in the preparation of a master plan for the redevelopment of the Study Area that will replace the existing social housing dwellings with new and modern dwellings, and provide for additional private dwellings, new streets and parks and community uses.

### Proposed housing and dwelling mix

Approximately 3,900 dwellings are proposed for the development, including a mix of private and social housing dwellings. The current population of study area is approximately 1,700 and is forecast to increase to approximately 7,500 post-renewal.

### Proposed positive health outcomes

The master plan will result in the following positive health outcomes:

- Increased provision of open space (total open space is 4.78 ha, of which 2.4 ha is new provision) for play, recreation, exercise and social connection. The proposal is for: a new 10,000m<sup>2</sup> Roosevelt Park; a new 5,000m<sup>2</sup> pedestrianised Community Greenway designed with people of all ages in mind; a 2,800m<sup>2</sup> community park in proximity to the public school; a 1,600m<sup>2</sup> community garden park adjacent to the existing community garden; a 3,500m<sup>2</sup> civic place with sports courts as well as the new Salt Pan View (770m<sup>2</sup>).
- 1,200m<sup>2</sup> of community and cultural floor space for arts and cultural outcomes, Men's Shed, Makers' Spaces, social enterprise and community programs.
- New and improved connections to open space along tree-lined green streets with wide footpaths, with all dwellings linked to parks by crossing no more than one road, supporting walkable neighbourhoods and promoting a healthier lifestyle.
- Existing and new trees to create tree canopy cover for approximately 30% of the site, supporting urban cooling, natural ventilation and providing shade and comfort to support active transport.
- A target replacement of the existing social dwellings (approximately 30%) on LAHC owned land.
- Improved walking and cycling connections to the Riverwood town centre and train station, Riverwood Public School and community facilities to encourage active and public transport and reduce reliance on private vehicles for local trips.
- New dedicated cycleways along key roads as well as extended shared paths along existing and new streets to promote walking and cycling throughout the Study Area.
- Reconnecting the Study Area and Riverwood town centre with Salt Pan Reserve, Riverwood Public School and Washington Park, which will support connectivity for residents as well as neighbouring areas.
- Approximately 50% of all ground-floor frontage will be front doors/gardens, activating residential streets and



## 2. Strategic policy context

This section considers the implications of State and local government strategic planning for the Riverwood Renewal project, with a focus on health equity.

### 2.1. Global commitment

In September 2015, Australia was one of 193 countries to commit to the United Nations Sustainable Development Goals (the SDGs). These provide guidance for social infrastructure outcomes as detailed below.



SDG indicator	SDG and targets	How this can be addressed for the Study Area
<b>3</b> GOOD HEALTH AND WELL-BEING 	3 Good Health and Wellbeing – Ensuring healthy lives and promoting wellbeing for all at all ages is essential to sustainable development	Quality and comfortable public spaces such as parks, community centres, and recreation blue and green grid links to district and regional spaces will support the Study Area to have improved health and wellbeing outcomes, and is a priority for this Strategy.
<b>4</b> QUALITY EDUCATION 	4 Quality Education – Obtaining a quality education is the foundation to improving people's lives and sustainable development.	Ensuring that the community can access lifelong learning opportunities through libraries near their homes; and children can access quality early education and care and school services is a priority of this Strategy (there is a library located in the Study Area).
<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE 	9 Industry, Innovation and Infrastructure – Investments in infrastructure are crucial to achieving sustainable development.	Industry innovation through improved access to technology within social infrastructure; and through new approaches to delivery such as co-location, sharing and partnership is a potential outcome with stakeholders such as Riverwood Community Centre, local councils, and the NSW Government.
<b>10</b> REDUCED INEQUALITIES 	10 Reduced Inequalities – To reduce inequalities, policies should be universal in principle, paying attention to the needs of disadvantaged and marginalised populations.	The Study Area will need to provide equitable access to universally designed and affordable social infrastructure, particularly for our more socially, economically and transport-disadvantaged residents.
<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	11 Sustainable Cities and Communities - There needs to be a future in which cities provide opportunities for all, with access to basic services, energy, housing, transportation and more.	Understanding the unique needs of all members of the Study Area from public, private and community housing is important, including ensuring they have access to the basic social services they need to reach their full potential (this is further addressed in the separate Equity-Based Health Impact Assessment Report).

## 2.3. Australian Government

The 2021 Australian Infrastructure Plan is a practical and actionable road map for infrastructure reform. This is the first time the Australian Infrastructure Plan has included social infrastructure such as schools, hospitals, parks, community centres and social housing. The sector's inclusion acknowledges the critical role these physical spaces and assets play in supporting the nation's wellbeing and in making Australia a great place to live.

A growing and aging population, technological advances and life-changing events (such as natural disasters and the COVID-19 pandemic) are changing how Australians live and work, highlighting the value of social infrastructure in supporting viable communities.

By providing high levels of amenity and quality of life, these facilities and the services they deliver attract people to live in an area and enable them to stay there through all stages of life. Yet the substantial contribution social infrastructure makes to local and national economies is not fully recognised.

The Plan's vision for social infrastructure is:

*Quality, accessible, future-focused, multipurpose and economically valued social infrastructure that supports a strong, healthy and prosperous nation and ongoing quality of life for all Australians.*

The social infrastructure reform agenda includes:

1. Valuing social infrastructure – national consistency
2. Uniform access – healthy and prosperous communities
3. Embracing technology – optimised delivery
4. Education hubs – contemporary learning
5. Housing stock – addressing the shortfall (social housing)
6. Valuing our culture – enhancing liveability (arts and culture)
7. Co-location and precincts – driving better outcomes (collaborative partnerships to create shared, well-used facilities and enable the co-location of health, education and other social facilities in mixed-use precincts).

## 2.2. NSW Government

### Premier's Priorities, 2021

The Premier's Priorities seek to enhance the quality of life of people in NSW. Priorities include a number of health-related goals including improving the health system, lifting education standards, and creating a better environment.

Goals that will be relevant to the redevelopment of the Riverwood precinct from a health-equity perspective include the goal to 'increase the proportion of homes in urban areas within 10 minutes' walk of quality green, open and public space by 10% by 2023, and the goal to 'increase the tree canopy and green cover across Greater Sydney by planting one million trees by 2022' – both of which are supported through the draft master plan.

### Draft NSW Public Spaces Charter, DPIE, 2020

The Draft NSW Public Spaces Charter has been developed by the NSW Department of Planning Industry and Environment (DPIE) to support the planning, design, management and activation of public spaces in NSW. The Charter defines public spaces as all places publicly owned or of public use, accessible and enjoyable by all for free and without a profit motive.

The Charter identifies 10 principles for quality public space, including Principle 6, which emphasises the importance of supporting healthy and active environments that refresh our spirits through public spaces that are accessible; are well-connected to support walking and cycling; include spaces and facilities for physical activities such as sports and recreation, as well as tranquil places for sitting and relaxing; integrate elements of play for people of all ages, and are flexible and multi functional to support different activities.

### Draft Greener Places Design Guide, Government Architect NSW, 2020

The Draft Greener Places Design Guide framework provides information on how to design, plan, and implement green infrastructure in urban areas throughout NSW.

The Guide emphasises that well-designed recreational open space, a high urban tree canopy and bushland and waterways improve health and wellbeing and create healthy cities.

### **Better Placed, Government Architect NSW, 2017**

Better Placed is an integrated design policy for the built environment of NSW and seeks to place good design at the centre of all development processes from project definition to concept design through to construction and maintenance. Better Placed is centred around seven distinct objectives that together seek to create a 'well-designed built environment that is healthy, responsive, integrated, equitable and resilient':

- Better fit: contextual, local and of its place
- Better performance: sustainable, adaptable and durable
- Better for the community: inclusive, connected and diverse
- Better for people: safe, comfortable and liveable
- Better working: functional, efficient and fit for purpose
- Better value: creating and adding value, and
- Better look and feel: engaging, inviting and attractive.

The Government Architect NSW defines a healthy built environment as a space that promotes healthy communities by promoting physical activity, wellbeing, social cohesion, community safety and security. The policy recognises that a healthy built environment can address health concerns such as chronic diseases, including type 2 diabetes and obesity.

### **Everyone Can Play, 2019**

Everyone Can Play is a set of design principles and best-practice recommendations for play spaces in NSW, focusing on inclusive play spaces. An inclusive play space invites people of all ages, abilities and cultures to come together to socialise and thrive. The principles focus on addressing three questions:

- Can I get there?
- Can I play?
- Can I stay?

The policy emphasises that well-designed play spaces can support the health and wellbeing of people of all ages, abilities and cultural backgrounds.

### **The Greater Sydney Region Plan and South District Plan, Greater Sydney Commission, 2018**

The Greater Sydney Region Plan: A Metropolis of Three Cities is built on a vision where people live within 30 minutes of their jobs, education and health facilities, services and great places. The Plan seeks to transform Greater Sydney into a metropolis of three cities – the Western Parkland City, Central River City and the Eastern Harbour City, guided by 10 strategic directions. Relevant directions include:

- Liveability - A city for people
- Infrastructure – A city supported by its infrastructure
- A city of great places.

The South District Plan maps the 20-year vision for the South District of Greater Sydney in which Riverwood is located.

Relevant priorities include:

- Planning Priority S3 – Providing services and social infrastructure to meet people's changing needs
- Planning Priority S4 – Fostering healthy, creative, culturally rich and socially connected communities
- Planning Priority S5 – Providing housing supply, choice and affordability with access to jobs, services and public transport
- Planning Priority S8 – Growing and investing in health and education precincts and Bankstown Airport trade gateway as economic catalysts for the district
- Planning Priority S15 – Increasing urban tree canopy cover and delivering Green Grid connections.

The South District Plan also includes, as a Priority Green Grid Project, improving the Salt Pan Creek Open Space Corridor. The Corridor contains important ecological communities, mangroves, wetlands, recreational facilities and walking and cycling trails on both sides of the creek. The project aims to strengthen the connection between Bankstown CBD and Salt Pan Creek, improve trails and recreational opportunities, and improve bridge crossings and connections to Bankstown, Punchbowl, Riverwood, Padstow, Peakhurst and Lugarno.

## **2.4. City of Canterbury-Bankstown**

The Riverwood Renewal Estate SSP is located within the City of Canterbury-Bankstown LGA. City of Canterbury-Bankstown has a number of strategic documents that are relevant to health-equity in Riverwood.

### **Connective City 2036**

Council has endorsed the Canterbury-Bankstown Local Strategic Planning Statement (LSPS): Connective City 2036. The LSPS features 10 Directions that focus on the City's metropolitan and local interactions and 10 Evolutions to build on the City's assets, character and opportunities. Engagement for the LSPS indicated that people want a motivated and active city that nurtures healthy minds and bodies.

Other LSPS commitments that are relevant to health and wellbeing include:

- Bankstown City Centre has been identified as a health and education precinct in the south district plan. As a result, the Bankstown City Centre will support health and wellbeing by providing health support services at the Bankstown-Lidcombe Hospital. The plan also identifies Canterbury Road as a medical precinct that will 'optimise existing health support services'.
- New health infrastructure is earmarked for Bankstown (subject to the Health Infrastructure NSW plans) to support a strong health care sector for an aging population. The hospital is set to anchor new health services.

- The plan prioritises and promotes cycling by identifying the need to link with the Greater Sydney cycle network. Further, the plan states that wayfinding systems, end-of-trip facilities, and bike parking facilities in centres can increase cycling.
- The plan indicates City of Canterbury-Bankstown's commitment to improving walkability to facilitate healthy and active lifestyles. For example, the plan suggests that elements such as more frequent facilitated pedestrian crossings will be added to the built environment.
- The plan commits to providing places and spaces that support social networks and encourage social connection to deliver positive wellbeing outcomes.
- The council also commits to enhancing 'the biodiversity of Canterbury-Bankstown's plants and animals and provide open spaces that receive sunlight to support turf and plant growth and enhance people's wellbeing'.

## CBCity 2028

CBCity 2028 set out seven destinations to transform the City of Canterbury-Bankstown. These have guided the design and development of Connective City 2036. The seven destinations are:

- Leading and engaged – A well-governed City with brave and future-focused leaders who listen.
- Liveable and distinctive – A well-designed attractive City, which preserves the identity and character of local villages.
- Moving and integrated – An accessible City with great local destinations and many transport options to reach them.
- Healthy and active – A motivated City that nurtures healthy minds and bodies.
- Prosperous and innovative – A smart and evolving City with exciting opportunities for investment and creativity.
- Clean and Green – A clean and sustainable City with healthy waterways and natural areas.
- Safe and strong – A proud inclusive community that unites, celebrates and cares.

Seven City transformations included:

- We are a Child-friendly City.
- A large-scale solar farm is constructed.
- A network of Smart infrastructure is constructed.
- The Bankstown transport hub and underground station connects movement for health, education and employment.
- Canterbury and Bankstown-Lidcombe Hospitals are transformed into state-of-the-art facilities.
- Our town centres are transformed through the Complete Streets approach.
- A collaboration is formed where local and state services are delivered through a single lens.

## Playgrounds and Play Spaces Strategic Plan, 2019

City of Canterbury-Bankstown's vision is to achieve quality, diverse and accessible play experiences that are fun and close to home, including:

- An equitable spread of play spaces across district and local catchment areas;
- Quality play experiences through unique and high-quality play spaces (including play space destinations), and
- Diverse play opportunities that cater for different age groups and levels of ability.

In addition, a hierarchy approach to play provision and improvements is recommended, with three play levels defined as follows:

- Play Level 1: Play space destinations with high-quality, diverse, unique and accessible play components, support facilities and settings;
- Play Level 2: Quality and interesting playgrounds and play spaces with diverse activity opportunities and good support structures and settings, and
- Play Level 3: Basic playgrounds or landscape play that support children's play at a local level and meet base standards.

The Play Strategy indicates that Riverwood currently has a high provision of play with seven playgrounds. However, as a future high-density area, the Study Area will have a higher demand for play to support children living in apartments to stay active. The playground at the Riverwood Library is recommended not to be replaced. However, the following is recommended:

- Enhance Riverwood Wetland 2 playground when incorporating Riverwood Wetland 1 and cater for broader age and abilities, ensure sufficient shade (trees and/or shade sails).
- Maintain and enhance landscape, install shade sails over southern section of equipment at Rotary Park.
- Increase play elements and consider exercise equipment at Bennett Park.
- Add an older-children focus on McLaughlin Oval.



## Canterbury Open Space Strategy 2017

The Strategy provides strategic and specific directions for open space in the City of Canterbury-Bankstown. These are detailed within the Social Infrastructure Study. In summary, the overriding priorities for the Western District (including Riverwood) are:

- Increase the quality, function and accessibility of open space in the southern part of the area.
- Obtain additional open space and improve existing open space to better cater for the northern area.
- Investigate the potential for additional recreation destinations in the area.
- Strengthen the linear connections in the south (along the M5 Motorway and Salt Pan Creek corridors).
- Enhance streetscapes to increase walkability and connections to open space, and
- Retain and strengthen the natural areas.

Specific actions include:

- Continue to landscape and improve Rotary Park as a key recreation destination.
- Create and maintain linear open spaces along the M5 Motorway.
- Enhance streetscapes to improve the walkability of suburbs and connect to destination open spaces.
- Retain and strengthen natural areas and corridors along Salt Pan Creek and the M5 Motorway, including through tree planting and increased urban forest canopy, and
- Undertake improvements to create McLaughlin Oval and Punchbowl Park as a quality sports hub.

Consultation with Council has also indicated that City of Canterbury-Bankstown Council has plans for a significant upgrade of the Salt Pan Reserve to a high-quality, multi-use recreation space. A significant part of the S94 contribution regime is allocated to this upgrade.

## Youth Action Plan 2019-2024

City of Canterbury-Bankstown's Youth Action Plan includes a strategic priority around health and wellbeing. It includes objectives to improve physical health outcomes for local young people, focusing on identified needs including healthy eating, living and physical exercise, and around youth-friendly spaces and places including objectives to create welcoming and inclusive youth-friendly public places throughout the City and to ensure public places are welcoming for women and girls.

## City of Canterbury Aging Strategy 2011-2015

City of Canterbury-Bankstown's vision is to support older people to live well by creating an environment where:

- Getting around is safe and accessible for older people
- Provide pedestrian and bike friendly environments
- Promote accessible public transport options. Public transport is viewed as inadequate following reduction of bus services, changes of routes, bus stops not in walking distance, and difficulty travelling outside the area
- A range of affordable and safe housing options are available for older people
- Promote older people's access to a diverse range of housing options that are culturally appropriate
- Older people would like to be involved in community gardens
- Older people would like to see town centre development and access to shopping centres and entertainment
- Older people are respected and connected to their communities
- Foster a sense of belonging and opportunities for people to connect
- Older people are active participants in our community
- Parks and amenities are not currently equipped to engage older people in recreational and physical activities
- Older people would like to see art and cultural activities, art galleries and cinemas in the Canterbury area
- Increase availability of low-cost and diverse physical activity at community facilities, and
- Older people are supported to remain independent and to access services.

## Canterbury-Bankstown Urban Heat Report, 2020

In 2020, Cred Consulting delivered a study on the prevalence and impacts of urban heat, particularly in relation to community heat vulnerability and resilience, for the City of Canterbury-Bankstown Council.

This Study found that Riverwood experiences some of the highest average land surface temperatures in the LGA and that the Study Area population experiences relatively high heat vulnerability. This indicates a strong need to plan for cool and heat-responsive development to support liveability and health lifestyles.

Interestingly, while Riverwood is located in proximity to a waterway at Salt Pan Creek Reserve, which is typically associated with cooling and lower surface temperatures, this reserve is also characterised by low tree canopy and a large area of poorly irrigated grass, which can reach very high temperatures. We understand Council is in the process of developing a master plan for this regional open space, and planning for cooling will be crucial.

## Creative City Strategic Plan 2019-2029

The Creative City Strategic Plan 2019-2029 is Council's strategic plan for how to enhance the City's creative and cultural resources and use. It contributes to the vision of making City of Canterbury-Bankstown a place 'Where Interesting Happens' by recognising the importance of the City's social fabric, natural landscapes and built environment. One of the many ways City of Canterbury-Bankstown currently supports creativity and culture is by providing funding or locations for creative spaces and activities, such as community centres, library programs or dedicated creative spaces. Relevant actions include:

- Preparing works schedule to inform the funding of public art and maker spaces through developer contributions.
- Investigating opportunities to enhance major libraries and knowledge centres, and deliver more intergenerational creative opportunities there outside of school/work hours and during the weekends.
- Delivering creative outcomes as part of any urban renewal, master planning process or planning proposal (from Council or other agencies/developers). These may include spaces for community and creative activities, or public art installations, led by advice from Council's Arts and Culture Reference Group. (High Priority).
- Activating town centres with a range of creative activities/events.
- Supporting development of the night-time economy with a program of creative activities and events in town centres and through the Night Time Economy Detailed Action Plan.
- Encouraging nighttime movement through effective public lighting, which incorporates public art.
- Enhancing the experience of walking and cycling with public art, temporary art, pop-up parks and cafes.
- Including public art in significant public domain upgrades for open spaces, destination play spaces, youth recreation areas and town centres when designing for liveable centres.

## 2.5. Georges River Council

### Georges River LSPS 2040

Council has endorsed the Georges River LSPS 2040 with a vision: 'A productive place to live, work and enjoy – with diverse, active green, well designed and connected places.' The LSPS features five interrelated themes and 20 planning priorities to achieve the vision. The themes include:

- Access and movement
- Infrastructure and community
- Housing and neighbourhoods
- Economy and centres
- Environment and open space.

Theme 2 7. Theme 2 – Infrastructure and community:

"The co-location and sharing of family, economic, creative and cultural interests bring richness and harmony to the lives of people in our City.

Our public spaces and facilities respond to the cultural characteristics of our diverse community with many opportunities for festivals and events. We have a number of unique art and culture trails that attract residents and visitors.

Public art is a feature of many of our centres. There are also a range of spaces to cultivate local, homegrown artists, scientists, dancers, inventors, makers, writers, musicians and athletes."

### Community Strategic Plan 2018-2028

The community strategic plan identifies six themes that are important to the community. These include:

- A protected environment and green open spaces
- Quality, well-planned development
- Active and accessible places and spaces
- A diverse and productive economy
- A harmonious and proud community with strong social services and infrastructure, and
- Leadership and transparency.

## 2.6. Riverwood Estate State Significant Precinct Social Infrastructure Study

The Riverwood Estate State Significant Precinct Social Infrastructure Study prepared by Cred Consulting provided an analysis of social infrastructure needs to support the Riverwood community with outcomes from recommendations outlined below.

Recommendation	Rationale
<b>Public facilities</b>	
<p>1,268m<sup>2</sup> of public facility floor space including:</p> <ul style="list-style-type: none"> <li>• 600m<sup>2</sup> of community centre floor space</li> <li>• 518m<sup>2</sup> of library floor space</li> <li>• 150m<sup>2</sup> of cultural floor space, and</li> <li>• Replacement of the Men's Shed facility, which will be lost through development to Riverwood.</li> </ul> <p>There are already two community centres within or connected to the Study Area, so this floor space could be delivered in one of two ways:</p> <ol style="list-style-type: none"> <li>1. Through a contribution to refurbish and expand the existing Riverwood Community Centre to include: <ul style="list-style-type: none"> <li>• Men's Shed/Makers' space</li> <li>• Purpose-built creative arts space for participation and production</li> <li>• Space for social enterprise/community capacity building programs, and</li> <li>• Increased and improved community program delivery space for a range of social services and programs for children, young people, seniors and culturally diverse residents.</li> </ul> </li> <li>2. A new Creative Arts &amp; Cultural Centre could be built within the Study Area for up to 1,268m<sup>2</sup> providing: <ul style="list-style-type: none"> <li>• Men's Shed/Makers' space</li> <li>• Purpose-built creative arts space for participation and production, and</li> <li>• Space for social enterprise and capacity building programs.</li> </ul> </li> </ol>	<ul style="list-style-type: none"> <li>• The Study Area is well serviced with existing community centres and libraries including the Riverwood Community Centre and the Riverwood Library and Knowledge Centre, which are located next to the site in Washington Park. While the Library and Knowledge Centre is new, the Riverwood Community Centre facility is aging and needs refurbishing and upgrades to be fit for purpose and to be able to provide expanded services to the diverse Riverwood community, including private and public housing tenants, young and old.</li> <li>• The proposal will result in the loss of the space where the Riverwood Men's Shed is currently operated from which will need to be replaced. It services older people from Riverwood and Mortdale and is an important community space.</li> <li>• The proposal will also result in the loss of community rooms located within social housing buildings used for tenant programs and meetings.</li> <li>• There are no arts or cultural facilities for cultural participation or production within 5km of the Study Area. But this an identified need by both City of Canterbury-Bankstown and Georges River councils.</li> <li>• Spaces for social enterprise development, places for community building and capacity building programs were identified as a need for the socially diverse community.</li> </ul>
Encourage developers to provide communal indoor spaces connected to communal open space within residential buildings to support diverse community needs, including for music practice rooms, children's parties or study spaces.	<ul style="list-style-type: none"> <li>• People living in small apartments may need low-cost/free spaces away from the home to meet, socialise or study/work.</li> <li>• Children living in apartments may need places to practice noisy instruments.</li> <li>• CHPs may include programs rooms for tenant meetings, training and other events as part of their buildings.</li> </ul>
Deliver new early education and care centres (long day care) to service benchmarked demand for up to 145 places (inclusive of the 60 places already provided within the Study Area). It is recommended that the existing not-for-profit SDN service is replaced to service future low-income families living here in the future in community housing.	<ul style="list-style-type: none"> <li>• Benchmarks indicate demand for up to 145 places.</li> <li>• Local services are not at capacity and can support increased growth.</li> <li>• The SDN centre currently located within the Study Area will be displaced through renewal and provides an important service for lower-income families and disadvantaged children. Access to quality early education and care has significant health and educational benefits for children.</li> </ul>

Public open space	
<p>3.3ha to 4.5ha of public open space within the Study Area. This could be delivered as:</p> <ul style="list-style-type: none"> <li>• New local parks within the Study Area of between 0.3ha and 2ha in size that are accessible within 200m of high-density dwellings.</li> <li>• They should be embellished with facilities to support social connection, active lifestyles and provide a 'backyard' away from apartment living such as table tennis and games tables, exercise equipment and playful elements.</li> <li>• They need to be cool and welcoming and connected via comfortable links to homes and other services and facilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Best practice supports 15% to 20% of a high-density site being delivered as quality public open space.</li> <li>• Government Architect NSW's Draft Greener Places Guidelines recommend local parks should be between 0.5ha and 2ha in size.</li> <li>• The future community will be high-density and will need quality open space outside of their home for health and wellbeing outcomes.</li> </ul>
<p>Embellishment to sports fields nearby may be required to improve capacity to address increased load from additional resident population. Priority sports fields include those in proximity to the Study Area including:</p> <ul style="list-style-type: none"> <li>• Riverwood Park and Wetlands (Georges River Council)</li> <li>• McLaughlin Oval (City of Canterbury-Bankstown), and</li> <li>• Kentucky Reserve (City of Canterbury-Bankstown).</li> </ul>	<ul style="list-style-type: none"> <li>• The area is well serviced with playing fields including existing and proposed sports fields within 400m of the Study Area, in both the Canterbury-Bankstown and Georges River LGAs.</li> <li>• Based on benchmarks, there is no demand resulting from the forecast growth to deliver new sports fields within the Study Area. City of Canterbury-Bankstown has also proposed new sports fields at Salt Pan Creek Reserve and upgrades to the sports field at McLaughlin Oval. Both these sports spaces are within 400m of the Study Area and will likely be those used by the future population.</li> <li>• Georges River Open Space, Recreation and Community Facilities Strategy indicated that its sports fields are over-utilised and there are opportunities to improve them to increase capacity and to respond to increased demand resulting from population growth, including at Riverwood Park and Wetlands.</li> </ul>
<p>1 multipurpose outdoor court within the Study Area that could be shared for use for ball games, tai chi, dance and markets. Embellished with seating, shelter and other amenities to support older people to use.</p>	<ul style="list-style-type: none"> <li>• Benchmarking indicates demand for 1 multipurpose outdoor court.</li> <li>• Future community will be older and culturally diverse with a high demand for outdoor courts/hard-surface areas.</li> <li>• Hard-surface spaces that are sheltered can support community building programs activities such as markets, dance and exercise programs.</li> </ul>



## 2.7. What does this mean for the proposal?

There is increasing awareness of and focus on the connection between individual and community health and the built environment and this is reflected in state and local government strategic planning documents, which outline the role of well-planned communities and places in supporting liveability, health and wellbeing.

The Riverwood planning proposal and master plan respond to state and local government strategic drivers as relating to health and wellbeing outcomes, including through:

- Increased tree canopy to provide approximately 30% cover supporting urban cooling and encouraging active transport (City of Canterbury-Bankstown LSPS, City of Canterbury-Bankstown Urban Heat Report) .
- Improved walking and cycling connections encouraging active transport, physical activity and reducing reliance on private motor vehicles (City of Canterbury-Bankstown LSPS).
- Increased provision of open space with increased number of homes within 10 minutes of green, open and public spaces encouraging physical activity and connected communities (Premier's Priorities, Better Placed).
- Improved open space to allow for flexible, multipurpose uses including formal and informal recreation and social connection (Draft NSW Public Spaces Charter).
- Improved connections to existing open spaces including Salt Pan Creek Reserve and park to park links within the Study Area (NSW Greener Places Guidelines, Canterbury Open Space Strategy).
- Provision of a range of new play spaces as well as a pedestrianised Community Greenway connecting to Riverwood Public School (City of Canterbury-Bankstown Playgrounds and Play Spaces Strategic Plan).
- Youth-friendly spaces including a new informal sports court (Youth Action Plan 2020-2024).
- Accessible and intergenerational public spaces that support older people to participate in the community (City of Canterbury-Bankstown Aging Strategy 2011-2015).

# 3. Community profile and health implications

This chapter provides a review of current and forecast population characteristics of the Study Area and implications for health infrastructure and services, including a focus on the differing needs of vulnerable population cohorts. It also provides an assessment of neighbouring populations' health needs.

This chapter provides an overview of the current and forecast population characteristics of Riverwood suburb and Study Area, as well as implications for health infrastructure and services. As shown in the image below, the suburb of Riverwood (SA2) is located within both the City of Canterbury-Bankstown LGA and Georges River LGA. The Study Area is wholly located within the City of Canterbury-Bankstown LGA.

This chapter also provides an overview of high-level health indicators for the City of Canterbury-Bankstown LGA sourced via HealthStats NSW, compared to the Sydney South West Local Health District.

## 3.1. Total population 2016

Based on data from the 2016 ABS Census, the total population of the Riverwood suburb (SA2) was 11,724 people.

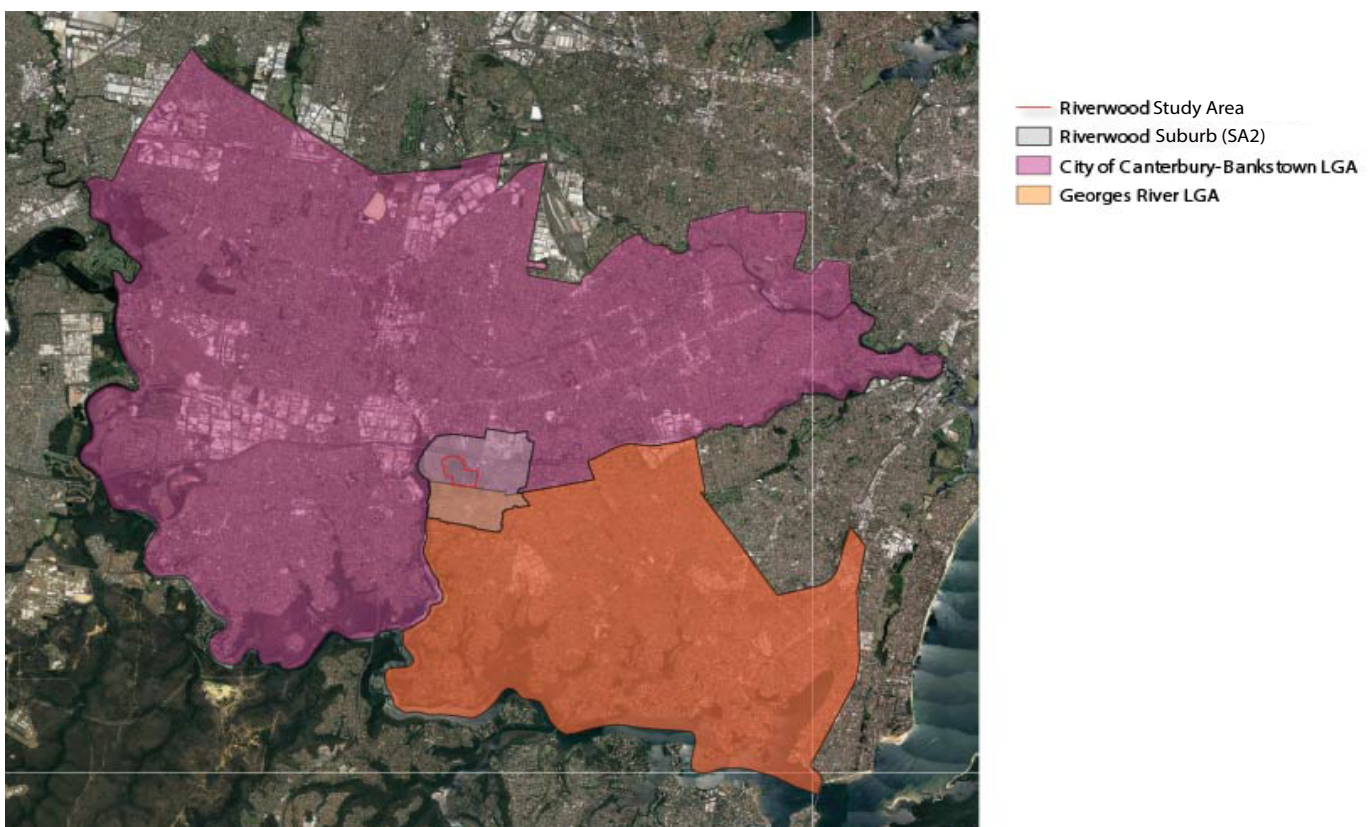
The total population of the portion of the Riverwood suburb located within City of Canterbury-Bankstown was 6,356 people.

The current population for the Study Area is based on the TZ2646, which consists of the Study Area and Washington Park development located to the north of the Study Area and is 3,112. TZ2646 is the smallest geographical boundary at which the projected data is available. The current population for the Study Area is estimated at approximately 1,700.

## 3.2. Study Area population

LAHC internal research has identified (September 2021) that the population is characterised by approximately:

- 60% are single-person households
- 10% are large households
- 50% are aged 65 years or older.



### 3.3. Current population characteristics (Riverwood suburb within City of Canterbury-Bankstown)

Because the Study Area is located in the City of Canterbury-Bankstown LGA, the following current population characteristics reflect the population of the Riverwood Suburb (SA2) that is located within the City of Canterbury-Bankstown LGA. This data reflect 2016 Census data sourced from profile.id.

Overall, the community is characterised by an older age profile and high cultural diversity, with higher relative socio-economic disadvantage, including a high proportion of low-income households, households renting social housing and persons with disability, as well as low educational attainment and low car ownership.

#### 3.3.1. Very high proportion of households renting social housing

At the time of the 2016 Census, around 43% of households in the Riverwood suburb within City of Canterbury-Bankstown were renting social housing (1,143 households). The Study Area comprised 1019 social housing dwellings, representing 95% of all dwellings within the Study Area.

#### 3.3.2. Older age profile

The Riverwood suburb within City of Canterbury-Bankstown is characterised by an older age profile compared to the City of Canterbury-Bankstown. As shown in the table below, Riverwood has a high median age (41 years), a high proportion of residents aged over 60 years (27%) and a low proportion aged under 18 years (18.7%), compared to the average across City of Canterbury-Bankstown and Greater Sydney.

#### 3.3.3. High cultural and linguistic diversity

The Riverwood suburb within City of Canterbury-Bankstown population is highly culturally and linguistically diverse. As shown in the table over page, Riverwood has a high proportion of people born overseas (52.7%), speaking a language other than English at home (63.9%), and people who are not fluent in English (20.9%), compared to the average across City of Canterbury-Bankstown and Greater Sydney.

The most common places of birth other than Australia are China (19.4%), Lebanon (4.2%) and Vietnam (2.7%). The most common languages spoken other than English are Mandarin (16.2%), Arabic (12.7%) and Cantonese (11.4%).

#### 3.3.4. High proportion of people with disability

As shown in the table over page, Riverwood has the highest proportion of people with a need for assistance due to disability (10.4%) across all suburbs in the City of Canterbury-Bankstown LGA, more than double the average across Greater Sydney.

#### 3.3.5. High proportion of high-density dwellings

In 2016, the Riverwood suburb within City of Canterbury-Bankstown was characterised by a very high proportion of high-density dwellings, representing 51% of all dwellings, high compared to the LGA (14.4%) and Greater Sydney (10.7%).

#### 3.3.6. High socio-economic disadvantage

Riverwood is one of the most socio-economically disadvantaged suburbs in the City of Canterbury-Bankstown. In 2016, Riverwood had a SEIFA score of 799.0, indicating it was the second-most disadvantaged suburb in the LGA.

As shown in the following table, the Riverwood suburb within City of Canterbury-Bankstown is characterised by a low median household income (\$741), a high proportion of low-income households earning less than \$600 per week (39%) and higher rates of unemployment (12.3%) and youth disengagement (13%), compared to the LGA and Greater Sydney.

#### 3.3.7. High proportion of people living alone

Riverwood is characterised by a smaller average household size. As shown in the following table, this includes a very high proportion of lone-person households (32.7%) and fewer couple with children households (23.9%), compared to the LGA and Greater Sydney. In particular, Riverwood had the highest proportion of older lone-person households (15.5%) in the LGA.

#### 3.3.8. Low car ownership

In 2016, Riverwood had the highest proportion of residents without a car (25.3%) in the LGA, much higher than the LGA (10.9%) and Greater Sydney (10.7%).

#### 3.3.9. Low educational attainment

In 2016, 41.2% of residents in the Riverwood suburb aged over 15 had left school before Year 11. This is higher compared to 35.7% in the LGA and 31.2% in Greater Sydney.

17.3% of Riverwood residents had a university qualification, the second-lowest in the LGA. This is lower compared to the LGA (19.7%) and Greater Sydney (28.3%).



Table 3 - Riverwood (suburb within City of Canterbury-Bankstown) population characteristics (2016 ABS Census data via profile.id)

Characteristic	Riverwood (suburb in City of Canterbury-Bankstown)		City of Canterbury-Bankstown LGA	Greater Sydney
Residents (2016)	6,356		346,302	4,823,991
Age group				
Median age	41	↑	35	36
0-4 years	4.9%	↓	7.2%	6.4%
5-11	7.3%	↓	9.6%	8.8%
12-17	6.5%	↓	7.4%	6.9%
18-24	9.0%	↓	9.7%	9.6%
25-34	14.9%	↓	15.3%	16.1%
35-49	16.5%	↓	19.9%	21.1%
50-59	13.9%	↑	12.1%	12.2%
60-69	12.2%	↑	8.9%	9.5%
70-84	12.0%	↑	7.7%	7.5%
85+	2.8%	↑	2.2%	2%
Cultural diversity				
Born overseas	52.7%	↑	44.0%	36.7%
Recent arrivals (2011-2016)	15.9%	↓	17.5%	21.4%
Speaks a language other than English at home	63.9%	↑	60.1%	35.8%
Mandarin	16.2%	↑	5%	4.7%
Arabic	12.7%	*	17.2%	4%
Cantonese	11.4%	↑	3.9%	2.9%
Not fluent in English	20.9%	↑	13.1%	6.5%
Aboriginal and Torres Strait Islander	1%	↑	0.7%	1.5%
Income and employment				
Median household income	\$741	↓	\$1,296	\$1,750
Low-income households	39%	↑	20.6%	15.1%
Unemployment	12.3%	↑	8.3%	6.1%
Youth disengagement	13.0%	↑	10.4%	7.6%
Household composition				
Average household size	2.39	↓	3	2.72
Couples with children	23.9%	↓	39.8%	35.3%
Couple without children	18.5%	↓	18.5%	22.4%
Sole-parent household	14.0%	↑	13.1%	10.4
Group households	4.0%	*	3.2%	4.5%
Lone-person households	32.7%	↑	18.6%	20.4%
Dwelling structure				
High density	51.1%	↑	14.4%	23.5%
Car ownership				
Without a car	25.3%	↑	10.9%	10.7%
Wellbeing				
People with disability	10.1%	↑	6.7%	4.9%
With an internet connection at home	63.0%	↓	76.0%	81.4%



## 3.4. Forecast population profile

### Forecast population – Study Area

A total of approximately 3,900 dwellings are proposed for the Study Area, including a mix of private and social housing.

### Forecast population – Riverwood suburb (SA2)

Based on SGS Economics & Planning population forecasts, the post-renewal population in the suburb of Riverwood (SA2) will be 23,323 people.

### Service age profile

The current population for the Study Area is based on the TZ2646, which consists of the Study Area and Washington Park development located to the north of the Study Area. TZ2646 is the smallest geographical boundary at which the projected data is available. The current population for the Study Area is estimated at 1,700.

Table 4 shows the projected service age profile of the TZ2646 area and SA2, after completion of the renewal. The renewal of the Study Area will see an increase in population across all age groups, with highest growth in the population aged 35-49 years (+ 1,015, 224%). Overall, the population of the Study Area will grow from approximately 1,700 people in 2016 to 7,500 in 2041.

### Proposed housing and dwelling mix

Approximately 3,900 dwellings are proposed for the development, including a mix of private and social housing dwellings. The current population in the Study Area is approximately 1,700 people and in 2041 the forecast total population will be approximately 7,500 people.

Table 4 - Forecast population service age groups based on approximately 3,900 dwellings (Source: SGS Economics & Planning, 2021)

Service age group	Current (2016) TZP2646 (Study Area + Washington Park)	Percentage – Based on SGS forecast to 2041 for Riverwood Suburb (SA2)	Forecast Riverwood Suburb (SA2) population (23,323)	Approximately 3,900 dwellings	
				Percentage – Based on SGS forecast to 2041 for Study Area	Forecast Study Area Population (excluding Washington Park) (7,500)
Babies and preschoolers (0 to 4)	154	6.5%	1,519	6.4%	483
Primary schoolers (5 to 11)	190	8.8%	2,048	8%	599
Secondary schoolers (12-17)	175	7%	1,627	6.3%	475
Tertiary education and independence (18-24)	298	8.6%	2,002	8.3%	623
Young workforce (25-34)	567	13.7%	3,192	14.6%	1097
Parents and home builders (35-49)	454	20.9%	4,879	19.6%	1469
Older workers and pre-retirees (50-59)	384	12.6%	2,932	11.7%	881
Empty-nesters and retirees (60 to 69)	377	9.6%	2,235	10.2%	763
Seniors (70 to 75)	440	9.5%	2,219	11.8%	886
Elderly aged (75+)	73	2.9%	670	3%	224
<b>TOTAL:</b>	3,112	100%	23,323	100%	7,500

## 3.5. Health and wellbeing profile

### 3.5.1. SWSPHD Health Needs Assessment

The South Western Sydney Primary Health Network (SWSPHD), in which Riverwood is located, has prepared a Health Needs Assessment for the NSW Department of Health, identifying the following relevant health needs and issues for the district:

- Projected significant population growth will impact the health services.
- High proportion of culturally and linguistically diverse residents and refugees may have more difficulty in gaining access to health care.
- Aging population and increasing service demand for older people including residential aged care, as well as projected increase of population with dementia, and increase in falls and falls-related Injury in older adults. Service needs reveal that private geriatricians are in short supply.
- High proportion of people with disability have higher levels of illness than the general population and face significant financial and physical barriers to accessing health services, as well as discrimination.
- High prevalence of people who are overweight and obesity, including among children and young people.
- High prevalence of diabetes, with higher diabetes prevalence among disadvantaged groups (e.g. older people, socioeconomic disadvantage).
- Higher levels of psychological distress in the SWS region, and psychological distress was the highest in the most disadvantaged groups.
- Lack of suitable public housing stock and affordable private housing in the SWS region and risk of homelessness. The primary reason people sought Specialist Homelessness Services Program (SHS) accommodation was domestic violence (30% in SWS compared with 15% for NSW), time out from family, and relationship breakdown and eviction (7% compared with 4% for NSW).
- Significant amount of community concern relating to drug use. Issue was in the top five health concerns for consumers.
- Aboriginal populations have a higher disease burden; higher rate of alcohol attributable hospitalisations; poorer antenatal outcomes; higher asthma prevalence in adults; higher smoking rate in adults, and higher dementia hospitalisations among Aboriginal people aged 65 years and over.

### 3.5.2. Canterbury-Bankstown LGA health data

There are no health statistics available for the suburb of Riverwood. The following health statistics sourced from HealthStats NSW (online tool) give insight into the health profile of the City of Canterbury-Bankstown LGA compared to the South Western Sydney Local Health District (SWSLHD) and NSW.

This data shows that, across all reviewed health indicators, the Canterbury-Bankstown LGA is doing comparatively well compared to the SWSLHD and NSW, with lower rates of overweight and obese persons, alcohol attributable hospitalisations, and smoking attributable hospitalisations (although, there is a higher proportion of persons who reported insufficient physical activity).

However, as the Riverwood population is characterised by relatively high socioeconomic disadvantage and higher rates of disability compared to the LGA, the suburb is likely to experience far poorer health outcomes compared to the Canterbury-Bankstown LGA.

Research shows that people from lower socioeconomic groups are at greater risk of poor health, have higher rates of illness, disability and death, and live shorter lives than those from higher groups (Australian Institute of Health and Welfare, 2016).

Moreover, lower socioeconomic groups may experience poorer health outcomes associated with elements of housing quality, such as air quality, heating, noise and safety. A research report by NSW FACS titled Measuring Social Housing Outcomes: Desktop Review of Evidence summarises the links between health and housing, including:

- Good-quality housing leads to better health. For example, a safe neighbourhood with high amenity and 'neighbourhood quality' indirectly influences the likelihood that of an individual to be involved in healthy lifestyles.
- There are tentative links between housing quality and mental health. For example, children who have housing instability will generally experience increased levels of stress.
- Good-quality housing can lead to increases in social interaction. Social inclusion and housing social mix can play a role in influencing these outcomes.

### 3.5.3. Social Health Atlas, Population Health Areas, Torrens University Australia, 2021

The following health statistics are sourced from the Social Health Atlas, Population Health Areas tool and provide insights into the health profile of the Study Area. The arrows provide comparison to Canterbury-Bankstown LGA.

Table 5 - Social Health Atlas, Population Health Areas including Riverwood, Canterbury-Bankstown LGA, Georges River LGA, Bankstown - North/Bankstown-South (per 100 people).

Indicators	Riverwood		Canterbury-Bankstown LGA	Georges River LGA	Greater Sydney
Rates of obesity (2017-2018)	24.6	▼	27.8	22.7	25.5
Current smokers (2017-2018)	20.1	▲	15	12.1	11.5
Low, very low or no exercise in the previous week (2017-2018)	74.4	▲	73.6	65.3	62.3
Self-assessed poor health (2017-2018)	21.8	▲	18.8	12	12.24
Alcohol consumption at levels considered to be high risk (2017-2018)	9.1 -		9.1	12.3	14.1
Adequate fruit intake for persons (2017-2018)	51.7	▼	57.5	53.1	55.0

Table 5 indicates that Riverwood suburb has:

- A much higher rate of self-assessed poor health
- A lower rate of obesity than Canterbury-Bankstown LGA and Greater Sydney; however, a higher rate than Georges River LGA
- A much higher rate of current smokers compared to other areas
- A higher rate of 'low, very low or no exercise in the previous week' compared to other areas
- A lower rate of adequate fruit intake compared to other areas
- A similar rate of risky alcohol consumption compared to Canterbury-Bankstown LGA; however, lower than Georges River LGA and Greater Sydney.

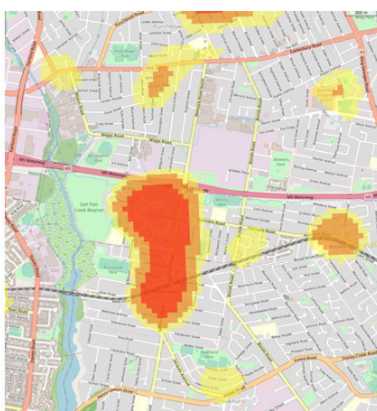
### 3.5.4. Crime and safety in the Study Area

The Study Area is located in a crime hotspot, as shown below in the BOCSAR crime maps for the 12 months to December 2020.

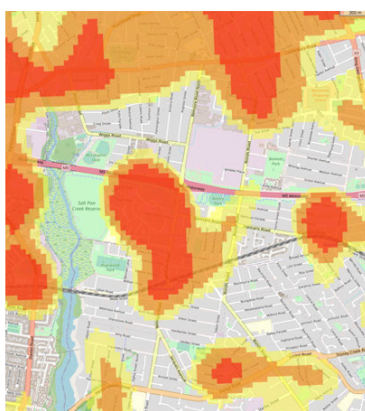
Consultation with the Riverwood community indicated that some residents, particularly women, report feeling unsafe walking through the area, and in their homes. One service provider noted that this is partly because of the distribution of dwelling types, with clusters of studios leading to concentrations of single men in some areas. People also said they felt unsafe because of areas of poor lighting and poor casual surveillance. Safety was a priority for the renewal for at least three service providers (Riverwood Public School, Riverwood Community Centre, and St George Community Housing).

Figure 4 - BOSCAR crime hotspot maps (NSW Bureau of Crime Statistics and Research, 2020)

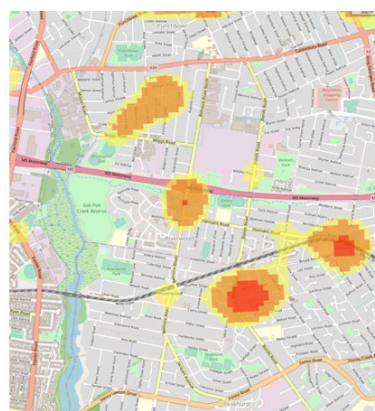
**Assault (non-domestic assault)**



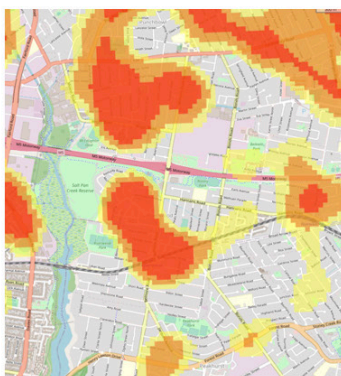
**Theft (steal from motor vehicle)**



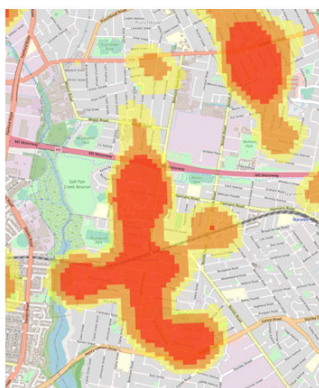
**Robbery**



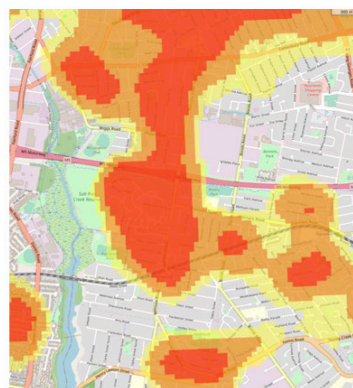
**Motor vehicle theft**



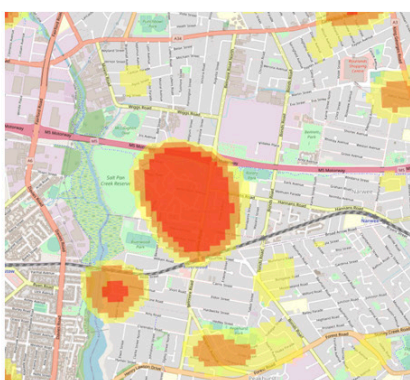
**Theft (break and enter dwelling)**



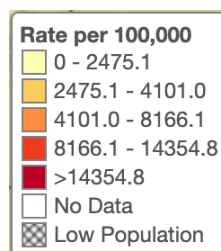
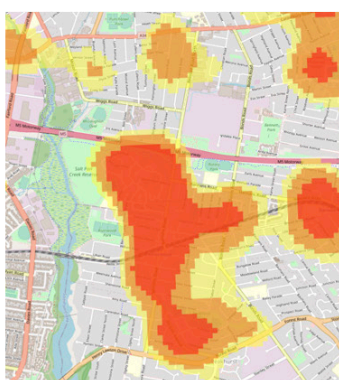
**Assault (domestic)**



**Theft (Steal from Dwelling)**



**Malicious damage to property**





### 3.6. Summary of health implications of the Study Area forecast population characteristics

The following table provides an overview of the forecast population characteristics of the Study Area.

Table 6 - Summary of health implications of the Study Area forecast population characteristics

Future population characteristic	Demographic indicators	Health need or implication (research sourced from NSW Health's Healthy Built Environment Checklist)
Older people	15% of future residents will be over the age of 70 years	<ul style="list-style-type: none"> <li>• An older population is associated with higher numbers of chronic health conditions and disability, which can place greater demand on the health care and services sector.</li> <li>• To support a healthy and active lifestyle and stay connected to their community, older people need to live within walking distance of services, retail, open spaces and community facilities.</li> <li>• An accessible built environment can support people to age in place as their mobility may decrease over time, including accessible public transport, community facilities, open spaces and streets. For example, streets can be designed with wide walking paths, clear wayfinding and shaded seating areas for resting. The provision of accessible public rest rooms can also be a barrier for older people.</li> <li>• Older age is the most consistent predictor of adverse health outcomes due to extreme heat and may have fewer resources and options in terms of adapting to some of the effects of climate change. Older people can be supported with shady streets, cool housing and access to water for cooling.</li> <li>• Older people may have caring responsibilities for grandchildren and play spaces should be designed for comfort for all ages.</li> <li>• Research shows that older people significantly increase moderate to vigorous physical activity with access to an outdoor gym in a park. Outdoor gyms should offer different equipment types and shade.</li> <li>• Older people living in high-rise apartments are at higher risk during emergencies, and should ideally live on lower and ground floors, and their needs considered in resilience planning.</li> <li>• The provision of adaptable, accessible and affordable housing can support older people to age in place. Universal design principles create homes that work well for older people and remove the need for a move to assisted living facilities. Home modifications can address the individual needs of older people who want to age well in their existing home.</li> <li>• Research shows that being near green space and visible blue spaces improves the overall wellbeing of older adults and supports their cognitive ability and the ability to delay dementia.</li> </ul>

Future population characteristic	Demographic indicators	Health need or implication (research sourced from NSW Health's Healthy Built Environment Checklist)
<b>Children</b>	<ul style="list-style-type: none"> <li>6% aged 0-4 years</li> <li>8% aged 5-11 years</li> </ul>	<ul style="list-style-type: none"> <li>Research shows that children increasingly do not meet the national guidelines for physical activity. Healthy outcomes for children can be supported with shady, friendly and safe streets and parks to enable them to walk or cycle to school, as well as local access to high-quality open spaces to play outside or participate in other physical activity outside the house.</li> <li>Research shows that children using active transport to get to school are healthier, with a need for access to schools within walking distance along safe, shady streets.</li> <li>Families with children living in apartments require access to spaces outside the home to play, exercise, relax and socialise, as well as celebrate birthday parties. This could include communal spaces in an apartment building or community facilities in the neighbourhood.</li> <li>Access to the natural environment is essential for healthy development in children. Children need opportunities for unstructured and imaginative outdoor play in their neighbourhoods in addition to fixed equipment playgrounds. These spaces allow for communal games, which help create a sense of belonging to local places.</li> <li>Features that encourage physical activity by children include playgrounds, basketball courts, walking paths, running tracks, swimming areas, lighting, shade and drinking water fountains. Amenities such as toilets, barbecues, lights, walking paths and picnic tables may allow people to stay longer and increase their physical activity.</li> <li>The NSW Government Everyone Can Play Guidelines outline principles to consider in designing play spaces that are inclusive and accessible for all. There is an increasing trend towards disability-inclusive play facilities.</li> <li>Children are particularly vulnerable to heat stress, and access to shade and drinking water fountains is important in outdoor areas used by children. Water play features in playgrounds are an attractive option for families to escape the heat on hot days.</li> </ul>
<b>Young people</b>	<ul style="list-style-type: none"> <li>15% aged 12-24 years</li> </ul>	<ul style="list-style-type: none"> <li>To support educational outcomes, young people require access to spaces outside the home to study alone and in groups (such as libraries, community facilities, or even outdoors).</li> <li>Young people need access to free and informal exercise spaces outside the home including indoor courts, exercise equipment and multipurpose outdoor courts.</li> <li>A Western Australian study shows that young people are much more likely to use parks with skate facilities, walking paths, barbecues, picnic tables, toilets, lights and more trees. Young people also increase physical activity when they have opportunities to connect with peers in their neighbourhood.</li> </ul>
<b>Working-aged people</b>	<ul style="list-style-type: none"> <li>13.7% aged 25-34 years</li> <li>20.9% aged 35-49 years</li> </ul>	<ul style="list-style-type: none"> <li>For all population groups of working age, including vulnerable groups, not working is associated with poorer physical and mental health and wellbeing.</li> <li>Working-aged people require access to services and facilities, employment opportunities and transport.</li> <li>Working-aged people require access to services, programs and activities outside of work hours including at night and on the weekend. This includes well-lit parks and outdoor exercise equipment for use at night.</li> <li>Working-aged people require safe and well-lit walking and cycling routes home from the train station at night.</li> <li>Local co-working spaces can support people to work close to home in an agile environment. This is particularly important in the wake of the COVID-19 pandemic. Design of housing can also support home-based working.</li> </ul>

Future population characteristic	Demographic indicators	Health need or implication (research sourced from NSW Health's Healthy Built Environment Checklist)
<b>People living alone</b>	<ul style="list-style-type: none"> <li>Very high proportion of lone-person households (50%)</li> </ul>	<ul style="list-style-type: none"> <li>People who live alone are more at risk of social isolation, which is in turn associated with poorer health outcomes across the life span (Gyasi et al, 2020).</li> <li>Around 50% of future social housing residents in Riverwood will likely be living alone within studio or one-bedroom dwellings and will need social infrastructure outside of the home to connect with friends and neighbours, to act as a backyard and to prevent social isolation.</li> </ul>
<b>People living in high density</b>	<ul style="list-style-type: none"> <li>100% high-density dwellings</li> </ul>	<ul style="list-style-type: none"> <li>Quality public spaces are important for residents in higher-density housing who have smaller living areas. This means spaces that encourage physical activity, children's play, relaxation and wellbeing, social and community connections and food production.</li> <li>The projected population of the Study Area is approximately 7,500 residents. The forecast population density of the site is likely to be high and is likely to be competing needs in public space and for social infrastructure. There will be a need for quality social infrastructure and open space that addresses a range of uses and users and encourages social connection between users rather than conflict.</li> <li>Studies show that trips by walking and cycling grow with higher housing density and mixed land uses.</li> </ul>
<b>People with disability</b>	<ul style="list-style-type: none"> <li>Likely high proportion of people with disability living in social housing</li> </ul>	<ul style="list-style-type: none"> <li>People with disability are at a higher risk of experiencing a range of health issues and have diverse accessibility requirements that should be considered in planning for precinct renewal to ensure that the built environment and community are inclusive and support participation. People with disability may also require access to a range of specialised medical services.</li> <li>Public spaces (including community facilities and open spaces) will need to be universally designed and accessible for people with disability, given the high proportion of people with disability living in social housing.</li> <li>Many people with disability experience very different housing and living arrangements to the rest of the population, including living with family, in group homes, or in institutions. They are also more likely to experience housing stress or be homeless, are over-represented in housing assistance programs, and are less likely to own their homes. The provision of adaptable, accessible and affordable housing is important to support people with disability to stay living in their community.</li> </ul>
<b>Culturally diverse residents</b>	<ul style="list-style-type: none"> <li>Likely high proportion of residents born overseas (44% in LGA) and speaking a language other than English at home (60% in LGA)</li> </ul>	<ul style="list-style-type: none"> <li>Social infrastructure and open space will need to support a range of uses by diverse groups including different cultural groups and older people, including places to gather and connect, spaces to learn English and other community programs and recreational spaces that respond to cultural interests, such as hard surfaces for tai chi, outdoor markets and outdoor performances.</li> <li>People from culturally and linguistically diverse backgrounds may face additional barriers in accessing health services; for example, due to language barriers, or, in the case of more recently arrived populations, more limited familiarity with the services system. These populations may also have fewer social connections or support living close by, which may be a risk factor for social isolation. Ensuring adequate access to spaces for social connections outside the home and appropriate services with cultural competency is important.</li> <li>Previous studies have reported that individuals with limited English proficiency have more difficulty in gaining access to health care compared to English-proficient individuals.</li> </ul>

Future population characteristic	Demographic indicators	Health need or implication (research sourced from NSW Health's Healthy Built Environment Checklist)
<b>Households without cars</b>	<ul style="list-style-type: none"> <li>Likely to be low car ownership, particularly among social housing residents</li> </ul>	<ul style="list-style-type: none"> <li>Public transport alternatives to cars will be important due to low car ownership in the area and residents will require comfortable walkable connections to services, transport, programs and public spaces.</li> <li>People who don't own a car or don't have easy access to public transport may face increased exposure to heat in undertaking daily activities.</li> </ul>
<b>Educational attainment and participation</b>	Likely to be low educational attainment and participation, particularly among social housing dwellings	<ul style="list-style-type: none"> <li>Opportunities to support improved educational outcomes through spaces for adult learning including classes and learning through play opportunities will be important. In particular, play spaces that encourage children to develop emotionally and reduce aggression.</li> </ul>
<b>Social housing tenants</b>	The majority of current social housing tenants will be rehoused – with a target replacement of the existing social dwellings (approximately 30%) on LAHC owned land	<ul style="list-style-type: none"> <li>Social housing tenants may experience psychological distress associated with rehousing and the wait to be rehoused.</li> <li>Tenants who relocate may lose important social ties and supports (e.g. reduced social capital), which may lead to diminished wellbeing and feelings of isolation. In particular, older residents who are relocated away from friends and support networks may become socially isolated and there may be increased dependence on social services for support.</li> <li>A changing tenure mix within the Study Area may lead to higher prices for local health/wellbeing services, which would impact on social housing and lower-income residents.</li> <li>A changing tenure mix within the Study Area, with social housing tenants living alongside private tenants and owners, may expose social housing tenants to stigma or experience social marginalisation.</li> <li>In general, people from lower socioeconomic groups are at greater risk of poor health, have higher rates of illness, disability and death, and live shorter lives than those from higher groups.</li> <li>Lower-income households require access to affordable services, transport, spaces and activities outside the home to exercise, socialise and relax. A built environment that supports free physical activity can support better health outcomes for lower-income households.</li> <li>Lower-income households may be at higher risk of heat stress due to poorly designed housing that is harder to cool and fewer resources to respond to hot climates. Housing should be designed to support affordable cooling, and there should be local access to cool and free public spaces to escape the heat on hot days.</li> <li>Affordable access to social infrastructure and open space can support community involvement and recreation for lower-income households.</li> </ul>

### 3.11. Geographical factors impacting health impacts

There are also a number of geographical factors impacting on the distribution of health impacts across the Study Area. These include:

- While areas within the Study Area located to the south-east are within close walking distance to services and a train station in the Riverwood town centre (a 5-minute walk), areas located to the north-west are located further away (up to a 15-minute walk).
- The topography of the Study Area is relatively flat with a gentle slope (1 in 40) that runs from east to west, with a high point along Belmore Road and the low point at Salt Pan Creek Reserve. The gentle slope facilitates an easily, walkable neighbourhood for most residents and visitors and is unlikely to limit mobility within the site.





## 4. Social and health infrastructure

This chapter provides an overview of the role of social and health infrastructure in supporting health and wellbeing and an overview of available social and health infrastructure within proximity to the Study Area.

### 4.1. The role of social infrastructure and open space in supporting health and wellbeing outcomes

Research shows that access to quality social infrastructure and open space can help encourage healthy lifestyles, social cohesion and support health and wellbeing outcomes for local communities.

In particular, a high proportion of residents living in apartments within the Study Area indicates a need for easily accessible spaces outside the home for recreation, exercise, play and socialisation to support good health outcomes, as well as internal community spaces within apartment buildings, which can help reduce social isolation.

Social infrastructure helps to bind people and neighbourhoods together to create social capital, social cohesion and community wellbeing. There is significant research that indicates that social connection leads to happier people. A report from Busan in Korea showed that there was a strong link between social infrastructure and happiness, where residents who lived closer to libraries and schools were significantly happier than those who did not. Having close and easy access to public social infrastructure can create neighbourhoods that actively participate in different activities together and promote a friendlier and thus healthier and happier lifestyle.

Studies have shown that access to natural environments such as green spaces contribute to improved mental health and increased physical activity, which in turn reduces anxiety, depression and psychological stress. These spaces encourage participation in recreation and help to create friendships and community togetherness while being physically active.

Access to public open space close to where people live is associated with increased physical activity in all age groups. People who have access to nearby usable green space are also twice as likely to report better health than those who do not.

#### Measured health and wellbeing impacts:

- A Danish study found that residents who did not grow up with green spaces nearby had a 55% increased risk of developing depression, anxiety and substance abuse in later years.
- A New Zealand study revealed that the greenest neighbourhoods had the lowest risks of poor mental health and the risk of cardiovascular disease was decreased by 15%.
- Studies show that a lack of social connection may be a greater detriment to health than obesity, smoking and high blood pressure. A study of more than 3.4 million participants in the UK found those who feel socially isolated have a 30% higher risk of early death (National Health Service, 2015).
- In a 2017 AARP study, the cost to Medicare of social isolation and loneliness was estimated at \$6.7 billion annually. Specifically, the increased cost was due to the higher health care costs of socially isolated and lonely seniors. Loneliness can be a risk factor for certain chronic health conditions such as arthritis, high blood pressure, heart disease and diabetes.
- Research from the American Enterprise Institute shows that Americans who live in closer proximity to neighbourhood amenities such as libraries are more content with their neighborhood, more trusting of others, and less lonely, regardless of whether they live in large cities, suburbs, or small cities or towns.

## 4.2. Provision of social and health infrastructure and services

### Social infrastructure

The Riverwood Estate State Significant Precinct Social Infrastructure Study (SIS) found that the Study Area is well serviced with social infrastructure and open space located in close proximity to social housing dwellings (shown in the map below), and made a number of recommendations to address forecast social infrastructure and open space needs from the proposed renewal. At the time of writing (February 2021), these recommendations to address community needs have largely been adopted through the master plan.

In addition to contributions to existing community facilities, new social infrastructure proposed within the master plan includes one new early education and care centre within the Study Area.

In terms of open space, the master plan is providing increased and improved public open space resulting in approximately 4.8ha within the Study Area, including a range of spaces that will support social connection, recreation and exercise and play.

Refer to Figure 5 and Appendix 1 for regional maps of social infrastructure and open space as per the SIS.

### Health infrastructure and services

Overall, the Study Area is well serviced with access to health infrastructure and services in close proximity. This includes access to eight (four bulk-billing and four non-bulk billing) General Practice medical centres and one dental surgery within the Riverwood town centre (5-15 minutes walking distance).

In addition, the Bankstown-Lidcombe Hospital is located 3km from the Study Area. Google Maps 2021 shows that the travel time between the Study Area and the Bankstown-Lidcombe Hospital by bus is around 25 minutes.

However, despite generally good access to health infrastructure and services, vulnerable community members may face additional barriers to accessing services. Access to affordable services within walking distance, accessible by public transport and with good disability access and parking will be important to help reduce barriers.

In summary, the Study Area is well serviced by health infrastructure and services within easy walking distance of the Riverwood town centre, with no identified gaps in provision.

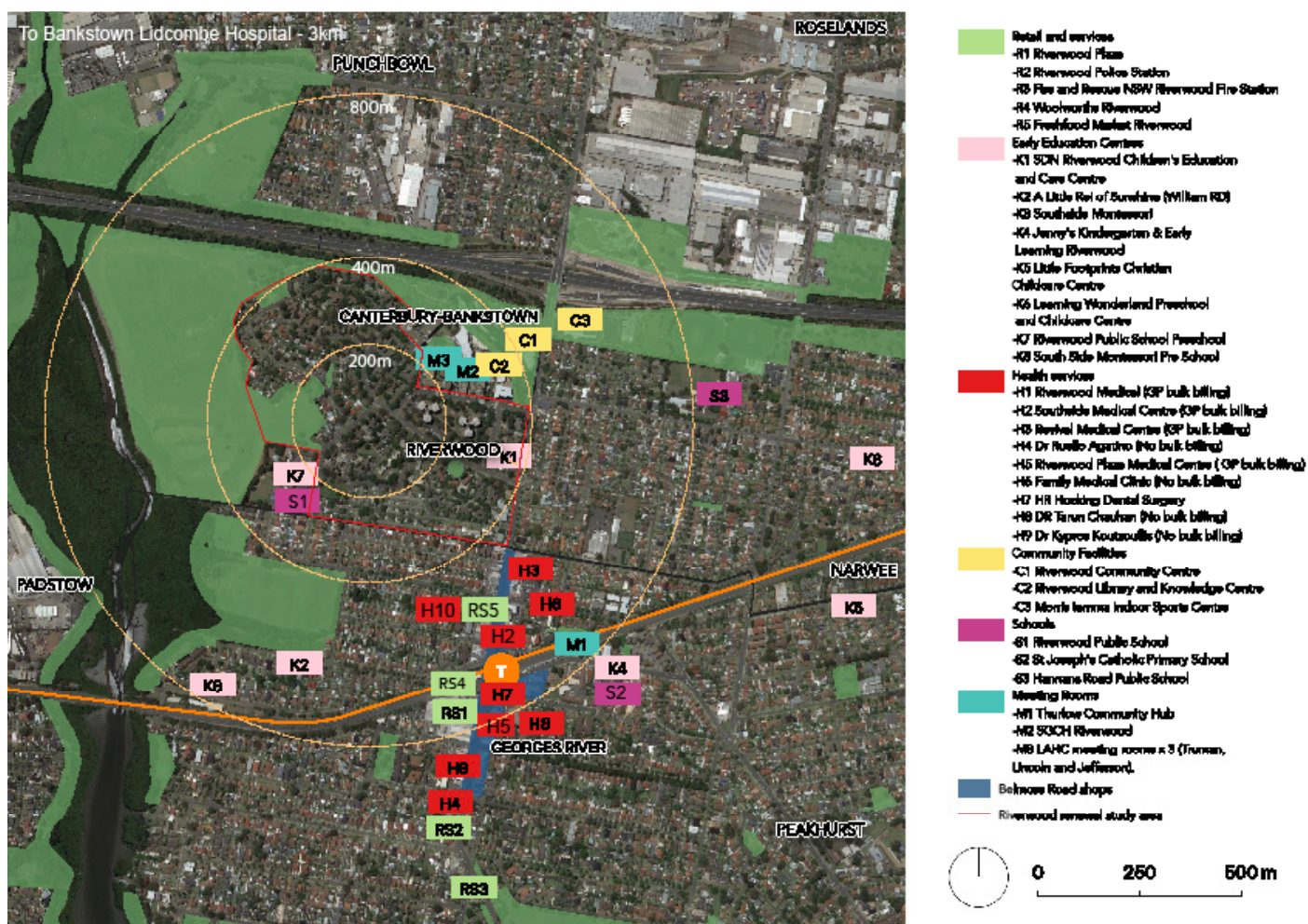


Figure 5 - Existing social infrastructure in Riverwood (Cred Consulting, 2021)



# 5. Healthy Built Environment Checklist

This chapter provides an assessment of the master plan against NSW Health's Healthy Built Environment Checklist.

## 5.1. About the Healthy Built Environment Checklist

The Healthy Built Environment Checklist is a practical tool to help NSW health professionals and those outside the health sector assess built environment factors that impact on health. It is designed to support engagement with planning processes and guide feedback on development policies and plans.

The Checklist aligns with current NSW Government priorities to deliver better environments and more liveable communities through greener public spaces in urban areas and increased tree canopy in the Greater Sydney area.

The Checklist aims to improve the amenity of the built environment for people, places and public spaces. It supports the capacity of health professionals to promote healthy planning as a core component of good design.

### Key findings

The following table provides an assessment of the master plan against the Healthy Built Environment Checklist, including a discussion of indicators and, where relevant, recommendations and suggestions to improve health and wellbeing outcomes.

Overall, our assessment has found that the master plan provides for good healthy built environment outcomes across all relevant themes and indicators. Based on our assessment, we have recommended a number of opportunities to further enhance health outcomes for future residents and residents of neighbouring areas through increased consideration of urban heat and universal design principles.



Table 7 - Assessment of the master plan against the Healthy Built Environment Checklist from NSW Health

Theme/characteristics	Indicators	Recommendations/suggestions
<b>Theme 1. Healthy eating</b>		
Promotes access to fresh, nutritious and affordable food and drink	<ul style="list-style-type: none"> <li>Riverwood town centre is located within 5-15 minutes walking distance from the Study Area and provides access to a number of fresh food markets, including Woolworths and Aldi, where residents of the Study Area can buy fresh and affordable food and drink. There is also a convenience store at the corner of Belmore Road and Hannans Road.</li> <li>The existing Riverwood Community Garden is one of the largest in NSW with over 82 lots, providing opportunities for residents to grow their own vegetables.</li> <li>The new 0.35ha Civic Plaza, in proximity to the existing Riverwood Community Garden, includes a plaza suitable for weekend markets, which could provide access to affordable healthy food.</li> </ul>	Ensure provision to drinking fountains and bottle filling stations in public spaces to provide access to water for healthy hydration and cooling.
Discourages over-consumption of unhealthy food and drink, including alcohol	There are no alcohol or fast food outlets within the Study Area; however, there is a BWS and several fast food outlets in the Riverwood town centre. This is unlikely to impact on health outcomes.	None required.
Preserves food-growing (agricultural) areas	The proposal does not affect food-growing land as Riverwood is not an agricultural area.	None required.
Supports local food production	<ul style="list-style-type: none"> <li>The existing Riverwood Community Garden will be preserved and provides opportunities for local food-growing alongside educational workshops. The master plan also proposes an additional community garden as part of the 0.3ha community park in close proximity to Riverwood Public School.</li> <li>Approximately 50% of ground-floor frontage throughout the Study Area will be residential entries with a front garden, with opportunities for residents to grow their own edible plants.</li> </ul>	Consider providing for verge planting for edible landscaping.
<b>Theme 2. Physical activity</b>		
Encourages physical activity	<p>The master plan outlines specific project objectives with the aim to help to encourage physical activity for residents, including the objectives to:</p> <ul style="list-style-type: none"> <li>Improve the walkability of Riverwood to achieve a walk score of 85/100.</li> <li>Increased access to open space, with all dwellings within 200m and no more than one road crossing away from a park.</li> <li>40% of all journeys to work by public transport or active transport modes, and</li> <li>Existing and new trees to create tree canopy cover for approximately 30% of the site.</li> </ul> <p>As discussed in the following rows, the master plan includes a number of key moves to improving access to open space and opportunities for active transport.</p>	None required.



Theme/characteristics	Indicators	Recommendations/suggestions
Promotes opportunities for walking, cycling and other forms of active transport	<p>The master plan provides increased opportunities for walking, cycling and other forms of active transport including:</p> <ul style="list-style-type: none"> <li>Improved walking and cycling connections to the Riverwood town centre and train station.</li> <li>New and improved connections to local parks, Riverwood Public School (along a pedestrianised street) and community facilities to reduce reliance on private vehicles for local trips.</li> <li>New connections that enhance and support the regional cycleway network.</li> <li>Connections to proposed dedicated cycleways along key roads to deliver a direct link for commuters to the station and the regional cycleway network.</li> <li>Extended shared paths along existing and new streets to improve connectivity and promote walking and cycling throughout the Study Area.</li> </ul>	<p>There is no explicit mention of universal design principles within the master plan; however, accessible streets and footpaths will be important to support opportunities for walking for older people and people with disability. This will include wide footpaths, comfortable and accessible seating in parks and along streets so people can stop and rest on their way to the shops or public transport.</p> <p>Consider delivering pedestrian and cycling connections from the earliest possible stages of development to encourage active lifestyles.</p> <p>Ensure the provision of ample, safe, attractive and convenient bicycle parking at key destinations, and consider bike storage within buildings.</p>
Promotes access to quality public open spaces, including green space and recreational facilities	<p>The master plan will provide for increased and improved public open spaces, with all dwellings to be within 200m and no more than one road crossing away from a park.</p> <p>The master plan will also provide improved connections to green spaces with residents, including creating walkable green streets with tree canopy and wide footpaths and creating a permeable edge to Salt Pan Reserve.</p> <p>The master plan will provide improved access to recreational facilities at Morris lemma Indoor Sports Centre and Kentucky Road Reserve, and new recreation facilities including an informal sports field and outdoor exercise equipment within the new Roosevelt Park and a sports court in the new Civic Plaza.</p>	<p>Consider planning to mitigate the impacts of noise from the sports court in the new Civic Plaza on surrounding residents.</p>
<b>Theme 3. Housing</b>		
Encourages housing that supports human and environmental health	<p>Healthy housing standards will be subject to detailed design phase.</p> <p>The renewal of the Study Area will support human and environmental health, locating housing within reasonable walking distance of shops, schools, public transport hubs and other important community services and destinations within Riverwood town centre. This will encourage residents to walk, cycle or travel by public transport to work and services.</p> <p>The Riverwood community will be living in high-density dwellings and will require access to communal spaces within apartment buildings as well as public open space for recreation and social connection.</p>	<p>Social housing residents will be less likely to own a car and social housing dwellings should be planned for in proximity to public transport.</p> <p>Plan for high-density apartment buildings to include access to communal indoor and outdoor spaces to support social connection and gatherings.</p> <p>Ensure high-density dwellings are designed with consideration to best practice and flexible design principles, including consideration of the needs of children, young people and older people.</p>
Encourages dwelling diversity	<p>The master plan encourages a diversity of housing types and sizes to accommodate households at different life cycle stages, aligning with the Apartment Design Guide targets.</p>	<p>None required.</p>

Theme/characteristics	Indicators	Recommendations/suggestions
Promotes affordable housing	The proposal includes a mix of social and private dwellings.	Ensure social housing is designed to be indistinguishable from other forms of housing.  Ensure social housing is not concentrated in an identifiable cluster.
Encourages adaptability and accessibility of housing	Adaptable and accessible housing standards will be subject to detailed design phase.	Encourage adaptable and accessible housing standards to ensure health and wellbeing and aging in place for older people and people with disability.
<b>Theme 4. Transport and connectivity</b>		
Reduces car dependency and encourages active transport	The master plan includes the specific objectives to promote walkability, encourage active transport and public transport and reduce reliance on cars. It proposes: <ul style="list-style-type: none"> <li>Concentrated density within walking distance of Riverwood train station, with 70% of dwellings within 800m of station.</li> <li>All development within 200m of a bus stop, providing access to Riverwood, Hurstville and Bankstown.</li> <li>Improved and new pedestrian and cyclist connections along streets with increased tree canopy to provide shade.</li> <li>New pedestrianised Community Greenway providing safe access to Riverwood Public School.</li> </ul>	Ensure pedestrian areas, including public plazas and pathways, are designed to be universally accessible to support access for people with disability.  Provide designated parking spaces for car-share programs to encourage car sharing.  Encourage cycling through provision of end-of-trip facilities and bike storage within apartment design.
Improves public transport services	The Study Area is located within proximity of public transport, including the train station in Riverwood town centre and bus stops along Belmore Road. The master plan provides additional bus stops (+2) throughout the Study Area to better connect residents to public transport and notes that train service frequency will double with planned increase in capacity during peak and off-peak periods.	Ensure public transport nodes (e.g. new bus stops) are designed to be universally accessible to support older people and people with disability.  Ensure new bus stops include amenities including shelter, seating, lighting, transport user information and wayfinding guidance.  Improvements to existing transport node at Riverwood train station could help to meet future population needs. However, this is solely an issue for Transport for NSW.
Encourages infill development and/or integration of new development with existing development	The master plan will provide improved and integrated connections from the Study Area to the Riverwood town centre and to Belmore Road shops, which will benefit residents of the Study Area as well as surrounding areas.	None required.
<b>Theme 5. Quality employment</b>		
Improves the location of jobs to housing and commuting options	The Study Area has good access to employment opportunities accessible by public transport in Bankstown and Hurstville town centres. The master plan will improve connections to the Riverwood train station and will also provide additional bus stops, improving commuting options to jobs.	Especially in the wake of the COVID-19 pandemic, it will be important that housing is designed to support home-based employment.
Increases access to a range of quality employment opportunities	The master plan will provide increased open space to address an identified undersupply in the Riverwood town centre, which may support workers within the town centre to access open space.	None required.

Theme/characteristics	Indicators	Recommendations/suggestions
<b>Increases access to appropriate job training</b>	<p>The Study Area has good access to education opportunities at Bankstown and Hurstville town centres accessible via public transport. The master plan may increase access through improved public transport connections.</p> <p>In addition, the Riverwood Library and Knowledge Centre and other local community facilities may provide programs that support skill-development and training.</p>	None required.
<b>Theme 6. Community safety and security</b>		
<b>Considers crime prevention and sense of security</b>	The master plan is consistent with the local Canterbury-Bankstown LGA crime prevention plan and includes opportunities for passive surveillance through approximately 50% ground-floor residential frontages, street parking, clear sightlines and lighting.	<p>Consider development of a community safety audit of the master plan by the Police's Local Area Command (LAC).</p> <p>Appropriate lighting of key pedestrian and cyclist routes will be important to support active transport at night for high working-aged population.</p> <p>Ensure that spaces are clearly signposted to ensure clarity of ownership and use (public, private or communal) so people understand what the space is supposed to be for and who is able to use it.</p>
<b>Addresses risks associated with alcohol use</b>	The Riverwood suburb is not a high-risk area for alcohol-use-related risks.	Ensure alcohol-access restrictions in public open spaces, in particular, in proximity to Riverwood Public School and early education and care centres.
<b>Theme 7. Open space and natural features</b>		
<b>Provides access to green and blue open spaces and natural areas</b>	<p>The master plan will provide for increased and improved public open spaces, with all dwellings to be within 200m and no more than one road crossing away from a park.</p> <p>The master plan provides for increased provision of open space (total open space is 4.78 ha, of which 2.4 ha is new provision) for play, recreation, exercise and social connection. The proposal is for: a new 10,000m<sup>2</sup> Roosevelt Park; a new 5,000m<sup>2</sup> pedestrianised Community Greenway designed with people of all ages in mind; a 2,800m<sup>2</sup> community park in proximity to the public school; a 1,600m<sup>2</sup> community garden park adjacent to the existing community garden; a 3,500m<sup>2</sup> civic place with sports courts as well as the new Salt Pan View (770m<sup>2</sup>). This open space is centrally and equitably located to support all future populations. For lower-income and social housing residents in particular, these new and improved open spaces will provide affordable opportunities for recreation, play and socialisation outdoors that will support equitable health outcomes.</p>	None required.

Theme/characteristics	Indicators	Recommendations/suggestions
Ensures public spaces are safe, accessible, attractive and easy to maintain	The master plan proposes a wide range of open spaces that support a range of uses and experiences, including active and passive recreation, reflection, learning, play, adventure, gathering and celebration.	<p>Ensure access to seating, public toilets, access to drinking water, shade and baby changing facilities to encourage use of public space by a wide range of user groups.</p> <p>Ensure public spaces are universally accessible and designed to be inclusive for a range of community members (such as elderly, children, youth, multicultural groups).</p> <p>Plan to manage use by diverse users including dogs and humans within parks.</p> <p>Ensure public domain and particularly play spaces provide adequate protection from heat and UV radiation from the sun.</p> <p>Ensure some public open spaces are 'intimate', allowing space for quiet reflection and moderate privacy.</p>
Promotes quality streetscapes that encourage activity	<p>The master plan includes public domain design principles that encourage people to use and linger in them, including through activated streetscapes with ground-floor residential frontages.</p> <p>The proposed pedestrianised Community Greenway is an example of how the master plan responds to community needs and enhances public life.</p>	Ensure provision of benches and comfortable seating areas in the public domain and in streetscapes to encourage people to sit and interact.
Engenders a sense of cultural identity and place, and incorporates public art	<p>Public art will be subject to detailed design phase.</p> <p>The master plan includes a number of public spaces that are designed to accommodate community celebrations, festivals and other events.</p>	<p>Consider developing a public art strategy in consultation with local community to support a sense of place.</p> <p>Consider involving the community in the design of public spaces as they are delivered.</p> <p>Consider contributing to items of local heritage significance, with opportunities for Aboriginal heritage interpretation at Salt Pan Creek Reserve.</p>
<b>Theme 8. Social infrastructure</b>		
Provides access to a range of facilities to attract and support a diverse population	<p>The Study Area has good access to a range of community facilities including the Riverwood Library and Knowledge Centre and Riverwood Community Centre, and the master plan will improve active transport connections to these popular facilities.</p> <p>The master plan largely addresses the recommendations from the Social Infrastructure Study and has allocated 1,200m<sup>2</sup> to community uses including the Riverwood Men's Shed, which is an important resource for older residents.</p>	Option to upgrading the Riverwood Community Centre instead of providing a new facility should be considered.
Responds to existing and projected community needs and current gaps in facilities and/or services	The master plan largely addresses the recommendations from the SIS.	Pending negotiations with City of Canterbury-Bankstown regarding upgrades to Riverwood Community Centre, none required.



Theme/characteristics	Indicators	Recommendations/suggestions
Provides for early delivery of social infrastructure	The renewal has already delivered a new library and meeting rooms to service the growing population.	None required.
Promotes an integrated approach to social infrastructure planning	The master plan largely addresses the recommendations from the Community and Social Infrastructure Needs Analysis.	None required.
Maximises efficiencies in social infrastructure planning and provision	The master plan largely addresses the recommendations from the SIS, which outlines principles for best-practice social infrastructure planning including multipurpose, flexible facilities and shared use of schools.	None required.
<b>Theme 9. Social cohesion and connectivity</b>		
Provides environments that encourage social interaction and connection among people	<p>The master plan encourages social interaction and connection through the design of open spaces and public domain and through improved connections to existing services and retail at Riverwood town centre and nearby community facilities.</p> <p>In particular, open spaces have been designed for community use and activities, and to encourage people to meet, gather and socialise informally. The pedestrianised Community Greenway is a good example of a public domain feature that will encourage social interaction for people of all ages.</p> <p>The master plan makes provision for a community centre as recommended by the Social Infrastructure Study.</p>	<p>As per the Social Infrastructure Study (Cred Consulting, 2021), LAHC should negotiate with City of Canterbury-Bankstown Council regarding upgrades to the Riverwood Community Centre versus provision of a new facility, which would enable improved delivery of services for vulnerable groups such as children, young people and low-income residents.</p> <p>Ensure the provision of communal spaces within high density buildings to support social interaction.</p>
Promotes a sense of community and attachment to place	The master plan also builds on existing community strengths, including the Riverwood Community Garden, which is a focal point for social connection.	<p>Ensure public art or design features encourage a sense of place.</p> <p>Provide support for community or cultural development initiatives that will encourage a sense of belonging.</p>
Encourages local involvement in planning and community life	The existing Riverwood community has been consulted throughout the renewal project process and ongoing opportunities for new residents should be provided as the community grows.	Consider involving existing and new residents in the design of new and improved public spaces.
Minimises social disadvantage and promotes equitable access to resources	Riverwood will be home to a mixed-income community with people with different income levels living in a diverse housing mix.	Consider a social enterprise initiatives, such as the successful Kick Start Cafe, during the construction period.
Avoids community severance, division or dislocation	The renewal of the Study Area will include the renewal of current aging social housing to provide improved social housing that better meets the needs of tenants, and existing residents will be or have already been relocated. The master plan encourages further integration of the Study Area with surrounding areas, improving social cohesion across the suburb.	None required.

Theme/characteristics	Indicators	Recommendations/suggestions
<b>Theme 10. Environment and health</b>		
Improves air quality	The master plan will support air quality with increased tree canopy coverage (approximately 30%) by encouraging active transport and reducing reliance on cars through improved connections to Riverwood train station.	None required.
Improves water quality, safety and supply	Subject to detailed design phase.	Ensure incorporation of water-sensitive urban design principles.
Minimises the disturbance and health impacts associated with noise, odour and light pollution	While the Study Area is located in close proximity to the M5 Motorway, there is good separation of land uses reducing noise and odor pollution.	Provide a management plan to reduce or control noise during construction phase.
Considers and mitigates the potential for hazards (both natural and man-made)	The master plan has address potential hazards such as flooding within the Study Area.	None required.
Considers pest management strategies when determining the location of new development	Not relevant.	None required.
<b>Theme 11. Environmental sustainability and climate change</b>		
Meets environmental sustainability objectives	The master plan incorporates environmental sustainability objectives, and includes the objective to provide approximately 30% tree canopy cover for the site.	None required.
Considers climate change mitigation	The master plan tree canopy cover goals will help to address the impacts of urban heat.	Consider strategies to incorporate renewable energy design features, such as solar panels.
Adopts measures to adapt to climate change	Cred Consulting's Urban Heat Report prepared for City of Canterbury-Bankstown Council found that although much of Riverwood suburb (within Canterbury-Bankstown LGA) comprises open space, it still experiences some of the hottest average land surface temperatures in the LGA because the open space has very low vegetation and canopy cover and limited grass irrigation.	Consider opportunities to mitigate the impacts of urban heat for more vulnerable residents including older people, people with disability, children and social housing residents who may not be able to afford air conditioning. Opportunities to do so include through increased water in streets and parks, increased use of cool materials in the built environment and planning for access to 'cool refuges' on hot days. It will also be important to design social housing dwellings that support cooling and, in particular, consider top floors of buildings, which may get even hotter.
Promotes community resilience	The master plan provides opportunities for residents to build social networks including through building on existing community facilities such as Riverwood Library and Knowledge Centre, Riverwood Community Centre and Riverwood Community Garden.	Provide ongoing opportunities for residents to participate meaningfully in decision making and planning.

## 6. Equity-Focused Health Impact Assessment

This chapter provides an assessment of likely impacts of the Riverwood planning proposal on health and health infrastructure on the existing, future and neighbouring communities, including an assessment of the severity, likelihood and distribution of identified positive and negative impacts.

### 6.1. Equity-Focused Health Impact Assessment

Our assessment has found that the master plan is providing a healthy built environment that is equitably accessible. There are also existing social infrastructure and services that can provide continued access for residents to affordable social and recreational services and programs.

#### Health impacts

The master plan will result in the following positive health impacts:

- The renewal of the Study Area will replace existing aging social housing dwellings with new and modern dwellings better suited to the needs of tenants, which in turn will support their health and wellbeing.
- Increased provision of open space (total open space is 4.78 ha, of which 2.4 ha is new provision) for play, recreation, exercise and social connection. In addition to the existing public open space of Sal Pan Gardens (0.28ha) and Kentucky Reserve (2.07ha), the proposal is for: a new 10,000m<sup>2</sup> Roosevelt Park; a new 5,000m<sup>2</sup> pedestrianised Community Greenway designed with people of all ages in mind; a 2,800m<sup>2</sup> community park in proximity to the public school; a 1,600m<sup>2</sup> community garden park adjacent to the existing community garden; a 3,500m<sup>2</sup> civic place with sports courts as well as the new Salt Pan View (770m<sup>2</sup>). This open space is centrally and equitably located to support all future populations. For lower-income and social housing residents in particular, these new and improved open spaces will provide affordable opportunities for recreation, play and socialisation outdoors that will support equitable health outcomes.
- New and improved connections to open space along tree-lined green streets with wide footpaths, with all dwellings linked to parks by crossing no more than one road, supporting walkable neighbourhoods and promoting a healthier lifestyle.
- Existing and new trees to create tree canopy cover for approximately 30% of the site, supporting urban cooling, natural ventilation and providing shade and comfort to support active transport.
- Improved walking and cycling connections to Riverwood town centre, Riverwood train station, Riverwood Public School and community facilities to encourage active and public transport and reduce reliance on private vehicles for local trips, plus improved access to health and other service.
- New dedicated cycleways along key roads as well as extended shared paths along existing and new streets to promote walking and cycling throughout the Study Area.
- Reconnecting the Study Area and Riverwood town centre with Salt Pan Reserve, Riverwood Public School and Washington Park, which will support connectivity for residents as well as neighbouring areas.
- Approximately 50% of all ground-floor frontage will be front doors/gardens, activating residential streets and providing opportunities for casual interaction between residents/pedestrians and increasing passive surveillance.
- The master plan builds on existing community strengths such as the Riverwood Community Garden as a focal point of intergenerational connection, providing for additional quality and multipurpose public open space in close proximity.
- New links to existing community facilities and services will support and reduce barriers to participation in community activities and encourage the building of 'social capital' that makes communities stronger and more resilient.

The Riverwood Estate State Significant Social Infrastructure Study (Cred Consulting, 2021) also recommends that LAHC should negotiate with City of Canterbury-Bankstown Council regarding upgrades to the Riverwood Community Centre instead of providing a new facility, which would enable improved delivery of services for vulnerable groups such as children, young people and low-income residents.

Table 8 - Potential health impacts and recommended mitigation measures

Impact	Likelihood	Distribution	Proposed mitigation measure
<b>Impacts associated with rehousing of current social housing tenants</b>			
<ul style="list-style-type: none"> <li>Some social housing tenants may experience psychological distress associated with any required rehousing and the wait to be rehoused.</li> <li>Tenants who relocate may lose important social ties and supports (e.g. reduced social capital), which may lead to diminished wellbeing and feelings of isolation.</li> <li>In particular, older residents who are relocated away from friends and support networks may become socially isolated and there may be increased dependence on social services for support.</li> </ul>	High	Existing social housing residents	<p>Ongoing and clear communications with existing social housing tenants are recommended along with support through the process to stay connected with community friends and ties.</p> <p>LAHC advises that all social housing residents will have the option to return to the redeveloped Riverwood if a suitable property is available. It is anticipated that some residents will be able to move directly from their old home to a newly built home at Riverwood.</p> <p>LAHC also advises that social housing residents will be provided at least six months' notice and be assisted by the Department of Communities and Justice.</p>
<b>Impacts of changes in tenure mix</b>			
<ul style="list-style-type: none"> <li>A changing tenure mix within the Study Area may lead to higher prices for local health/wellbeing services, which would impact on social housing and lower-income residents.</li> <li>A changing tenure mix within the Study Area, with social housing tenants living alongside private tenants and owners, may expose social housing tenants to stigma or experiences of social marginalisation.</li> </ul>	High	Existing and future residents	<p>Community building should be implemented from the earliest stages of development and should focus on programs, events and activities that will:</p> <ul style="list-style-type: none"> <li>Recognise the unique Riverwood identity, including opportunities to build upon this with the new community.</li> <li>Deliver events, groups, and gatherings that create opportunities for residents to meet, create and play together, including social, affordable and private housing residents, residents of different ages, and residents from different cultural backgrounds.</li> <li>Support the needs of the disadvantaged social housing community including employment opportunities and social enterprise.</li> </ul>



Impact	Likelihood	Distribution	Proposed mitigation measure
<b>Urban heat</b>			
<p>Urban heat, and the associated elevated daytime temperatures, reduced night-time cooling and higher air pollution, has significant health and wellbeing impacts. The Canterbury-Bankstown Urban Heat Report (prepared by Cred Consulting) indicates that the Riverwood suburb experiences some of the hottest land surface temperatures in the LGA.</p> <p>The Study Area is forecast to have a number of population characteristics that will make the community more vulnerable to the impacts urban heat, including people living alone in social housing and low-income households, people in need of assistance due to disability, households without a car, and old people as well as young children. As temperatures continue to rise, it will be essential that the redevelopment of Riverwood plans for urban cooling and free and affordable opportunities to get cool on hot summer days.</p>	High	More likely to impact on social housing residents, older people, children and people with disability, and low-income residents who cannot afford cooling	<p>The master plan proposes approximately 30% urban tree canopy cover, which will support urban cooling and provide vital shade to walkers and cyclists.</p> <p>There may also be a need to consider opportunities to mitigate the impacts of urban heat for more vulnerable residents, including older people, people with disability, children and social housing residents who may not be able to afford air conditioning.</p> <p>Opportunities to do so include through increased water in streets and parks, increased use of cool materials in the built environment and planning for access to 'cool refuges' on hot days, and quality air-conditioned community rooms.</p> <p>It will also be important to design social housing dwellings that support cooling and in particular consider top floors of buildings, which may get even hotter.</p>
<b>Universal design and accessibility</b>			
<p>Riverwood is currently, and in the future will likely be, characterised by a relatively older population with higher rates of disability. To support everyone in the Riverwood community to get around, participate in the community and access services and public transport, there will be a need to incorporate best-practice universal design principles in planning for public spaces. There is also opportunity to plan for adaptable and flexible housing that allows for people to age in place and stay living in the community.</p>	High	More likely to impact on older people and people with disability	<p>Incorporate best-practice universal design principles in the Study Area, including consulting with local people with disability and older people to understand their priorities for accessibility.</p> <p>Ensure pedestrian areas, streetscapes, open spaces, community facilities and public transport nodes are designed to be universally accessible to support access for people with disability.</p> <p>Allow for gentle exercise opportunities including walking paths, hard surfaces for dancing and tai chi, and outdoor fitness equipment will provide affordable access to active recreation for this age group.</p>
<b>Managing the health impacts of construction</b>			
<p>During the construction period, construction noise and pollution may impact on the comfort and wellbeing of residents that move in early, including older people and people working from home.</p>	High	More likely to impact on older people and people working from home	<p>Consider planning to manage noise impacts during the construction period and ongoing communication with residents.</p>

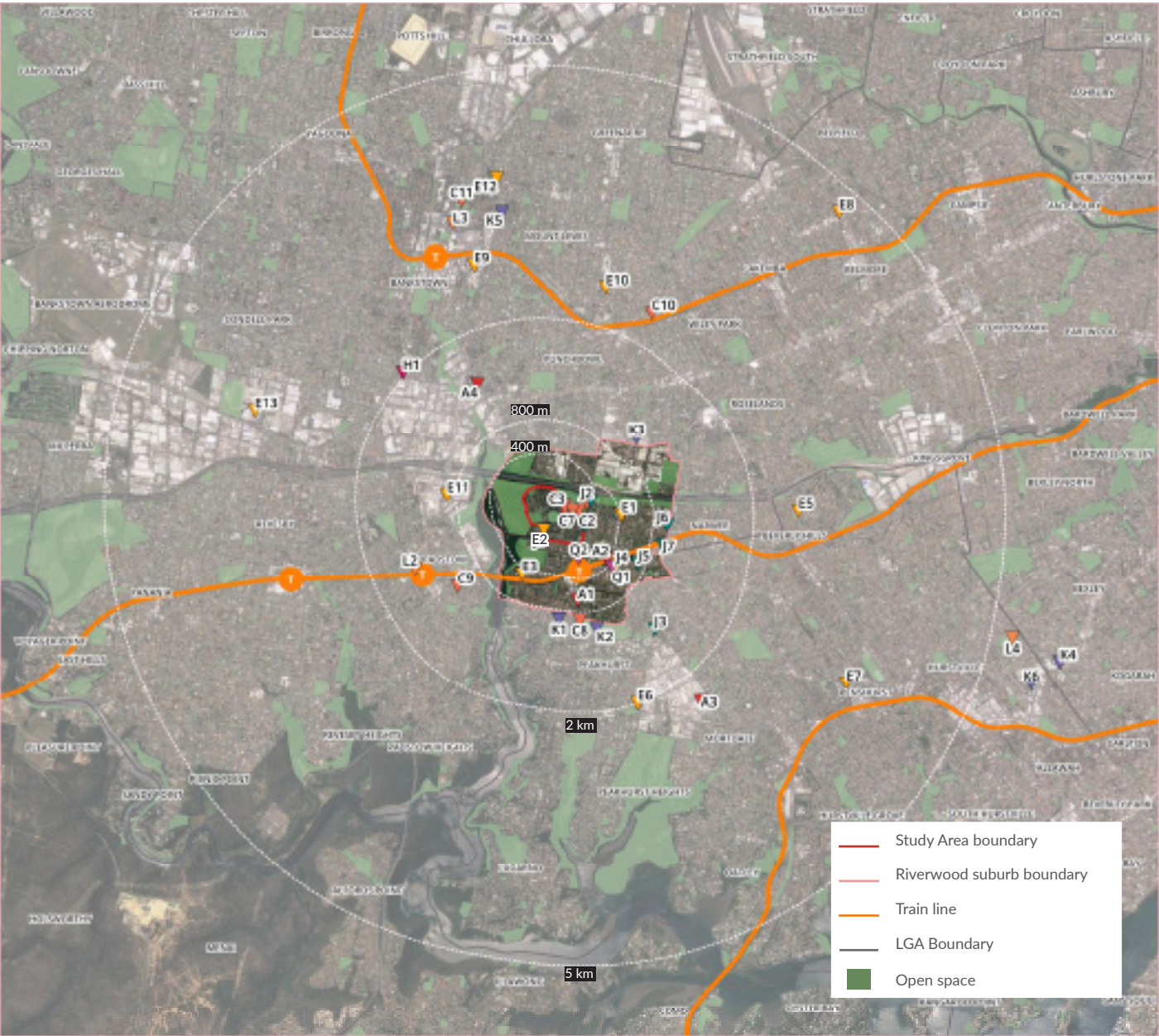
Impact	Likelihood	Distribution	Proposed mitigation measure
<b>Living well in high-density and lone-person households</b>			
<p>The Study Area will be a high-density community with many lone-person households, making it even more important to plan for opportunities for formal and informal social connections to prevent health impacts of social isolation.</p> <p>While the master plan addresses this through public domain principles, there may also be opportunity for community building programs run with local services. There will also be a mix of people renting social and private housing, with a need to encourage connections between people from across different backgrounds.</p>	High	All residents will be living in high-density dwellings, requiring access to spaces outside the home for recreation	<p>Deliver community building programs in partnership with local service providers to support social connection and cohesion as new residents move in.</p> <p>This can also be facilitated through the provision of quality community facilities as identified as needed within the Social Infrastructure Study.</p>
<b>Access to affordable services, programs and activities for lower-income residents</b>			
<p>The Study Area will be home to a mixed-income community, including people living in social housing dwellings and private dwellings. Research shows that living in a mixed-income community can have significant wellbeing benefits for lower-income residents; however, there is a need for ongoing access to a range of affordable services, programs and activities to reduce barriers to participating in the community and accessing services and to ensure community cohesion.</p> <p>While the master plan provides for a good range of free public spaces that will support lower-income residents, affordable community services, programs and activities will continue to play an important role in supporting future residents.</p>	High	More likely to impact on social housing residents and lower-income households	<p>This can be facilitated through LAHC negotiating with City of Canterbury-Bankstown Council regarding upgrades to the Riverwood Community Centre (as proposed in Notes in the Social Infrastructure Study) to support the ongoing provision of quality, affordable programs and services.</p> <p>Communal rooms within future social housing buildings for delivery of community programs can also improve health outcomes of social housing residents.</p>
<b>Diverse housing types</b>			
There is demand for dwellings to support existing families living within the Study Area and to support the inclusion of families in the renewal, including those on the waiting list for social housing, and those families looking for affordable private housing in a convenient location.	High	Likely to impact existing residents	Consideration should be given to providing a mix of social housing dwellings including accommodating family households. Socially sustainable neighbourhoods have a mix of household types.
There is a need for well-designed adaptable housing for people with disability. As of 2018, 9.2% of Riverwood suburb residents have a disability (much higher than the Greater Sydney average of 4.4%).	High	Likely to impact social housing residents	Include the provision of accessible housing for people with disability as part of the controls for future dwelling mix.
<b>Local workforce and employment</b>			
The future population will include around 30% social housing residents who are likely to be low income and have high rates of unemployment and will need access to employment opportunities. This may include Aboriginal and Torres Strait Islander community members.	high	Likely to impact social housing residents.	Opportunities for employment of local residents including existing and future social housing residents should be provided via apprenticeships, training and education during the construction phase.

# Appendix 1





Figure 6 - Existing public facilities in Riverwood within 5km radius from the site (source: Cred Consulting 2021)

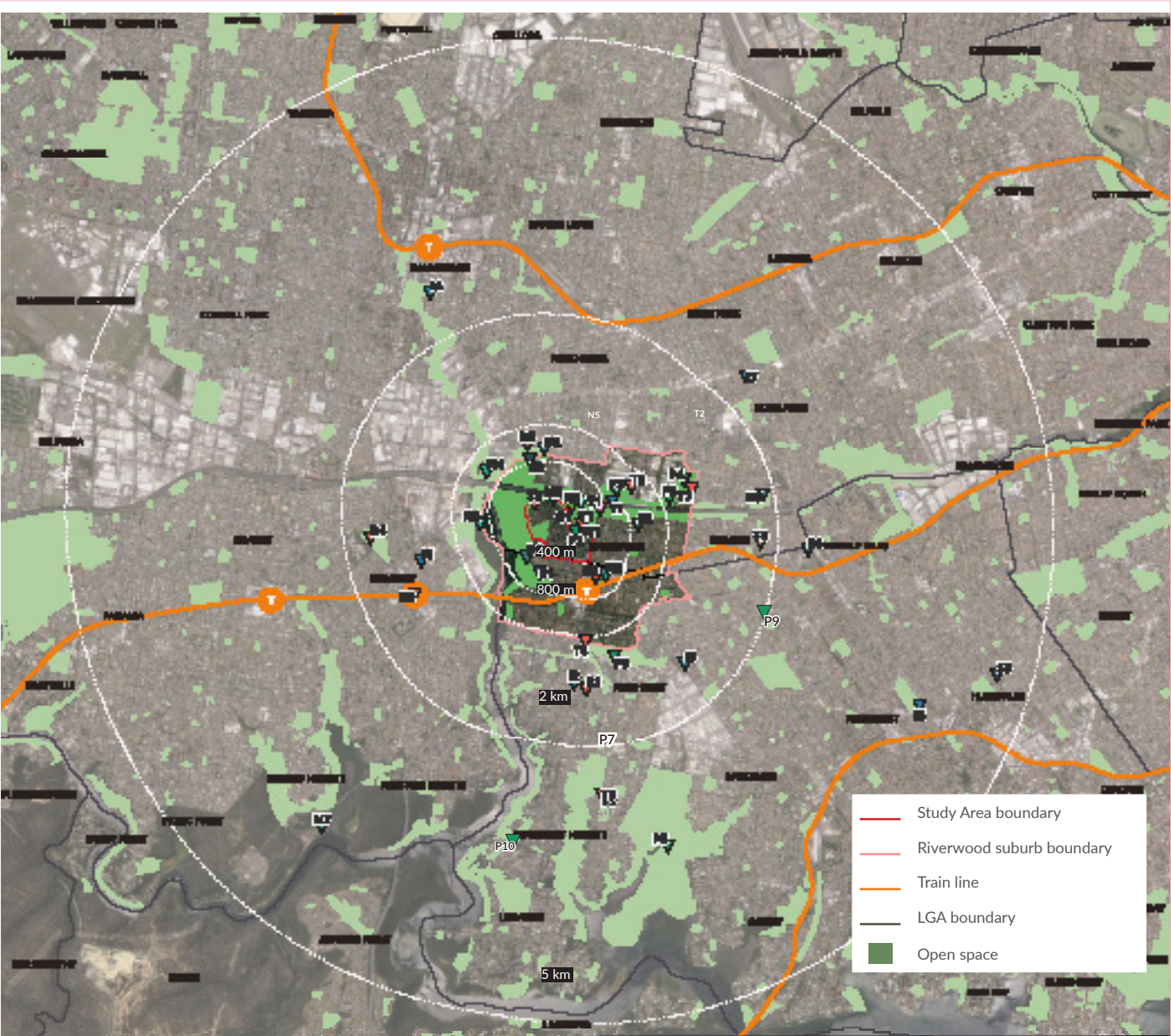


Map ref.	Category
C#	Community spaces
L#	Library
E#	Education
J#	Early childhood education and care
A#	Emergency services

Map ref.	Category
H#	Health and hospitals
Q#	Retail/Services
K#	Arts and cultural spaces



Figure 7 - Public Open Space and Recreation Facilities within 5km of the Study Area (source: Cred Consulting, 2021)



Map ref.	Category
N#	Natural areas
P#	Parks
S#	Sports spaces
T#	Play spaces
D#	Dog parks

Map ref.	Category
G#	Community garden
I#	Indoor recreation (indoor sports centres and aquatic facilities)
Y#	Youth spaces (skate parks)
R#	Clubs and RSLs