Draft Residential Travel Plan for Stellulata Cohousing

A small collaborative community at 24 Angas Street Ainslie ACT 2602

Our plan to reduce private car use and promote sustainable forms of transport such as walking, cycling and public transport.

"To support our desire to live lightly on the earth,

- We choose to walk, cycle or use public transport in preference to motor vehicles where possible."

from *Stellulata Cohousing Vision Statement*, June 2020

Stellulata Cohousing is a Demonstration Housing Project for the ACT Government

Stellulata Cohousing

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1. Our Residential Travel Plan in Brief

Stellulata Cohousing is committed to reducing car usage by

- making more use of walking, cycling and public transport,
- choosing to do more at home,
- and, when necessary, using shared electric vehicles. (See *Objectives*)

In pursuit of these objectives,

We selected the site of our community

- in a flat location to make it easier to walk and cycle,
- near to services like shops, health care providers, restaurants, pubs, clubs and parks, and
- close to public transport stops. (See *Site Audit*)

We reduce the need to travel by establishing

- community spaces to enable more activities at home,
- a library of tools for garden and workshop to encourage at-home activity,
- a well-equipped shared kitchen to make it easy to socialise on site, and
- good internet access for work, shopping, communication and entertainment. (*Targets 2-4*)

We make it easy to choose active travel options by providing communal resources including

- safe and secure site access and storage for bicycles,
- a shared electric cargo bike to transport some larger loads without a car,
- a community effort to improve safety and security for pedestrians in our area. (*Targets 5-6*)

We encourage active travel as a first priority and the use of public transport over cars by

- supplying all residents with information about our shared facilities and nearby services,
- promoting the health and social benefits of walking, cycling and public transport,
- supplying maps of the local area indicating the transport options,
- helping residents review their travel choices,
- making our community space available for neighbourhood events, thereby avoiding travel to other venues by residents and neighbours, and
- sharing this travel plan as a model for other households, organisations and developers. (*Targets 7-8*)

We further reduce our carbon footprint by

- creating a private car share system using electric vehicles, and
- encouraging carpooling by actively coordinating outings. (*Target 9*)

We monitor the success of this travel plan by

- creating a circle (a decision-making work group) to be responsible for the travel plan,
- collecting activity data as we go including through car usage logbooks,
- conducting resident surveys,
- reviewing and improving the plan at least annually, and
- reporting publicly on the results. (See *Implementation and Monitoring*)

2. Introduction

2.1 About Stellulata Cohousing

Stellulata Cohousing is a small collaborative community in Canberra, Australia to be located at 24 Angas Street Ainslie ACT 2602 (Block 6, Section 25 Ainslie).

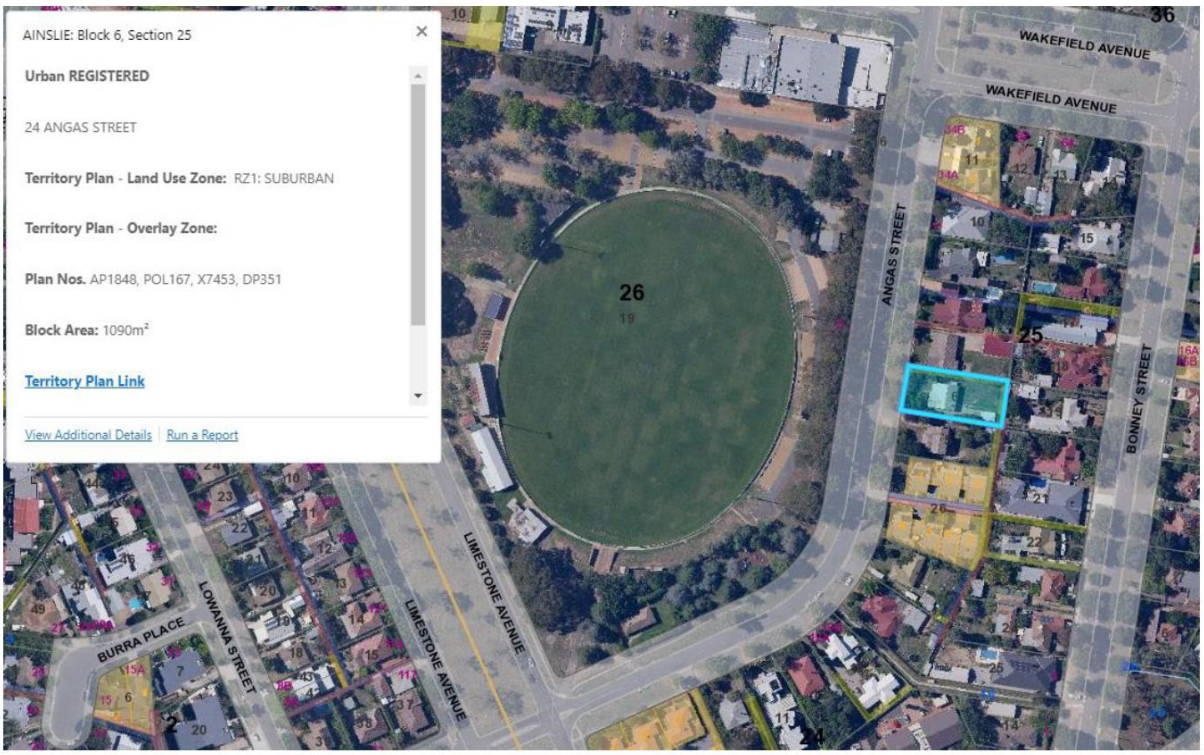
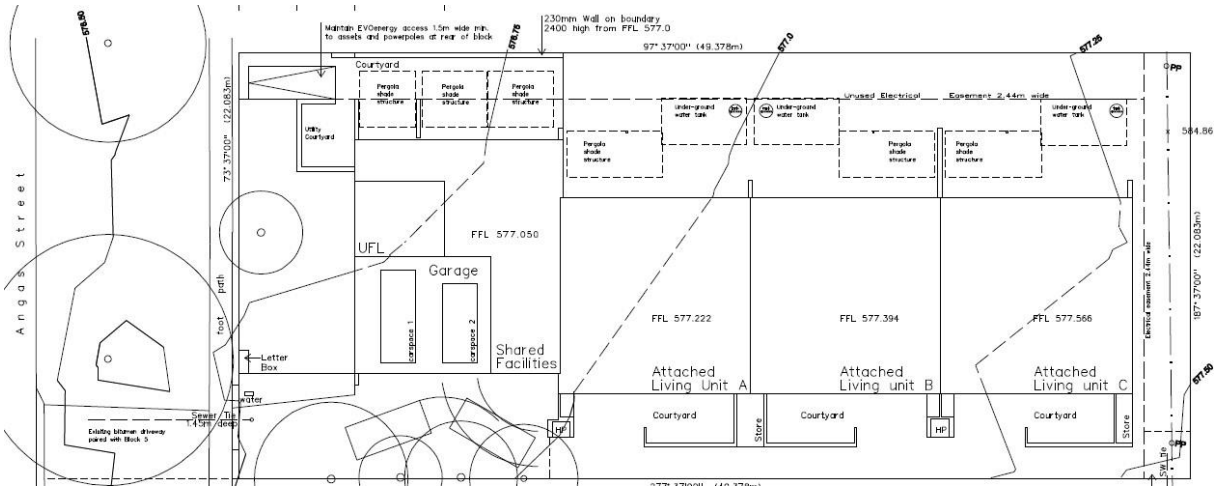


Figure 1: Location of development site (Source: ACTmapi)

Location image from AECOM Traffic Assessment Report (Feb 2020)

The proposed design consists of three 2-bedroom dwellings, and shared facilities including kitchen, entertainment space and laundry plus shared outdoor communal facilities including a garden. Plans and other details can be found on the Stellulata Cohousing website https://www.stellulata.com.au/



Site plan Stellulata Cohousing (May 2021)

Stellulata Cohousing has been selected as a Demonstration Housing Project for the ACT Government to test whether the model will be suitable for adoption by others in the Canberra community. Details of the selection process and other projects can be found on the Demonstration Housing website. https://www.planning.act.gov.au/urban-renewal/demonstration-housing-project

2.2 About Residential Travel Plans

A Residential Travel Plan is a site-specific plan which outlines a range of actions and incentives to reduce dependency on single occupancy car trips and increase the uptake of public transport, active travel modes and car sharing. It includes:

- a site audit of the current conditions such as the availability of footpaths and cycle paths, nearby bus stops, bus routes to key local destinations,
- objectives and targets,
- actions and strategies to achieve the targets, and
- implementation and monitoring of transport usage trends.

Travel Plans are required for major residential and commercial developments in various parts of Australia and in some other countries. See *References* below.

Ultimately, a travel plan seeks to reduce the impact of a development on the road network, reduce parking demand, increase travel efficiency and provide wider sustainable benefits.

This style of report is new to Canberra. As part of the Demonstration Housing process, Stellulata is testing the usefulness of Residential Travel Plans even though it may not be required in such a small atypical residential development.

Travel Plan pyramid from "Making Residential Travel Plans Work" (UK Department of Transport 2007)

2.3 Purpose of this Report

This Draft Residential Travel Plan for the proposed Stellulata Cohousing development at 24 Angas Street Ainslie is intended to guide and inform owners, planners, developers, residents, visitors, neighbours and the wider community as they work together for greater use of active and shared transport.

This report describes the location and design of the site and the relevant facilities and services, mostly in the *Site Audit* section below. The purpose is spelled out in more detail in the *Travel Plan Aim and Objectives* section and the *Targets and Indicators* section. Further facilities and services, along with management methods and promotion activities are listed in the *Action Plan* section.

As part of the Demonstration Housing process, Stellulata has agreed to develop this Residential Travel Plan and to implement it within two months of the Certificate of Occupancy and Use being issued. We will report on the implementation and the impact of the plan for a period of 5 years as described in the *Implementation and Monitoring* section.

This document builds on previous work by AECOM Australia Pty Ltd and Knight Frank Town Planning as part of the Demonstration Housing process. See *Summary of Previous Documents* below.

The plan will remain a draft and will be updated at least until the date of occupancy of the Stellulata development. After that time changes may still be made as we recognise changed circumstances, and learn from monitoring and evaluation.

2.4 References

Residential Travel Plans in other jurisdictions:

- UK Department of Transport "Making Residential Travel Plans Work" (2007) referenced by Plymouth City Council, UK at https://www.plymouth.gov.uk/planningandbuildingcontrol/travelplans/residentialtravelplans/
- City of Sydney "Travel planning guidelines: Preparing and implementing site-specific development measures" (2020) at https://www.cityofsydney.nsw.gov.au/development-guidelines-policies/travel-planning-guidelines/
- City of Ryde, NSW "Travel plan guidelines" (2015) at https://www.ryde.nsw.gov.au/Environment-and-Waste/Sustainable-Living/Sustainable-Transport/Travel-Plan-Guidelines/
- Essex County Council, UK "Residential Travel Plan Template" and "Guidance Notes" (2021) at https://www.essex.gov.uk/sustainable-travel
- Nottinghamshire County Council "Guidance for the Preparation of Travel Plans in support of Planning Applications" (2010) https://www.nottinghamshire.gov.uk/transport/public-transport/plans-strategies-policies/travel-plans
- UK Department of Transport "Making Personal Travel Planning Work: Practitioners' Guide" (2008) referenced by many UK Councils; accessed from the UK National Archives https://webarchive.nationalarchives.gov.uk/ukgwa/20101124142120/http:/www.dft.gov.uk/pgr/sustainable/travelplans/ptp/practictionersguide.pdf
- Nottinghamshire County Council Personal Travel Planning website "Travel Choice – Information for Residents" (2021) https://travelchoice.nottinghamshire.gov.uk/information-for/residents

3. Summary of Previous Documents

This Draft Residential Travel Plan builds on previous work by AECOM Australia Pty Ltd and Knight Frank Town Planning as part of the Demonstration Housing process. Sections of these reports are replicated or summarised in this document, sometimes without explicit acknowledgement.

Those previous reports are based on the Stellulata Cohousing development as described in the Demonstration Housing proposal in 2019. Any relevant changes to the project will be reflected in this document as new drafts are produced. The latest draft (and up-to-date information on other aspects of this project) can be found at the website https://www.stellulata.com.au/

3.1 Stellulata Proposed Development (Aug 2019)

The Demonstration Housing proposal from Stellulata included the following travel features:

- The choice of a site suitable for active travel (level terrain) and close to public transport, shops and services,
- A break with existing planning rules (later expressed in Territory Plan Draft Variation 376) to provide for fewer cars (two) garaged in one place (the shared facilities building),
- Shared electric vehicles with sufficient solar panels and batteries to cover charging, and
- Dedicated bicycle storage.

3.2 AECOM Traffic Assessment Report (Feb 2020)

The Traffic Assessment Report was prepared as part of the Demonstration Housing process to assess the transport implications of the Stellulata proposal. It forms the first draft of a site audit. This was greatly expanded in AECOM's *Draft Residential Travel Plan* (June 2020). Key points included:

- The location has more than adequate line of sight and easy access to arterial roads.
- The proposal is expected to generate 12-18 car trips per day using a standard formula (that takes no account of active travel) and 1-2 trips in the weekday peak period.

The report concluded that

- the proposed on-site supply of car parking spaces was adequate,
- access arrangements complied with the Australian standard, and
- traffic generated by the proposal was not expected to materially impact the surrounding road network.

3.3 AECOM Draft Residential Travel Plan (June 2020)

AECOM was commissioned by the ACT Government Demonstration Housing Team to prepare the first draft of a residential traffic plan for further refinement by Stellulata Cohousing. Significant components of the June 2020 report are included or summarised in sections below.

Section 2 of the AECOM plan titled "Existing Conditions" provides research on the road network, cycling, public transport and walking, with attention to hazards, constraints, destinations, and travel times. This is summarised in the *Site Audit* section below.

Later sections of the AECOM plan recommended a number of initiatives many of which have been incorporated into the *Action Plan* section below.

4. Travel Plan Aim and Objectives

The aim of this residential travel plan is to minimise single occupancy car trips associated with the Stellulata Cohousing development by promoting and encouraging the use of more sustainable alternatives.

To help achieve this overarching aim, this plan addresses specific objectives:

1. Decrease the number of car trips.
2. Reduce the need for vehicular travel.
3. Promote and encourage active travel as a first priority.
4. Promote and encourage use of public transport over cars.
5. Optimise the efficient use of shared electric vehicles.

5. Site Audit

AECOM's *Draft Residential Travel Plan* (June 2020) contains a rich collection of information about the site and the surrounding area. For this reason, the entire Section 2 titled *Existing Conditions* has been included as an attachment to this document. Key points are summarised here.

5.1 The Site

The subject site is located on the existing Block 6, Section 25 Ainslie. The site frontage is on Angas Street which connects to Limestone Avenue to the south-west and Wakefield Avenue to the north.

Figure 1 Site location

(Source: ACTMapi, 2020)

5.2 Road Network

Angas Street is a local access road (50 kph limit) with wide lanes and low traffic volumes which allows for cyclists. Limestone Avenue is an arterial road (60 kph limit) with two lanes in either direction. It has no dedicated on-road cycling lanes even though it is considered to be a main on-road cycling route. Wakefield Avenue is an arterial road (60 kph limit) heading west (towards Northbourne Avenue and Belconnen) and a minor collector to the east (towards Ainslie shops).

5.3 Existing Site Access and Car Parking

The existing access to the site is through a driveway from Angas Street. The existing car park is contained within the site. Currently, there no restrictions for on-street parking along Angas Street, except near intersections.

5.4 Road Safety

Analysis of the road crash data for a recent five-year period shows that most of the crashes are clustered along Northbourne Avenue and major intersections such as at Northbourne Avenue / Wakefield Avenue and Wakefield Avenue / Limestone Avenue.

Analysis of the pedestrian crash data shows that most of the recorded pedestrian crashes occurred along major roads such as Northbourne Avenue and Limestone Avenue. Analysis of the cyclist crash data shows that there are a significant number of cyclist crashes along Northbourne Avenue as well as along Cowper Street through to Ipima Street. More details are available in the Road Safety section of *Attachment 2*.

5.5 Public Transport

The Macarthur Avenue light rail stop is approximately 850 m from the site. This is a high frequency service which currently connects northside suburbs to the Canberra CBD. The light rail service also connects to the buses at the Gungahlin Place Bus Interchange, Dickson Bus Interchange and City Bus Interchange which operate services throughout Canberra. There are a number of nearby bus stops mainly along Cowper Street. These stops are services by bus route number 31 which connect city bus interchange and inner north suburbs to Belconnen.

5.6 Key Destinations

The list and image below show the key attractors that are within 2 km radial distance from the site. The attractors are based on the main trip generating land uses in the area as well as data based on a travel survey from future residents of the proposed site. These include:

A – Ainslie Shops
B – Ainslie Football Club
C – Ainslie Walking Trails
D – Macarthur Avenue Light Rail Stop
E – Events in Corroboree Park
M – Ipima Street Light Rail Stop
F – Events in Alan Ray Oval
G – Majura Sports Field
H – Haig Park
I – Braddon Liquor and Grocery Store
J – Turner Primary School
K – Merici College
L – Baker Gardens Pre-school
M – Canberra Centre
N – The ANU
O – Dickson Shops
P – O'Connor Shops
Q – Lyneham Shops
R – Downer Shops
S – Dickson Bus Interchange
T – City Bus Interchange
U – Dickson Pool
V – Lyneham High School
W – Lyneham Primary School
X – Dickson College
Y – Daramalan College
Z – Brindabella College

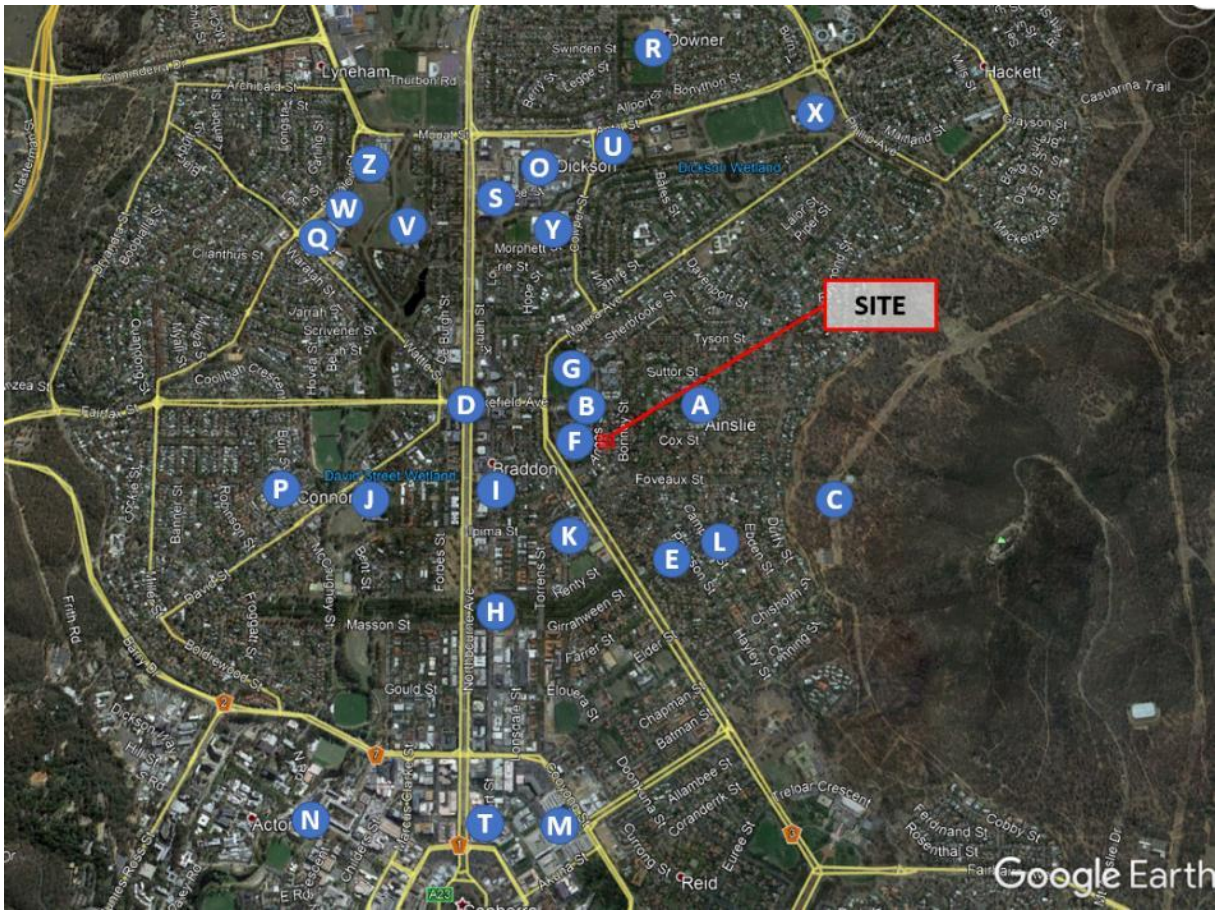


Figure 2 Key attractors

(Source: Google Earth, 2019)

The *Existing Conditions* attachment details estimated travel times to key destinations. Notably, the Macarthur Avenue light rail stop is an 11-minute walk from the site. The nearest bus stop on Cowper Street is a 5-minute walk. Ainslie shops is a 10-minute walk. Canberra Centre in the CBD is a 24-28 minute walk, 8-9 minutes cycling and 4-8 minutes by car and about 30 minutes by public transport (not counting wait times).

As Ainslie is a residential area, pedestrian traffic in the area around the site is low. Most of the key attractors in the area are a mix of recreational and social activities. These are more likely to generate activity during the weekends or after work.

Travel times to most major attractors are generally low for cyclists. For public transport, travel times are generally larger due to passenger wait times and the walking distance from the service stops to the destination.

5.7 Pedestrian And Cyclist Facilities

Public footpaths in the area are generally in good condition and follow the verges of most streets, allowing access for both pedestrians and cyclists. On-road cycling facilities are mainly along Northbourne Avenue and Ipima Street. Limestone Avenue has no dedicated on-road cycling lanes even though it is considered a main on-road cycling route. The area around the site is a well vegetated and generally well-lit, enhancing the amenity and safety of pedestrians and cyclists.

Angas Street has a walkability score of 67 out of 100[1]. Scores between 50-69 outline a "somewhat walkable" area where some errands can be accomplished on foot. Points are awarded based on the

[1] Based on data from www.walkscore.com

distance to amenities in the following categories: dining and drinking, groceries, shopping, errands, parks, schools and culture and entertainment. Amenities within a 5-minute walk are given maximum points. A decay function is used to give points to more distant amenities, with no points given after a 30-minute walk. Walk Score also measures pedestrian friendliness by analysing population density and road metrics such as block length and intersection density.

5.8 Gap Analysis

AECOM undertook a site visit on 28 January 2019. The following are the identified constraints, the locations of which are marked with their corresponding numbers in the image below.

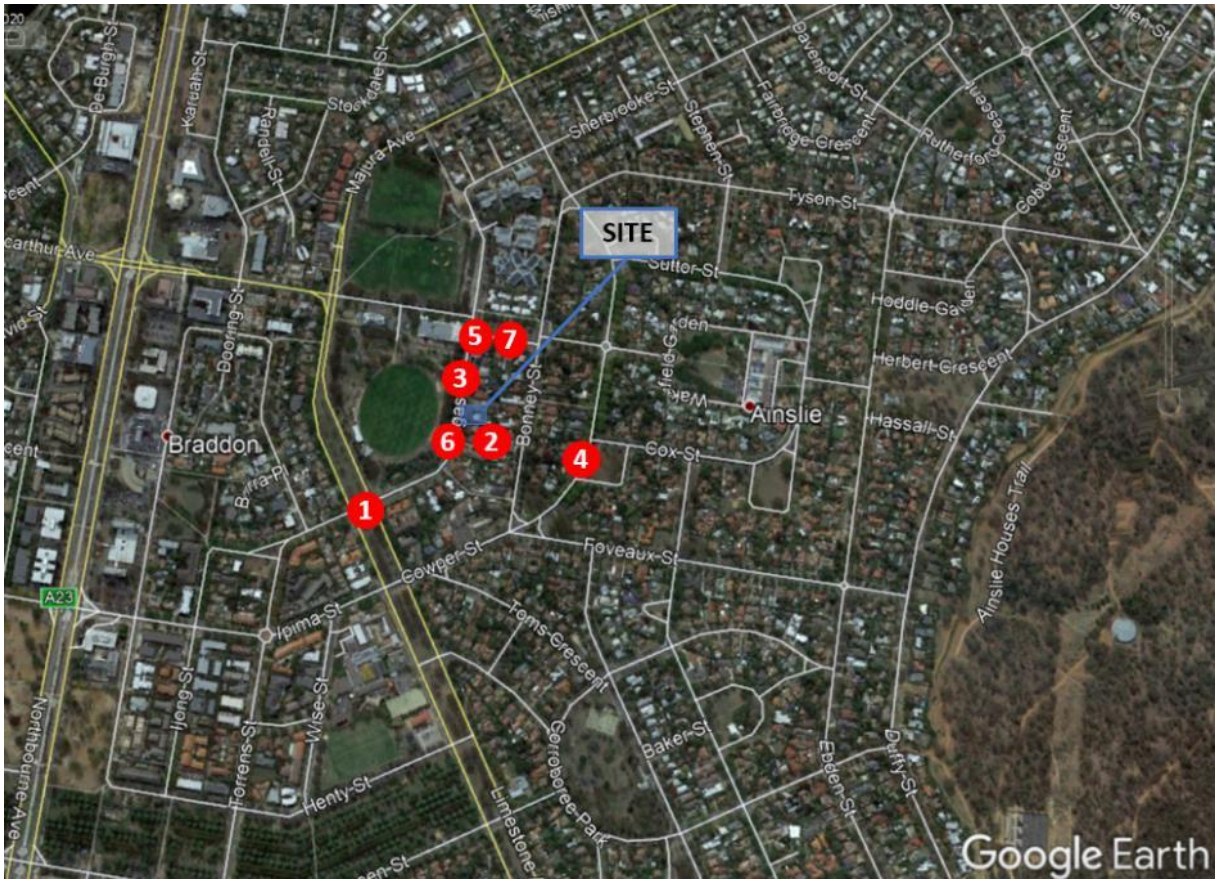


Figure 3 Ainslie gap analysis

1 – The intersection at Limestones Avenue/Angas Street is unsignalised. This constraint is only minimal since there are low traffic volumes along Angas Street. In addition, there is a median cross-over which allows vehicles to wait between carriageways. Limestone crossings which cater for key east-west desire lines are catered for by signals at Ipima / Cowper Street and at Wakefield Avenue which are immediately adjacent Angas Street.

2 – The bollard removed along the walkway between Angas Street and Bonney Street could enable vehicular traffic.

3 – There is no clear crossing along Angas Street

4 – The crossing to the bus stop on Cowper Street is from a driveway and there is no matching kerb ramp on the side of the road.

5 – There is a missing footpath connection across Angas Street towards the Ainslie Football Club meaning people need to cross Wakefield Avenue first.

6 – There is no connection from the walkway between Angas Street and Bonney Street to the other side of Angas Street where there is a kerb ramp and path.

7 – There is a hedge obstructing the footpath along Wakefield Avenue. This is common in more established suburbs and should be monitored.

For further details, see the attachment titled *Existing Conditions* below.

6. Targets and Indicators

It is important that any target set here is specific, measurable, achievable, realistic and has a time-frame. However, setting targets for this development is problematic for a number of reasons.

1. The community is small.
   With only three households, a small individual variation can dramatically impact the total community result. For example, even one additional person joining the community and working odd hours or in distant suburbs would significantly impact the rate of car usage.

2. The first residents are already highly motivated to avoid unnecessary car usage.
   Targets that require improvement over time may not show results.

3. The development is in a wide street with low traffic volumes.
   Even in peak hour the nearby arterial streets are relatively free-flowing. This project is very unlikely to affect traffic or parking congestion. Targets measuring the consequences of less car use may not show results.

4. Secondary objectives relate to efficiency and the promotion of alternative transport modes.
   Gauging the impact of "soft measures" like information and motivational messages requires tools such as surveys and specific targets are more difficult to define and measure.

In the summary table below, each target is supported by indicators – other measurements that may help assess progress towards the objectives. Each target is explained more fully in the following sections.

Objective	Targets	Indicators
1. Decrease the number of car trips	i. Car trips less than 5 per day per unit in year 1 reducing to 3 trips by year 5.	Number of walking / cycling / bus / tram / car trips per day per unit.
2. Reduce the need for vehicular travel	On-site facilities available - ii. tool library (within 1st year); iii. internet services (3 months); iv. catalogue of local services (6m).	Number of community events held on site. Number of walking / cycling / bus / tram / car trips per visitor.
3. Promote and encourage active travel as a first priority	v. Ensure safe and secure site access and storage for cycles. vi. Lodge requests to provide well-lit, safe walk and cycle paths in the local area. vii. Provide all new residents and visitors with travel information about walking, cycling and public transport.	Number of walking / cycling / bus / tram / car trips per day per unit.

Objective	Targets	Indicators
4. Promote and encourage use of public transport over cars	vii. Provide all new residents and visitors with travel information about walking, cycling and public transport. viii. Investigate Personalised Travel Planning tools.	Number of walking / cycling / bus / tram / car trips per day per unit.
5. Optimise the efficient use of shared electric vehicles	ix. Establish systems to log car usage, encourage sharing and optimise electric vehicle charging.	Number of walking / cycling / bus / tram / car trips per day per unit. Analysis of energy monitoring data from solar PV system.

6.1 Target 1 – Number of Car Trips

Related to Objective 1 – Decrease the number of car trips.

Target 1. The number of car trips generated by residents of the Stellulata Cohousing community will average less than 5 per day per unit in the first year of occupation. The target will be reduced to 3 car trips per day per unit by the fifth year. Note that most outings consist of two trips – one to the destination and then the return trip.

According to Transport Canberra's *Household Travel Survey 2017*, "The typical ACT – Queanbeyan household makes 9.04 trips per day, with residents making 3.55 trips per person per day."

The Australian Capital Territory *Estate Development Code* (Territory Plan 2008) says "To calculate the traffic volume apply a traffic generation rate of 8 vehicle movements per day per dwelling for single dwellings, a rate of 6 vehicles per day per dwelling for multi-unit developments, and a rate of 7 vehicles per day for blocks 360m^2 or smaller."

Based on the Stellulata development proposal, AECOM's *Traffic Assessment Report* says the expected traffic generation of the site can be reduced to "4-6 trips per day for each dwelling. Based on this the future site is expected to generate 12-18 trips per day or 1-2 trips in the weekday peak period."

The target has been set at the low end of this range.

6.2 Targets 2-4 –On-site Facilities

Relates to Objective 2 – Reduce the need for vehicular travel.

Target 2. Complete the on-site tool library within the first year. This includes items for the shared garden, workshop, laundry, kitchen, lounge, barbecue, cars, and electric cargo bike.

Travel will be reduced by enabling more on-site activities for residents, their friends and neighbours. Having the right tools and services on-hand will make work, recreation and social activities more convenient than travelling elsewhere. Stages in the process include needs analysis, gap identification, procurement, and management systems.

Target 3. Complete the communication infrastructure within the first 3 months. This includes Internet, telephone, intercom, security, and postal systems.

Travel will be reduced by enabling working from home, easy but securely controlled access to the site for visitors, online shopping and delivery services. Some of these items require the design and implementation of technical systems (phone, internet, intercom). Some require procedures to be agreed and implemented (collection from a shared letter box, responding to couriers and visitors).

Target 4. Compile a catalogue of local services within the first 6 months. This includes all services within one kilometre of the development – retail, health, recreation, entertainment, transport.

The need for vehicular travel will be reduced if residents and visitors are aware of facilities within walking distance including bus stops that allow onward travel.

6.3 Targets 5-6 – Walking and cycling safely

Relates to Objective 3 – Promote and encourage active travel as a first priority.

Target 5. Complete cycle storage and management facilities within the first 3 months. This includes safe and secure site access and storage for the bicycles of residents and visitors and the provision of a shared electric cargo bike with storage, charging, booking and usage logging systems.

Target 6. Lodge requests to provide well lit, safe walk and cycle paths in the local area within the first 3 months. This includes items identified in AECOM's Gap Analysis and listed in a previous section. These items, and any additional items of concern, will be reviewed every 6 months.

6.4 Target 7 – Travel information

Relates to Objectives 3 and 4 – Promote and encourage active travel as a first priority and the use of public transport over cars.

Target 7. Develop a travel information pack within the first 6 months. It will provide all new residents and visitors with travel information about walking, cycling and public transport.

Residents and visitors are more likely to make good decisions about their travel choices if information is readily available. This includes information about the health and social benefits of walking, cycling and public transport.

It will also include specific information such as the catalogue of local services compiled in Target 4, maps of the local area indicating the transport options, procedures for using shared facilities such as the cargo bike and detailed public transport information.

The information pack can come in the form of posters, pamphlets, catalogues, log books and interactive online tools. This may include a digital information pack such as Nottingham's Travel Choice – https://travelchoice.nottinghamshire.gov.uk/travel-packs/digital-travel-information-pack-nottinghamshire/

6.5 Target 8 – Personalised Travel Planning

Relates to Objectives 3 and 4 – Promote and encourage active travel as a first priority and the use of public transport over cars.

Target 8. Investigate Personalised Travel Planning tools during the first year. Personalised Travel Planning encourages people to think about the way they currently travel, and shows the options and benefits of sustainable travel, in a very individual and thus motivating way.

Personalised Travel Planning has been referred to as 'Travel Blending' in Australia, 'Travel Feedback Programmes' in Japan and as 'individualised travel marketing' in the USA. It includes processes to help people identify any barriers they have to using sustainable transport for their regular journeys and offers information and support exactly tailored to their needs. By identifying their own barriers and solutions, the beneficiary is in control of the situation and feels empowered to make the change. See https://www.polisnetwork.eu/project/ptp-cycle/

6.6 Target 9 – Procedures for sharing electric vehicles

Relates to Objective 5 – Optimise the efficient use of shared electric vehicles.

Target 9. Establish systems within the first 6 months to log car usage, encourage sharing and optimise electric vehicle charging. This includes a car booking system, a process for coordinating car usage among residents, a usage log book process, and energy monitoring components of the on-site solar photo voltaic system.

When it is necessary to use a car, these systems will encourage residents to plan their travel and consciously combine the outings of multiple people or multiple destinations where it can reduce impact on the environment.

7. Action Plan

Most actions are described or implied in the previous section on targets. They are all listed here with additional comments where necessary.

	Action	Objective	Target	Comments
1.	Introduce travel diary / survey / logbook systems	1	1	Accurately estimating the average number of walking / cycling / bus / tram / car trips per day per unit is key to determining the success of the plan.
2.	Establish a tool library for the garden and workshop to encourage at-home activity	2	2	This involves needs analysis, gap identification, procurement, and management systems. Include bicycle maintenance.
3.	Establish a well-equipped shared kitchen to make it easy to socialise on site	2	2	Include the barbecue and shared lounge areas. Similar process to tool library.
4.	Develop systems for managing the shared facilities	2	2	Include booking procedures, maintenance requests and logging of usage. (Usage statistics helps determine the success of this plan.)
5.	Establish good internet access for work, shopping, communication and entertainment.	2	3	
6.	Establish other communications infrastructure – telephone, intercom, security, and postal systems	2	3	Consider easy but securely controlled access to the site for residents and visitors. This may require procedures to be agreed and implemented (collection from a shared letter box, responding to couriers and visitors).
7.	Develop a catalogue of local services	2	4	This includes all services within one kilometre of the development – retail, health, recreation, entertainment, transport.
8.	Ensure safe and secure site access and storage for cycles	3	5	This includes the bicycles of residents and visitors and the provision of a shared electric cargo bike with storage, charging, booking and usage logging systems

	Action	Objective	Target	Comments
9.	Lodge requests to provide well-lit, safe walk and cycle paths in the local area	3	6	This includes items identified in AECOM's Gap Analysis.
10.	Provide all new residents and visitors with travel information about walking, cycling and public transport	3, 4	7	This includes health and social benefits of walking, cycling and public transport. It will also include specific information such as the catalogue of local services compiled in Action Item 6, maps of the local area indicating the transport options, procedures for using shared facilities such as the cargo bike and detailed public transport information. It may be presented as posters, pamphlets, catalogues, log books and interactive online tools (a "digital information pack").
11.	Investigate Personalised Travel Planning tools.	4	8	PTP encourages people to think about the way they currently travel, and shows the options and benefits of sustainable travel, in a very individual and thus motivating way.
12.	Establish systems to manage and optimise the sharing of electric vehicles	5	9	This includes a car booking system, a process for coordinating car usage among residents, a usage log book process, car charging procedures and energy monitoring components of the on-site solar photo voltaic system.

8. Implementation and Monitoring

As part of the Demonstration Housing process, Stellulata has agreed to develop this Residential Travel Plan and to implement it within two months of the Certificate of Occupancy and Use being issued. We will report on the implementation and the impact of the plan for a period of 5 years.

8.1 Travel Plan Management

Stellulata Cohousing operates on a collaborative model for decision making and task allocation. This is summarised in the *Stellulata Vision Statement (June 2020)* in Attachment 1 below.

Travel Plans generally require the appointment of a Travel Plan Coordinator whose role is to:

- Coordinate the implementation of the Travel Plan;
- Conduct surveys and collect data to measure progress;
- Communicate and promote the Travel Plan to stakeholders;
- Coordinate events and initiatives;
- Monitor and review the Travel Plan.

In Stellulata we will create a circle (a decision-making work group) to be responsible for the travel plan and fulfil the roles of the Travel Plan Coordinator. The Travel Plan Circle will be responsible for all items in the *Action Plan* and for reporting to a full community meeting on progress every 3 months.

We are confident that the full community will strongly support this travel plan. All residents commit to the Stellulata Vision Statement which includes an explanation of how we will support our desire to live lightly on the earth.

8.2 Monitoring and Review

As part of the Demonstration Housing process, the ACT Government, represented by the Environment, Planning and Sustainable Development Directorate (EPSDD), requires that reviews be conducted annually for a period of five years after the issue of the Certificate of Occupancy and Use.

The results from these reviews must be provided to EPSDD to show progress towards Travel Plan targets and objectives. The reviews will include:

- Basic information about the site, including the number of residents;
- Details of mode-splits and progress towards targets;
- Details of the initiatives implemented since the last review;
- An assessment of whether initiatives have been successful in terms of meeting Travel Plan objectives and targets; and
- Details of future initiatives to be undertaken or any changes necessary.

In preparation for the reporting to government, the Travel Plan Circle will:

- Analyse vehicle usage and other data in preparation for meetings to review this Plan.
- Facilitate the reviews of the Plan 6 and 12 months after issue of Certificate of Occupancy, and thereafter at least annually – to be conducted at full community meetings held just for this purpose, or for a wider purpose as appropriate.
- Updating and circulating this Plan following review meetings – advancing the version number and providing a date stamp in the footer.

Stellulata Cohousing also commits to making these reports publicly available.

9. Attachment 1 – Stellulata Vision Statement (June 2020)

Vision

Stellulata Cohousing is a small community in Canberra consisting of private two-bedroom townhouses and shared resources including a common house and gardens.

Members work together to develop and maintain functional and enjoyable living spaces and build a welcoming community for each other, our neighbours and friends.

We enjoy the benefits of our own homes while fully sharing our common spaces and resources and fairly contributing to the community costs and tasks.

Values

- We trust, respect and accept one another.
- We bring joy to our work and play.
- We resolve conflict responsibly.
- We live interdependently and acknowledge our individuality.
- We contribute to our community.
- We care for each other.
- We live lightly on the earth.

Principles

While we are only a small community, we are following the principles of cohousing.

1. Participatory process.
   Future residents participate in the design of the community so that it meets their needs.
   At Stellulata, the founding members collaborated in the design and individual owners can tailor their own dwellings at their own cost.
2. Neighbourhood design.
   The physical layout and orientation of the buildings (the site plan) encourage a sense of community and social interactions.
3. Common facilities.
   Common facilities are designed for daily use, are an integral part of the community, and are always supplemental to the private residences.
   At Stellulata we have private dwellings including courtyards and gardens and we share a common house, including kitchen, laundry, freezer and garage plus common gardens and shared vehicles.
4. Resident management.
   Residents manage their own cohousing communities, and also perform much of the work required to maintain the property. They participate in the preparation of common meals, and meet regularly to solve problems and develop policies for the community.
   At Stellulata, we will maintain a system of fair participation in community tasks based on each resident's skills and interests.
5. Non-hierarchical structure and decision-making.
   Each person takes on one or more roles consistent with his or her skills, abilities or interests.
   Decisions are made by consensus wherever possible.
   Stellulata will use many of the tools and decision-making processes of sociocracy aiming for consent to acceptable decisions rather than full consensus. Residents will consult whenever an action or decision might impact others.

In order to maintain the character of our collaborative community,

6. New owners and new long-term residents need prior approval from the other owners.
7. All costs outside of the private dwellings will be agreed and shared equally.
8. Our intention is that all owners and residents will build connections with each other through shared activities including eating together, relaxing together and working together on community projects such as garden maintenance, and shared decision making.
9. We will create our own traditions.

To support our desire to live lightly on the earth, residents will

10. share resources including motor vehicles and equipment
11. choose to walk, cycle or use public transport in preference to motor vehicles where possible
12. minimise our negative impact on the natural world including our carbon emission.

10. Attachment 2 – Existing Conditions (AECOM June 2020)

This attachment is Section 2 from AECOM's *Draft Residential Travel Plan* (June 2020) prepared for Environment, Planning and Sustainable Development Directorate of the ACT Government.

The Site

The subject site is located on the existing Block 6, Section 25 Ainslie. The site frontage is on Angas Street which connects to Limestone Avenue to the south-west and Wakefield Avenue to the north.

Figure 4 Site location

(Source: ACTMapi, 2020)

Road Network

Surrounding Roads

Angas Street

Angas Street is a local access road with a default speed limit of 50 km/h. It is a two-way road with one lane in either direction sitting on a 30.5 m wide road reserve. There is no marked on-road cycling along the road. However, the wide lanes and low traffic volumes allow for cyclists.

Limestone Avenue

Limestone Avenue is an arterial road with a posted speed limit of 60 km/h. It is a two-way road with two lanes in either direction, separated by a 33 m wide median within the vicinity of the site. As per the Active Travel Infrastructure Practitioner's Tool Guide[2], Limestone Avenue is a main on-road cycling route from the intersection at Wakefield Avenue through to Fairbairn Avenue.

[2] https://activeinfrastructure.net.au/

Wakefield Avenue

Wakefield Avenue is an arterial road to the west of the intersection at Angas Street and a minor collector to the east of the intersection. It is mostly configured as a two-way road with one lane in either direction, with a posted speed limit of 60 km/h. The arterial length of Wakefield Avenue is a main on-road cycling route as per the Active Travel Infrastructure Practitioner's Tool Guide.

Bonney Street

Bonney Street is a local access street with a default speed limit of 50 km/h. It connects to Wakefield Avenue to the north and Cowper Street to the south. It is a two-way road with a single lane in either direction, sitting within a 31 m wide road verge.

Existing Site Access

The existing access to the site is through a shared driveway from Angas Street (Figure 5).

Figure 5 Existing site access

(Source: Google Earth, 2019)

Car Parking

The existing car park is contained within the site. Currently, there no restrictions for on-street parking along Angas Street, except near intersections.

Road Safety

Road Crashes

Figure 6 shows the most recent five-year period of road crash data recorded from 1st January 2015 to 31st December 2019. Analysis of the crash diagram shows that most of the crashes are clustered along Northbourne Avenue and major intersections such as at Northbourne Avenue / Wakefield Avenue and Wakefield Avenue / Limestone Avenue.

There was one crash recorded along Angas Street which was a property damage only level crash. Similarly, there was one recorded property damage only crash near the intersection of Angas Street / Wakefield Avenue. At the intersection of Angas Street / Limestone Avenue, there were 25 recorded crashes of which one was an injury level crash.

Along Edgar Street near the Ainslie shops there is a cluster of property damage only level crashes. This can be mostly attributed to vehicles manoeuvring in and out of the car parks.

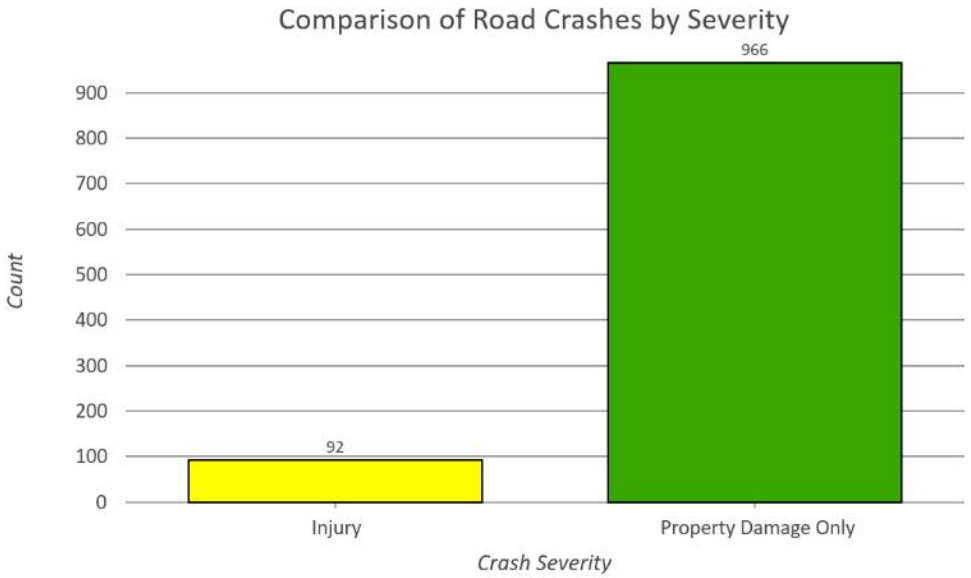
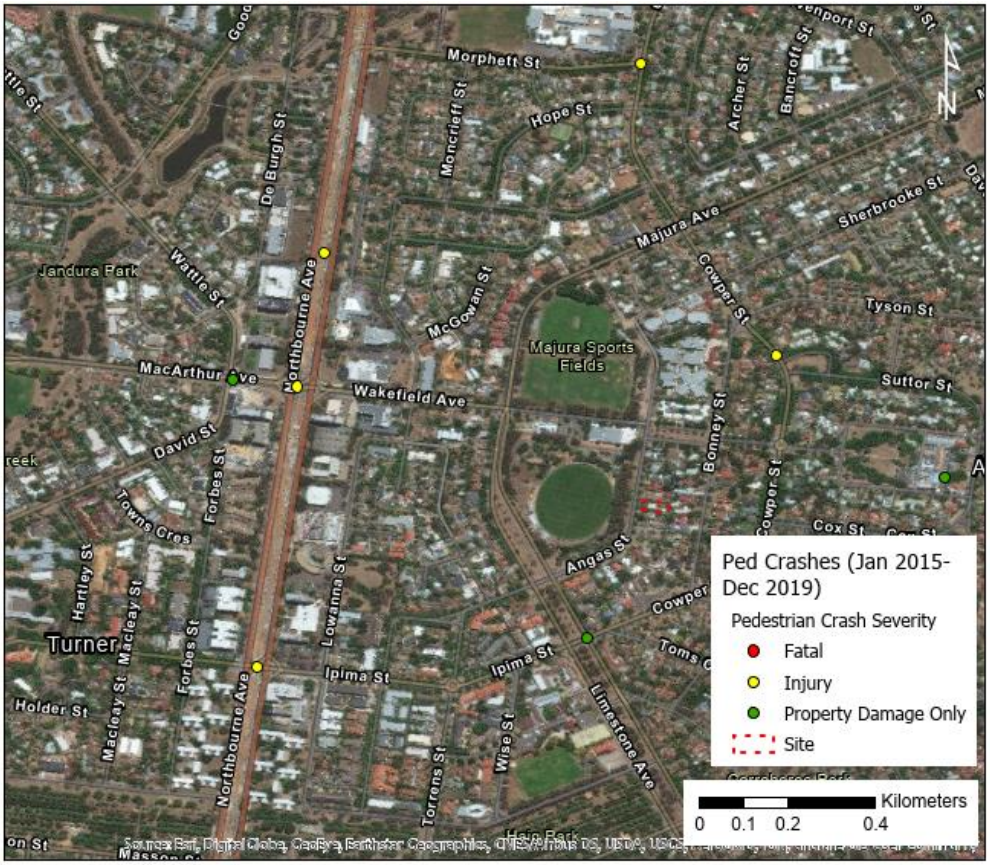


Figure 6 Road Crashes (Jan 2015-Dec 2019)

Pedestrian Crashes

Figure 7 shows the most recent five-year period of pedestrian crash data recorded from 1st January 2015 to 31st December 2019. Most of the recorded pedestrian crashes occurred along major roads such as Northbourne Avenue and Limestone Avenue. The closest pedestrian crash to the site was at the intersection of Limestone Avenue / Cowper Street which was a property damage only level crash. There was also one property damage only severity level crash near the Ainslie shops.



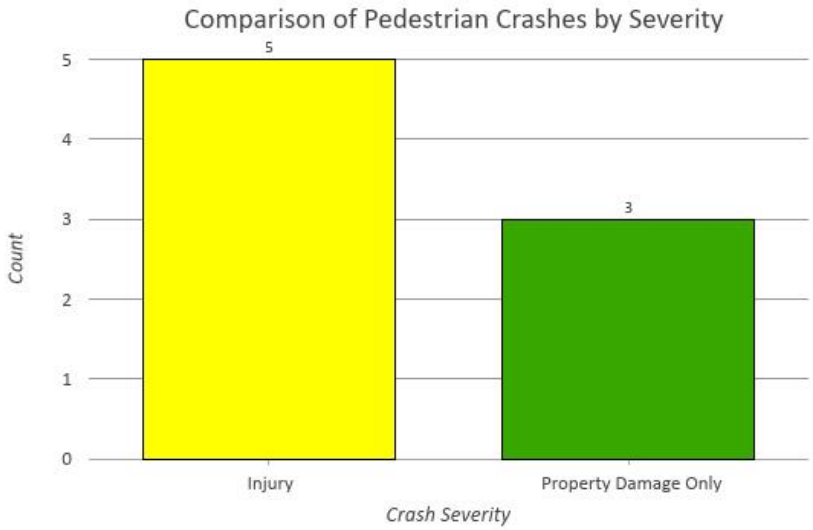
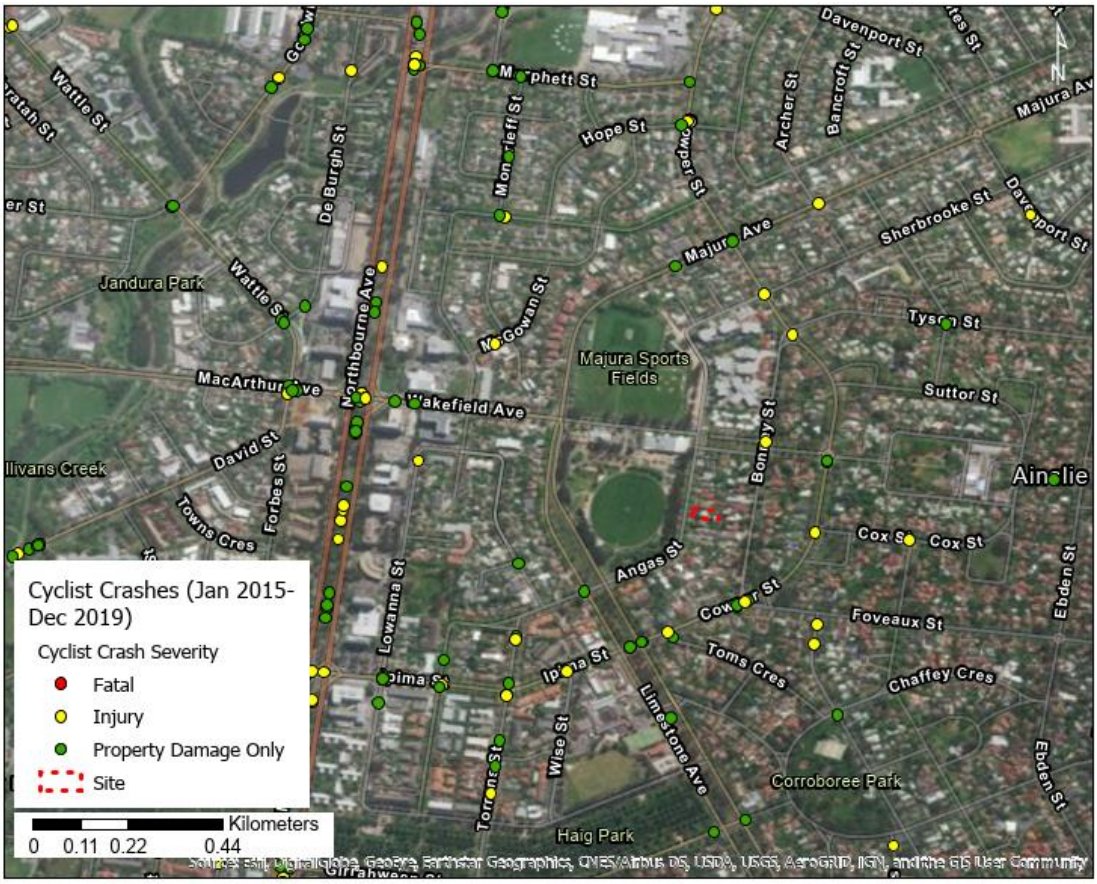


Figure 7 Pedestrian Crashes (Jan 2015-Dec 2019)

Cyclist Crashes

Figure 8 shows the most recent five-year period of cyclist crash data recorded from 1st January 2015 to 31st December 2019. There are a significant number of cyclist crashes along Northbourne Avenue as well as along Cowper Street through to Ipima Street. Near the site, there was an injury level cyclist crash at the intersection of Wakefield Avenue / Bonney Street. In addition, a property damage only severity level crash was recorded at the intersection of Ijong Street / Limestone Avenue, opposite the Angas Street / Limestone Avenue intersection.



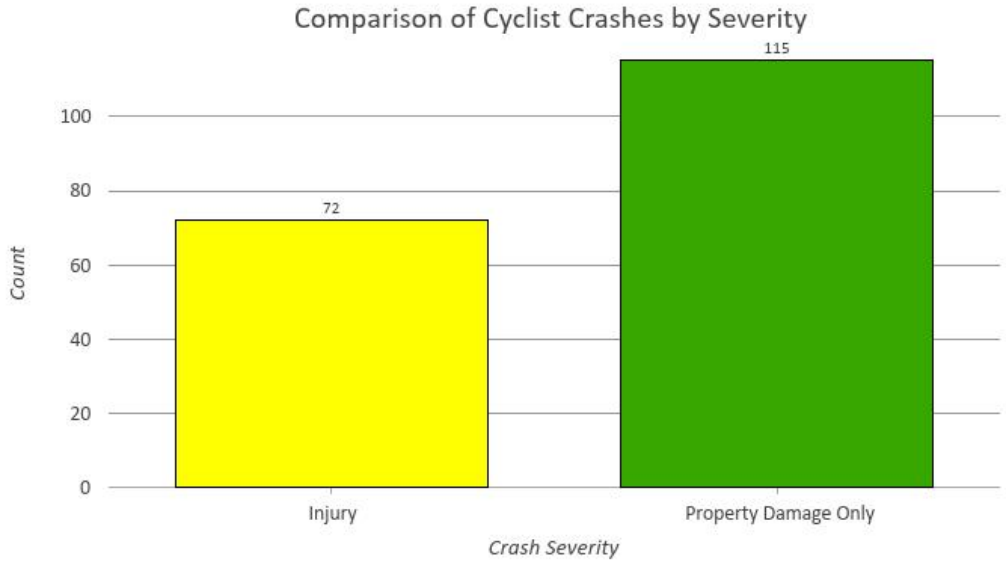


Figure 8 Cyclist crashes (Jan 2015-Dec 2019)

Public Transport

As shown in Figure 10 below, the Macarthur Avenue light rail stop is approximately 850 m from the site. This is a high frequency service which currently connects northside suburbs to the Canberra CBD. The service operates every 6 minutes during peak periods and every 15 minutes during the off-peak. The light rail service also connects to the buses at the Gungahlin Place Bus Interchange, Dickson Bus Interchange and City Bus Interchange which operate services throughout Canberra.

Figure 10 also shows a number of bus stops mainly along Cowper Street. These stops are services by bus route number 31 which connect city bus interchange and inner north suburbs to Belconnen. This service operates every 30 minutes throughout the day from 6.00AM to 11.00PM.

Availability of Public Transport Information

Public transport timetables and route maps are available through the Transport Canberra website. In addition, the *NXTBUS* app is available for download on both Android and iOS, which gives real time information on the location of Transport Canberra buses.

Google Maps also has a journey planner, showing available public transport routes from a certain location to a destination.

Public Transport Fares

Table 1 and Table 2 outlines the cash fares and MyWay pass fares[3] for Transport Canberra services.

Table 1 Cash fares

Cash Fares	
Adult Single	$5.00
Adult Daily	$9.60
Concession Single	$2.50
Concession Daily	$4.80

Table 2 MyWay fares

MyWay Fares	
MyWay Card Purchase	
Adult	$5.00
Concession and Student	$2.50
MyWay Seniors	No fee
MyWay Adult	
Peak	$3.22
Off-peak	$2.55
Weekday Cap	$9.60
Weekend/Public Holiday Cap	$5.87
MyWay Concession	
Peak	$1.61
Off-peak	$0.00
Weekday Cap	$4.80

[3] Based on fares from https://www.transport.act.gov.au/tickets-and-myway/fares

MyWay Fares	
Weekend/Public Holiday Cap	$2.17
MyWay Student	
Tertiary Student	$1.61
School Student – School Days	$1.22
School Student – Non School Days	$1.61
Weekday Cap	$4.80
Weekend/Public Holiday Cap	$2.17

Key Destinations

Attractors

Figure 9 below shows the key attractors that are within 2 km radial distance from the site. The attractors are based on the main trip generating land uses in the area as well as data based on a travel survey from future residents of the proposed site. These include:

A – Ainslie Shops
B – Ainslie Football Club
C – Ainslie Walking Trails
D – Macarthur Avenue Light Rail Stop
E – Events in Corroboree Park
M – Ipima Street Light Rail Stop
F – Events in Alan Ray Oval
G – Majura Sports Field
H – Haig Park
I – Braddon Liquor and Grocery Store
J – Turner Primary School
K – Merici College
L – Baker Gardens Pre-school
M – Canberra Centre
N – The ANU
O – Dickson Shops
P – O'Connor Shops
Q – Lyneham Shops
R – Downer Shops
S – Dickson Bus Interchange
T – City Bus Interchange
U – Dickson Pool
V – Lyneham High School
W – Lyneham Primary School
X – Dickson College
Y – Daramalan College
Z – Brindabella College

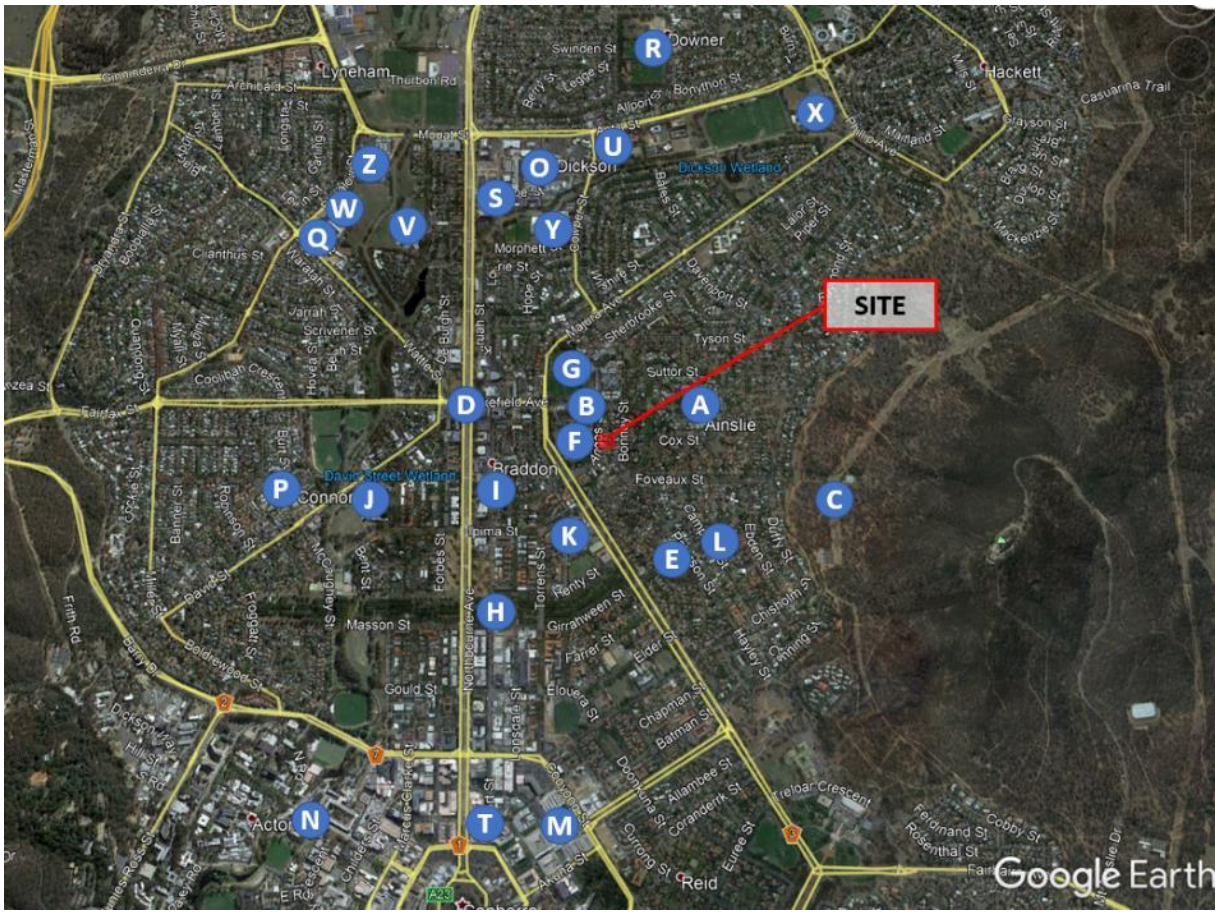


Figure 9 Key attractors

(Source: Google Earth, 2019)

As Ainslie is a residential area, pedestrian traffic in the area around the site is low. During the site visit undertaken on 28th January 2020, it was observed that many cyclist commuters use Angas Street to access the major routes on Limestone Avenue and Northbourne Avenue.

Most of the key attractors in the area are a mix of recreational and social activities. These are more likely to generate activity during the weekends or after work. Notably, the Macarthur Avenue light rail stop is around an 11 minute walk from the site or 850 m in distance from the site. This is a high frequency services that connects surrounding residents to the north towards Gungahlin as well as the city centre and further south through connected bus services.

Ainslie shops, which is another key attractor is a 10 minute walk from the site. This can be accessed from the connected footpaths from the site to the shops.

Travel Times

Travel times to key attractors shown in Figure 9 above and other attractors listed on the travel survey from future residents of the proposed site are shown in Table 3. Travel times are based on *Google Map* journey time data.

As seen in Table 3, travel times to most major attractors are generally low for cyclists. For public transport, travel times are generally larger due to passenger wait times and the walking distance from the service stops to the destination.

Table 3 Travel times to key destinations from the site

Destination from site	Public Transport	Walking	Cycling	Car
Ainslie Shops	N/A	11-13 minutes	3-4 minutes	2 minutes
Ainslie Football Club	N/A	2-3 minutes	1-2 minutes	1 minute
Ainslie Walking Trails	• Walk – 13 to 17 minutes • Maximum wait time – 30 minutes • Bus – 3 minutes • Total Travel Time – 16 to 50 minutes	19-21 minutes	7-8 minutes	4 minutes
Macarthur Avenue Light Rail Stop	N/A	9-13 minutes	3-4 minutes	4-5 minutes
Corroborree Park	N/A	10-12 minutes	3-4 minutes	2-3 minutes
Alan Ray Oval	N/A	0.5-1 minute	0.5-1 minute	1 minute
Majura Sports Field	N/A	3-5 minutes	1-2 minutes	1 minute
Haig Park	• Walk – 5 to 8 minutes • Maximum wait time – 30 minutes • Bus – 4 minutes Total Travel Time via Bus – 9 to 42 minutes • Walk – 11 to 15 minutes • Maximum wait time – 15 minutes • Light Rail – 3 minutes Total Travel Time via Light Rail – 14 to 33 minutes	11-14 minutes	4-5 minutes	2 minutes
Braddon Liquor and Grocery Store	N/A	7-11 minutes	3-4 minutes	3 minutes
Turner Primary School	N/A	18-23 minutes	6-8minutes	4-5 minutes
Merici College	N/A	8-12 minutes	3-4 minutes	3-4 minutes
Baker Gardens Pre-School	N/A	13-17 minutes	3-4 minutes	3-4 minutes
Canberra Centre	• Walk – 13 to 19 minutes • Maximum wait time – 30 minutes • Bus – 11 minutes Total Travel Time via Bus – 24 to 60 minutes • Walk – 13 to 19 minutes • Maximum wait time – 15 minutes • Light Rail – 5 minutes Total Travel Time via Light Rail – 18 to 39 minutes	24-28 minutes	8-9 minutes	4-8 minutes
The ANU	• Walk – 13 to 19 minutes	28-33 minutes	9-12 minutes	6-16 minutes

Destination from site	Public Transport	Walking	Cycling	Car
	• Maximum wait time – 30 minutes • Bus – 11 minutes Total Travel Time via Bus – 24 to 60 minutes • Walk – 9 to 13 minutes • Maximum wait time – 30 minutes • Light Rail – 11 minutes Total Travel Time via Light Rail – 20 to 54 minutes			
Dickson Shops	• Walk – 3 to 7 minutes • Maximum wait time – 30 minutes • Bus – 6 minutes Total Travel Time via Bus – 9 to 43 minutes • Walk – 22 to 28 minutes • Maximum wait time – 15 minutes • Light Rail – 1 minute Total Travel Time via Light Rail – 23 to 44 minutes	22-28 minutes	5-7 minutes	4-6 minutes
O'Connor Shops	N/A	25-30 minutes	7-9 minutes	5-6 minutes
Lyneham Shops	• Walk – 12 to 16 minutes • Maximum wait time – 30 minutes • Bus – 6 minutes Total Travel Time via Bus – 18 to 59 minutes	25-30 minutes	8-10 minutes	6-7 minutes
Downer Shops	• Walk – 15 to 19 minutes • Maximum wait time – 30 minutes • Bus – 6 minutes Total Travel Time via Bus – 9 to 43 minutes • Walk – 27 to 31 minutes • Maximum wait time – 15 minutes • Light Rail – 3 minutes Total Travel Time via Light Rail – 30 to 49 minutes	30-40 minutes	7-9 minutes	6-8 minutes

Destination from site	Public Transport	Walking	Cycling	Car
Dickson Bus Interchange	• Walk – 3 to 5 minutes • Maximum wait time – 30 minutes • Bus – 8 minutes Total Travel Time via Bus – 8 to 43 minutes • Walk – 12 to 18 minutes • Maximum wait time – 15 minutes • Light Rail – 1 minute Total Travel Time via Light Rail – 13 to 34 minutes	20-25 minutes	5-6 minutes	4-5 minutes
City Bus Interchange	• Walk – 4 to 8 minutes • Maximum wait time – 30 minutes • Bus – 12 minutes Total Travel Time via Bus – 16 to 50 minutes • Walk – 10 to 14 minutes • Maximum wait time – 15 minutes • Light Rail – 1 minute Total Travel Time via Light Rail – 11 to 30 minutes	25-30 minutes	8-9 minutes	6-7 minutes
Dickson Pool	• Walk – 3 to 7 minutes • Maximum wait time – 30 minutes • Bus – 6 minutes Total Travel Time via Bus – 9 to 43 minutes • Walk – 22 to 28 minutes • Maximum wait time – 15 minutes • Light Rail – 1 minute Total Travel Time via Light Rail – 23 to 44 minutes	20-25 minutes	5-6 minutes	4-5 minutes

Destination from site	Public Transport	Walking	Cycling	Car
Lyneham High School	• Walk – 9 to 13 minutes • Maximum wait time – 30 minutes • Bus – 8 minutes Total Travel Time via Bus – 17 to 51 minutes • Walk – 16 to 20 minutes • Maximum wait time – 15 minutes • Light Rail – 1 minute Total Travel Time via Light Rail – 17 to 36 minutes	20-25 minutes	6-8 minutes	5-6 minutes
Lyneham Primary School	• Walk – 11 to 15 minutes • Maximum wait time – 30 minutes • Bus – 13 minutes Total Travel Time via Bus – 24 to 58 minutes	30-40 minutes	9-11 minutes	6-7 minutes
Dickson College	• Walk – 12 to 16 minutes • Maximum wait time – 30 minutes • Bus – 5 minutes Total Travel Time via Bus – 17 to 51 minutes	30-40 minutes	9-11 minutes	6-7 minutes
Daramalan College	• Walk – 4 to 8 minutes • Maximum wait time – 30 minutes • Bus – 4 minutes Total Travel Time via Bus – 8 to 42 minutes • Walk – 20 to 25 minutes • Maximum wait time – 15 minutes • Light Rail – 1 minute Total Travel Time via Light Rail – 21 to 41 minutes	13-17 minutes	4-5 minutes	2-3 minutes
Brindabella College	• Walk – 9 to 13 minutes • Maximum wait time – 30 minutes • Bus – 13 minutes Total Travel Time via Bus – 22 to 56 minutes	30-40 minutes	9-11 minutes	6-7 minutes

Destination from site	Public Transport	Walking	Cycling	Car
New Acton Precinct	• Walk – 20 to 25 minutes • Maximum wait time – 30 minutes • Bus – 12 minutes Total Travel Time via Bus – 32 to 67 minutes • Walk – 20 to 25 minutes • Maximum wait time – 15 minutes • Light Rail – 5 minutes Total Travel Time via Light Rail – 25 to 45 minutes	40-50 minutes	11-12 minutes	9-10 minutes
Belconnen Shops	• Walk – 5 to 9 minutes • Maximum wait time – 30 minutes • Bus – 31 minutes Total Travel Time via Bus – 36 to 70 minutes	N/A	30-40 minutes	13-15 minutes
Gungahlin Shops	• Walk – 13 to 17 minutes • Maximum wait time – 15 minutes • Light Rail – 19 minutes Total Travel Time via Light Rail – 32 to 51 minutes	N/A	40-50 minutes	15-17 minutes
Commonwealth Park	• Walk – 22 to 26 minutes • Maximum wait time – 30 minutes • Bus – 10 minutes Total Travel Time via Bus – 32 to 66 minutes	45-55 minutes	11-15 minutes	7-8 minutes
Kingston Precinct	• Walk – 13 to 17 minutes • Maximum wait time – 35 minutes • Light Rail – 5 minutes • Bus – 16 minutes Total Travel Time via Public Transport – 34 to 73 minutes	N/A	25-30 minutes	12-14 minutes

Pedestrian and Cyclist Facilities

Pedestrian and Cyclists Routes

Figure 10 shows the pedestrian and cyclists facilities as per the ACT Government Open Data Portal. Public footpaths are generally in good condition and follow the verges of most streets, allowing access for both pedestrians and cyclists. On-road cycling facilities are mainly along Northbourne Avenue and Ipima Street. Limestone Avenue has no dedicated on-road cycling lanes even though it is a main on-road cycling route as per the Active Travel Infrastructure Practitioner's Tool[4]. The area around the site is a well vegetated and generally well-lit, enhancing the amenity and safety of pedestrians and cyclists.

Figure 10 Pedestrian and cyclist facilities

[4] https://activeinfrastructure.net.au/

Walkability Score

Angas Street has a walkability score of 67 out of 100[5]. Scores between 50-69 outline a "somewhat walkable" area where some errands can be accomplished on foot. Points are awarded based on the distance to amenities in the following categories: dining and drinking, groceries, shopping, errands, parks, schools and culture and entertainment. Amenities within a 5 minute walk are given maximum points. A decay function is used to give points to more distant amenities, with no points given after a 30 minute walk. Walk Score also measures pedestrian friendliness by analysing population density and road metrics such as block length and intersection density.

Gap Analysis

AECOM undertook a site visit on 28 January 2019. The following are the identified constraints, the locations of which are marked with their corresponding numbers in Figure 11.

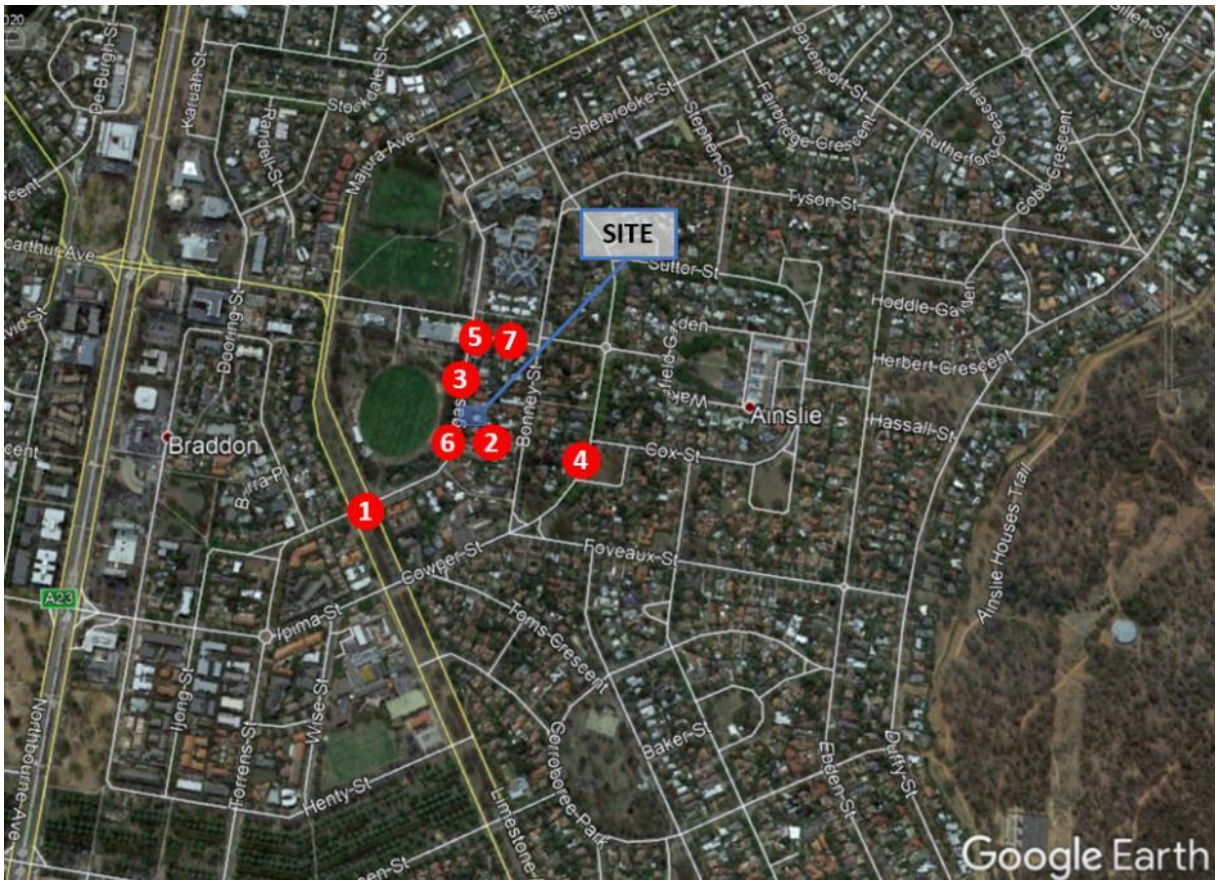


Figure 11 Ainslie gap analysis

1 – The intersection at Limestones Avenue/Angas Street is unsignalised. This constraint is only minimal since there are low traffic volumes along Angas Street. In addition, there is a median cross-over which allows to store vehicles (Figure 12). Limestone crossings which cater for key east-west desire lines are catered for by signals at Ipima / Cowper Street and at Wakefield Avenue which are immediately adjacent Angas Street.

[5] Based on data from www.walkscore.com

2 – The bollard removed along walkway between and Angas Street and Bonney Street could enable vehicular traffic (Figure 13).

3 – There is no clear crossing along Angas Street

4- The crossing to the bus stop on Cowper Street is from a driveway and there is no matching kerb ramp on the side of the road (Figure 14).

5- There is a missing footpath connection across Angas Street towards the Ainslie Football Club meaning people need to cross Wakefield Avenue first (Figure 15).

6 – There is no connection from the walkway between Angas Street and Bonney Street to the other side of Angas Street where the is a kerb ramp and path (Figure 16).

7 – There is a hedge obstructing the footpath along Wakefield Avenue (Figure 17). This is common in more established suburbs and should be monitored.

Figure 12 Limestone Avenue/Angas Street intersection

(Source: Google Maps, 2020)

Figure 13 Missing bollard

Figure 14 Driveway crossing to bus stop

(Source: Google Maps, 2020)

Figure 15 Missing footpath connection to the Ainslie Football Club

Figure 16 Missing footpath connection to Angas Street

Figure 17 Hedge obstructing footpath