

Health Infrastructure

**Goulburn Base Hospital
Redevelopment (SSD 8667)**

**Green Travel Plan and Travel Access
Guide**

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This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number

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Goulburn Base Hospital Transport Access Guide (TAG)

1 Introduction

1.1 Background

This Green Travel Plan has been prepared following feedback received from the Department of Planning and Environment (DPE) in relation to the proposed redevelopment of Goulburn Base Hospital (SSD 8667).

In light of the proposed works, and as mentioned in the transport and accessibility assessment prepared for the project, this Green Travel Plan aims to provide measures which positively influence transport demand and behaviours at the redeveloped hospital site.

A Travel Access Guide has also been prepared for the site, which outlines active and public transport accessibility to the site in a concise manner. The Travel Access Guide is attached to this document as Appendix A.

1.2 Site Location

Goulburn Base Hospital is located approximately 900m to the north-west of the Goulburn town centre. The site is bounded by Clifford Street, Faithfull Street, Goldsmith Street and Albert Street, as shown in Figure 1 below.



Figure 1: Goulburn Base Hospital location

Source: SIX Maps, 2018, modified by Arup

1.3 What is a Green Travel Plan?

A Green Travel Plan is a package of measures put in place by an employer to try and encourage more sustainable travel whilst commuting to work and also during the course of work. It is a means for an organisation to demonstrate a commitment and take a pro-active step towards improving the environmental sustainability of its activities.

More generally, the principles of a Green Travel Plan are applied to all people travelling to and from a site. Government authorities are placing increasing emphasis on the need to reduce the number and length of motorised journeys and in doing so encourage greater use of alternative means of travel with less negative environmental impacts than the car.

2 Existing Travel Patterns and Infrastructure

2.1 Mode Split

The most notable features of the existing travel patterns and surrounding infrastructure include:

- The majority of staff (85%) travel to the Hospital via private vehicle, with average vehicle occupancy being 1.2 people per car;
- Most staff car parking (81%) occurs on-street;
- Public transport does not make up any percentage of the mode split of staff travelling to the Hospital;
- Approximately 12% of staff walk, and 3% of staff cycle, to the Hospital;
- Of all outpatients surveyed, 100% travelled to the Hospital via private vehicle.

The Goulburn Health Service Workforce Plan (2015) also notes that 64% of Hospital employees live within the same postcode as the Hospital.

2.1.1 Travel patterns

Existing travel patterns of the Hospital staff were informed by a travel mode survey undertaken by TTW in December 2015. A mode share profile of this survey is provided in Figure 2.

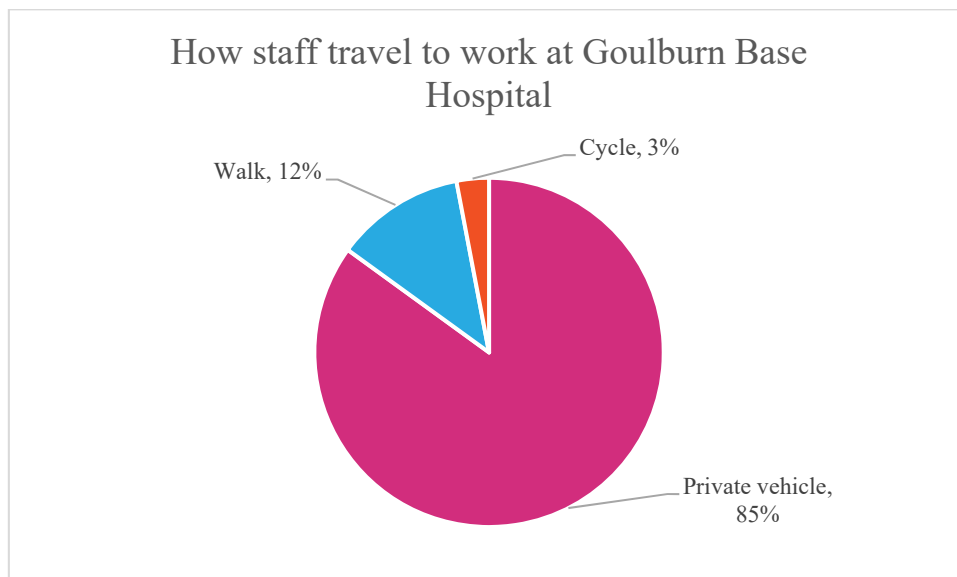


Figure 2: Staff mode share

Source: TTW, 2015

The significant majority (85%) of Goulburn Base Hospital staff typically travel to work by car. The active transport modes of walking and cycling make up 12% and 3%, respectively. This is likely a result of the majority (64%) of staff living in close proximity to the Hospital. Limited public transport services, combined with the availability of free parking, is the probable cause for public transport making up none of the staff mode share.

It is also beneficial to compare the results of the 2015 travel mode survey to the latest Census data, from the 2016 Census for Destination Zone (DZN) 115390001. It should be noted that this DZN encompasses the whole of Goulburn. This comparison is shown in Table 1.

Table 1: Mode share comparison between 2015 Survey and 2016 Census

Mode of Travel	Proportion of Total Trips	
	2015 Travel Mode Survey	2016 Census DZN 115390001
Private vehicle	85%	95%
Public transport	0%	1%
Walking	12%	4%
Cycling	3%	0%

As can be seen, the Hospital has higher proportions of staff traveling to work via active transport modes, compared to the wider Goulburn DZN. Car remains by far the most dominant mode in 2016 across Goulburn.

2.2 Pedestrian and Bicycle Networks

The site is bordered by four local roads: Clifford Street, Faithful Street, Goldsmith Street and Albert Street, and as such, the site can be accessed by pedestrians and cyclists from all directions.

Good quality footpaths service all approaches to the Hospital, linking well into neighbouring residential areas, as well as the town centre. All intersections in the vicinity of the site are unsignalised, however drop kerbs aid in pedestrian accessibility. There are also pedestrian refuges on the busier approaches to the Hospital, on Clifford Street, Faithful Street and Goldsmith Street (see Figure 3).



Figure 3: Pedestrian refuges at intersection of Goldsmith Street and Faithful Street

There is a dedicated cycle lane on Fitzroy Street, to the north of the Hospital, which continues to Crookwell Road. Cyclists are required to cycle a minimum of 200m along Goldsmith Street between the Fitzroy Street cycleway and the Hospital. While there are no other separated cycle facilities in the vicinity of the site, the relatively low vehicle traffic and wide lanes of surrounding streets provides reasonable cycling amenity for moderately confident riders. No formalised on-site bicycle parking is currently available.

Figure 4 shows the dedicated pedestrian and cycling facilities in the vicinity of the Hospital.



Figure 4: Pedestrian and cycle facilities in the vicinity of the site

Source: SIX Maps, 2018, modified by Arup

2.3 Public Transport Accessibility

There are currently two bus stops immediately adjacent to the Hospital on Goldsmith Street (Figure 5). Three bus routes service these stops, as described in Table 2 below. Figure 6 on the following page illustrates the various bus routes serving the hospital.

Table 2: Buses services Goulburn Base Hospital

Bus Route	Details	Goulburn Hospital Service Times
821B	Goulburn to Kenmore via Goulburn Base Hospital (loop)	1:03pm 2:23pm 3:43pm 4:43pm 5:40pm
821A	Goulburn to Kenmore via Goulburn Base Hospital (loop)	8:24am 9:24am 10:44am 12:04pm
824	St Aubyn Rd to Goulburn	9:54am 2:04pm
818	Goulburn to Crookwell	9:17am 1:32pm



Figure 5: Bus stop locations



Figure 6: Goulburn bus network map

Source: PBC Goulburn, 2018

Goulburn Train Station is located approximately 1.7km to the south-east of the Hospital. 1.7km is considered outside the accessible walking catchment of 800m.

3 Green Travel Plan Framework

3.1 Objectives

The main objectives of the Green Travel Plan are to reduce the need to travel and promotion of sustainable means of transport.

The more specific objectives include:

- High mode share for public transport, cycling and walking to work journeys;
- Ensuring adequate facilities are provided at the site to enable staff and visitors to commute by sustainable transport modes;
- Reduce the number of car journeys associated with business travel;
- Facilitate the sustainable and safe travel of new employees; and
- Raise awareness of sustainable transport amongst staff and visitors

3.2 Proposed Green Travel Plan Measures

3.2.1 Green Travel Plan

Description of measure

This Green Travel Plan has been prepared to promote the use of public transport, walking and cycling by visitors and employees for travel to and from Goulburn Base Hospital.

Monitoring mechanisms

- Feedback from hospital staff as to effectiveness and usefulness of Green Travel Plan
- Annual travel survey of staff and visitors to be conducted to understand travel patterns and trends for people accessing the hospital

3.2.2 Staff induction

Description of measure

To ensure new members of staff are aware of the Green Travel Plan, all new staff members should be made aware of the Plan as part of their induction process. Existing staff should also be informed of any new facilities associated with the redevelopment. These briefings should include:

- A brief introduction to the Plan and its purpose;
- Tour of the site to include a visit to the bicycle parking areas and shower and changing facilities; and
- Establishment of transport information packs to new staff explaining alternative ways (other than motor vehicle) of travelling to and from the site

Monitoring mechanisms

- Southern NSW Local Health District (SNSWLHD) to maintain a record of the number of staff inducted through the updated process as a way of understanding their exposure to the Green Travel Plan
- SNSWLHD to monitor the proportion of staff travelling to the campus by non-car modes through an annual travel survey

3.2.3 Cycling

Description of measure

All staff should be made aware of the staff changerooms and showers to be provided as part of the redevelopment. Bicycle parking is to be installed on the site to complement these end-of-trip facilities. Given that no staff were recorded as cycling to the site, it is recommended the initial allocation of bicycle parking be as follows:

- 6 staff bicycle rails which provide space for up to 12 bicycles at any one time. These should be located in a secure area in the hospital campus;
- 4 bicycle rails for visitors to be provided in close proximity to the main entry to the hospital building (in the public domain)

This initial allocation is considered sufficient to accommodate the likely demand. However if the cycling facilities are found to be occupied regularly, measured through occupancy surveys, additional facilities should be provided.

Events such as National Bike Week and Bike2Work Days, which encourage the usage of bikes as a mode of transport, should be promoted.

Monitoring measures

- SNSWLHD to monitor the demand for bicycle facilities at the Hospital through an occupancy survey undertaken every three months
- SNSWLHD to monitor the percentage of staff cycling to the campus through annual travel survey

3.2.4 Walking

Description of measure

The 2015 travel mode survey of the Hospital staff indicated that 12% walk to work at Goulburn Base Hospital. This indicates that walking is an attractive and achievable mode for a number of staff, highlighting the potential to increase this further. New pedestrian access points off Goldsmith Street and Albert Street are proposed as part of the redevelopment to improve pedestrian amenity for staff, patients and visitors.

Monitoring mechanisms

- SNSWLHD to monitor the percentage of staff walking to the Hospital through an annual travel survey
- Obtain feedback from staff regarding issues that may have walking on certain routes and liaise with local authority regarding improvements (e.g. footpath maintenance, lighting and security issues)

3.2.5 Carpooling

Description of measure

The travel mode survey found that the average car occupancy of staff driving to the Hospital was 1.20 people per car. This implies that only a small number of staff who drive to the site carry a passenger with them. Staff demographic information already indicated that the majority (64%) of staff reside within the Goulburn postcode, making the site conducive to potential carpooling programs.

This could involve a simple poster on the noticeboard or staff intranet page where staff would register their interest in carpooling by indicating where they live and their shift times.

A website has recently been established (www.hospitalcarshare.com.au) which allows staff members at a number of hospitals across Victoria, as well as Hornsby Ku-ring-gai Hospital, to connect with each other to encourage sharing a lift to work each day. Goulburn Base Hospital may wish to consider participating in this scheme and promoting the website to their staff members.

The screenshot shows the 'HOSPITAL carshare' website. At the top, it says 'Search results for Hornsby Ku-ring-gai Hospital'. Below this is a search filter section with a dropdown menu set to 'Filter by Suburb' and a blue 'Add Me' button. A table displays search results with columns: Suburb, Name, Hours, Status, M/F, and Get in touch. One result is shown for 'BAULKHAM HILLS' with a redacted name, 'office' hours, a person icon for status, and 'Female' for M/F. A 'Go' button is next to the result. Below the table, there's a status selector with icons for 'Driver', 'Passenger', and 'Both'. At the bottom, a light blue banner says 'Not on this list? Then add yourself now, it's easy...' with an 'Add Me' button.

Suburb	Name	Hours	Status	M/F	Get in touch
BAULKHAM HILLS	[REDACTED]	office	[Person Icon]	Female	Go

Status: [Car Icon] Driver [Person Icon] Passenger [Person Icon] Both

Not on this list? Then add yourself now, it's easy... [Add Me]

Figure 7: Hospital car share website

Monitoring mechanisms

- SNSWLHD to monitor the number of staff utilising carpooling to access the Hospital through an annual travel survey

3.3 Summary of Monitoring Mechanisms

- Feedback from staff as to effectiveness and usefulness of Green Travel Plan
- Annual travel survey of staff and visitors to be conducted to understand travel patterns and trends for people accessing the hospital
- Southern NSW Local Health District (SNSWLHD) to maintain a record of the number of staff inducted through the updated process as a way of understanding their exposure to the Green Travel Plan
- SNSWLHD to monitor the proportion of staff travelling to the campus by non-car modes through an annual travel survey
- SNSWLHD to monitor the demand for bicycle facilities at the Hospital through an occupancy survey undertaken every three months
- SNSWLHD to monitor the percentage of staff cycling to the campus through annual travel survey
- SNSWLHD to monitor the percentage of staff walking to the Hospital through an annual travel survey
- Obtain feedback from staff regarding issues that may have walking on certain routes and liaise with local authority regarding improvements (e.g. footpath maintenance, lighting and security issues)
- SNSWLHD to monitor the number of staff utilising carpooling to access the Hospital through an annual travel survey

4 Mode Share Targets

It has been assumed that, as a result of the measures to be implemented by the Hospital to encourage alternate modes of transport or increase vehicle occupancy, 5% of staff who currently drive to the site in a single vehicle will choose other modes of transport by 2022. This is applicable to daytime staff only, with staff arriving after hours to continue to primarily drive to work. This equates to car mode share for staff of 80%, in comparison to 85% in 2015. It is anticipated that the majority of this 5% shift will move to cycling and car pooling, particularly following the introduction of bicycle parking and promotion of car pooling services.

The annual travel survey conducted by the SNSWLHD will be the mechanism for monitoring whether this target will be reached. Should the target not be reached, further measures will need to be considered to promote walking and cycling to the Hospital such as greater incentives for staff to travel via these modes.

5 Conclusions

The encouragement of sustainable and active transportation options is a major issue for hospitals across NSW. Staff travel mode surveys for Goulburn Base Hospital staff indicate 85% choose to drive to work. Some of the key factors likely resulting in a high car mode share include:

- Lack of public transport accessibility to the site;
- Staff safety concerns (particularly afternoon and night shift staff) when travelling to/from work in evenings and/ or early mornings; and
- Approximately 36% of staff living quite a distance away (outside of the Goulburn postal area) from the Hospital.

There are opportunities however, to reduce car dependency and encourage travel to the Hospital by sustainable, alternative modes – taking particular advantage of the fact that 64% of staff live in close proximity and walking is already a relatively popular mode of accessing the site. A number of specific measures have been outlined to achieve these objectives. These travel demand measures complement the objectives of the NSW Government to encourage non-car modes to make up a larger mode share of travel on roads.

Appendix A

Goulburn Base Hospital Transport Access Guide (TAG)

A1 Transport Options to Goulburn Base Hospital

A1.1 Walking

A proportion of the staff working at Goulburn Base Hospital may live within a walking distance of the site, in the residential areas which surround the site. Some pedestrians may choose to walk from Goulburn Train Station (approximately 20min) or the town centre (approximately 11min).

A1.2 Cycling

Cycling is an inexpensive, quick and healthy way to travel. For those living within 5-10 kilometres of the Hospital this can save time and effort of finding parking at the Hospital. End of trip facilities (and likely on-site bike parking) for staff will be provided with the redevelopment.

A1.3 Buses

Two bus stops are located adjacent to the Hospital on Goldsmith Street. The following bus services can be utilised by users of the Hospital.

Bus services include:

- 818 Goulburn to Crookwell
- 824 St Aubyn Rd to Goulburn
- 821A/B Goulburn to Kenmore via Goulburn Base Hospital (loop)

Whilst the bus services are relatively infrequent, it is likely that the routes and timetable would coincide with the transport needs of some hospital users.

A1.4 Trains

Goulburn Train Station is located approximately 1.7km to the south-east of the Hospital. The Southern NSW Line (NSW Regional Trains) service Goulburn Station, providing access between Sydney and Canberra.

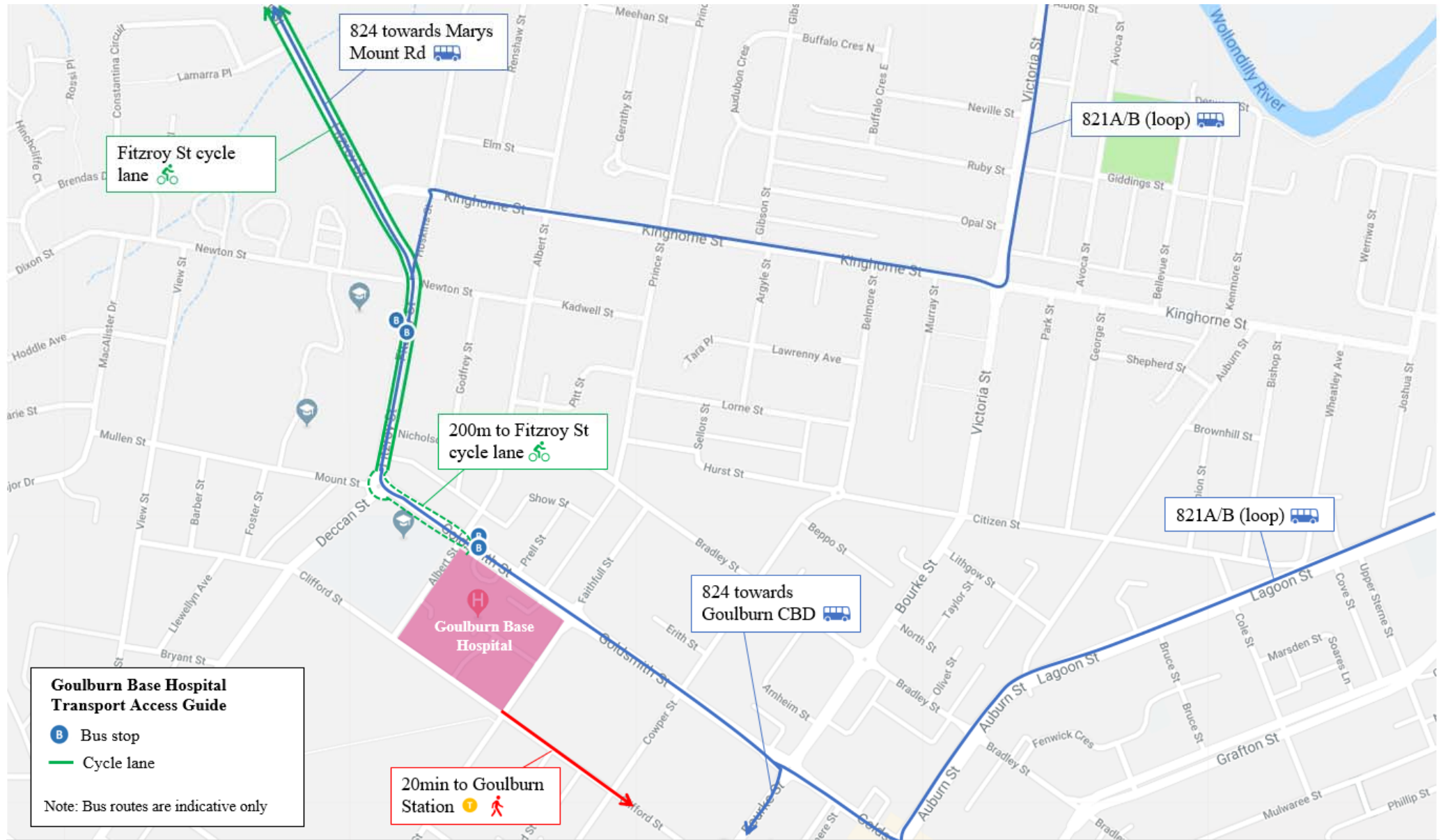


Figure 8: Transport Access Guide