

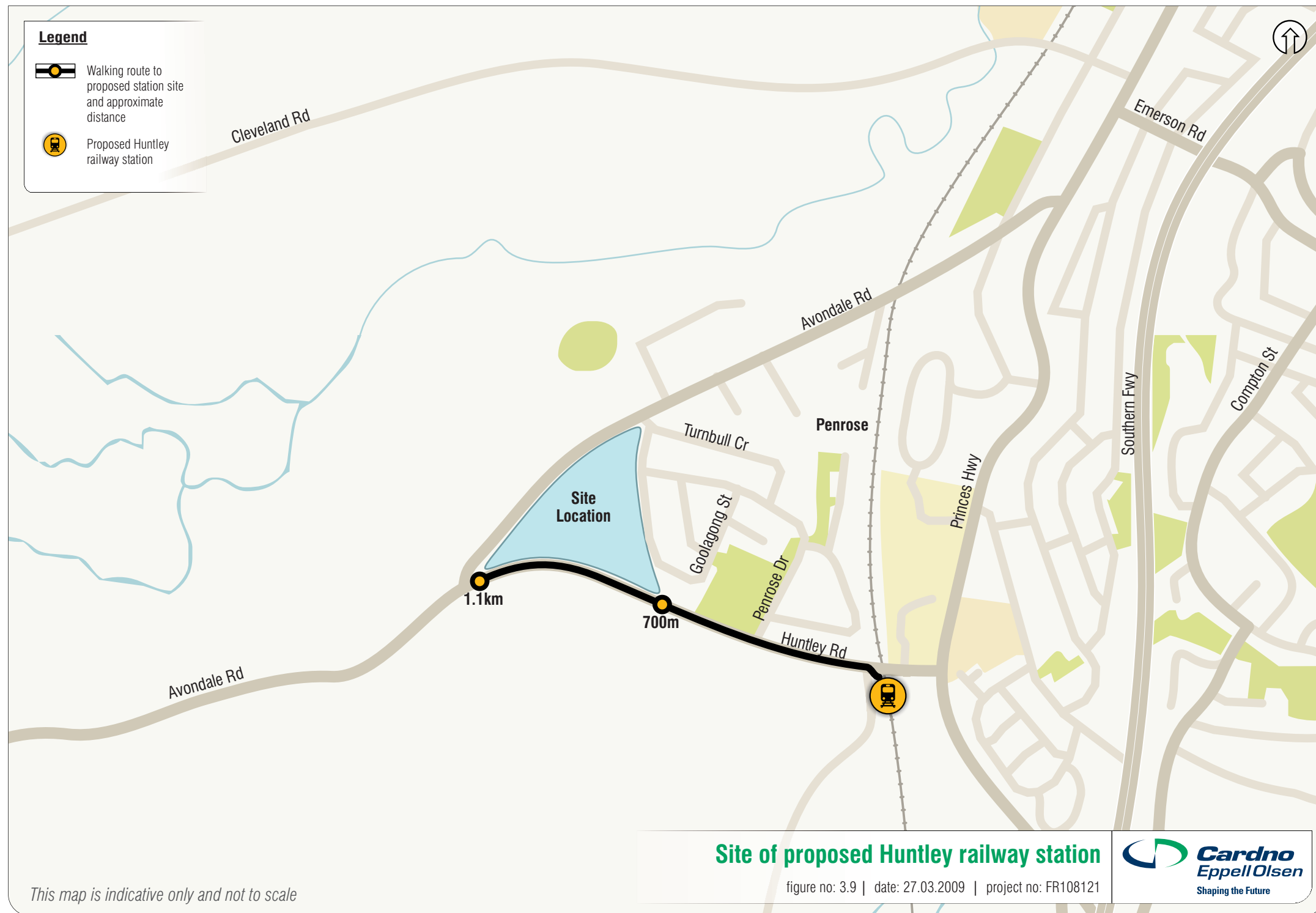
Legend



Walking route to
proposed station site
and approximate
distance



Proposed Huntley
railway station



Site of proposed Huntley railway station

figure no: 3.9 | date: 27.03.2009 | project no: FR108121

3.3.3 Bus Services

Premier Illawarra operates bus services in the Wollongong area, with routes stretching from Kiama in the south to Bellambi in the north. A network of three routes serves the greater Dapto area. They function as the primary mode of public transport for local trips and trips within the Wollongong region, with the railway used predominately for longer trips.

Table 3.8 lists the bus routes which serve the study area and provides a summary of service frequency at times when people are most likely to be traveling to or from the proposed development. **Figure 3.10** illustrates the bus routes operating within the study area.

Table 3.8 Summary of Bus Services in Dapto Area

Route No.	Route	Frequency Guide (approximate headway in minutes)					
		Direction	Weekday			Saturday	Sunday
			Peak	Off-Peak	Night	Daytime	Daytime
33	Penrose – Dapto – Horsley – Dapto – Koonawarra – Kanahooka - Wollongong	Northbound	30	60	1 service only	60	120
		Southbound	1 service only	60	60	60	120
37	LAKE LINK – ANTI-CLOCKWISE LOOP University – Wollongong – Warrawong – Shellharbour – Dapto – University	Southbound	60	60	120	60	60
43	Penrose – Dapto – Koonawarra – Kanahooka – Berkeley – Warrawong - Port Kembla	Northbound	60	60	No service	60	60
		Southbound	60	60	No service	60	120
57	LAKE LINK – CLOCKWISE LOOP University – Dapto – Shellharbour – Warrawong – Wollongong - University	Northbound	60	60	120	60	60

Whilst services are infrequent, they operate at, or close to, a clock face timetable at most times of the day. This format is easy to memorise and makes planning travel around a public transport timetable significantly easier.

However the routes are circuitous, especially for through travel between Dapto and Wollongong or Port Kembla. Effectively, routes 33 and 43 only provide reasonably direct services to the IIHP site from suburbs such as Dapto, Koonawarra and Kanahooka.

A brief analysis of travel times by bus was undertaken and the results are shown in **Figure 3.11**. The analysis included only areas served by a direct bus service, given that the infrequent services and non-integrated fare structure make transferring between services extremely unattractive.

Improvements to service frequency and fare structures would significantly increase the attractiveness of interchanging between bus and rail services at Dapto interchange, reducing journey time for longer distance trips.








The exception is the Lake Link services (Routes 37 & 57), which provide more direct services along Princes Highway between Wollongong and Oak Flats. The present route along Princes Highway results in the nearest bus stops being over one kilometre distant from the majority of the site. Diversion of these services along Huntley Road and Avondale Road (the route of the present 33 and 43 services) to service the IIHP site would provide a substantial increase in the opportunity for direct bus services from a number of different areas within the Wollongong region. This rerouting of the bus services would need to be discussed and agreed with the Ministry of Transport and the bus operator taking into consideration such factors as:

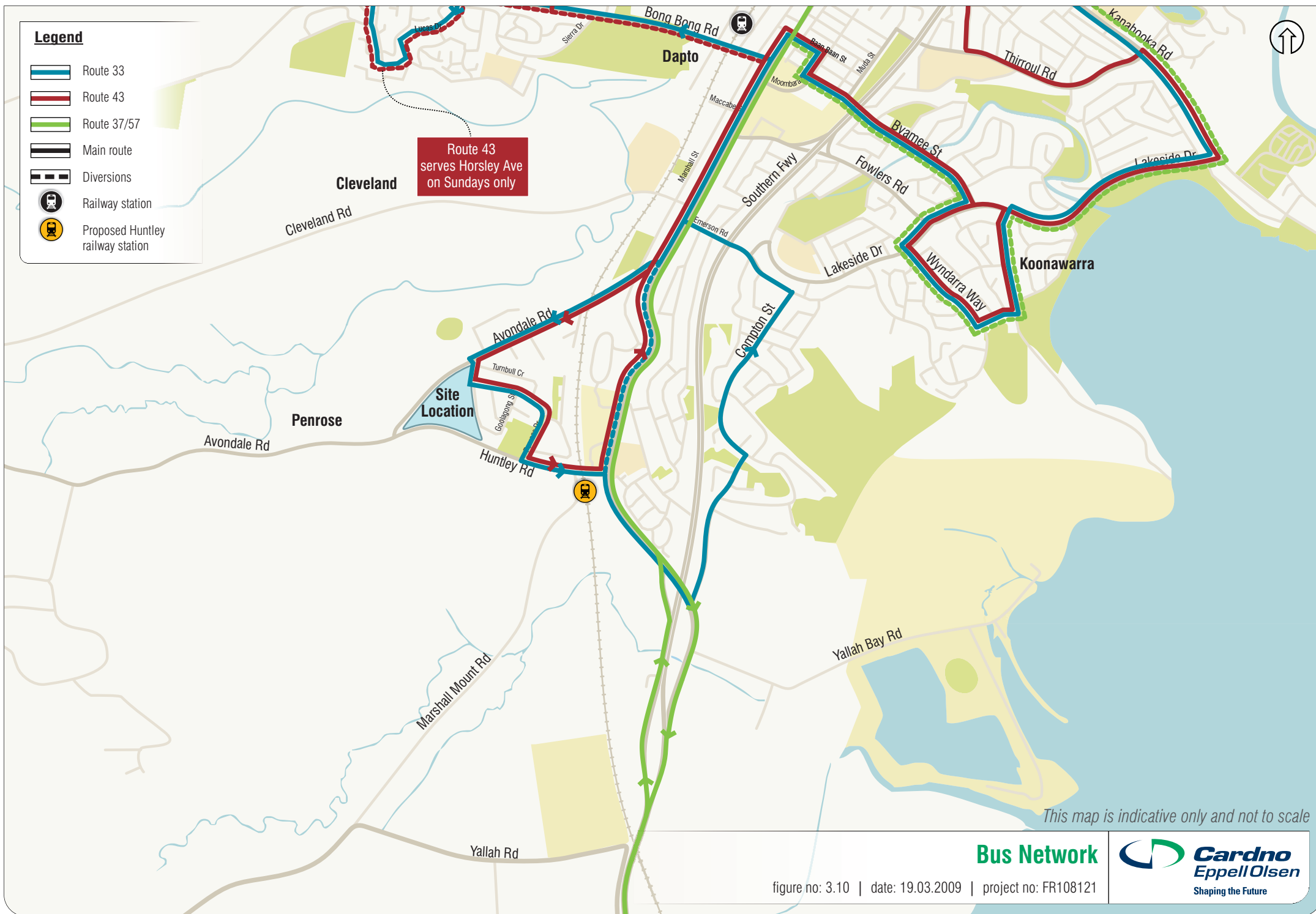
- Additional time required for diversion;
- Impact on route service times and vehicle provision (timetabling);
- Impact on removed section of route (Princes Highway);
- Potential for increased public transport benefits for adjoining residential suburbs;
- Potential passenger numbers to, and from, the IIHP; and
- Increases in service frequencies to increase the attractiveness of the service and improve potential patronage.

As the proposed development will inevitably attract disabled and elderly residents and inpatients, the provision of bus services will need to include accessible buses for all routes operating to and from the Precinct.

The existing route 33 and 43 services travel south along Princes Highway from Dapto, turning into Avondale Road at Goolagong Street, and pass through Penrose residential area via Penrose Drive before joining Huntley Road. These services could potentially be re-routed via Avondale and Huntley Roads once the site has been developed. If this occurs, residents of Penrose would still remain within close proximity to bus services on Avondale and Huntley Roads.

Legend

-  Route 33
-  Route 43
-  Route 37/57
-  Main route
-  Diversions
-  Railway station
-  Proposed Huntley railway station



Bus Network

figure no: 3.10 | date: 19.03.2009 | project no: FR108121

Cardno Eppell Olsen
Shaping the Future

Legend

-  0-30 minutes travel time
-  30-60 minutes travel time
- Travel times are indicative only.
For more details see Section 3.3.2



3.3.4 Existing Bus Infrastructure

Figure 3.12 shows the existing bus infrastructure in the vicinity of the site and **Table 3.9** summarises the facilities provided at bus stops in the vicinity of the site.

Table 3.9 Existing Bus Stop Facilities



Stop No.	Bus Stop Sign	J-Pole	Seat	Shelter	Timetable	Route or Network Map
1	No	No	Yes	Yes	No	No
2	Yes	No	Yes	Yes	No	No
3	Yes	No	Yes	Yes	No	No
4	No (very old yellow - painted concrete post only)	No	No	No	No	No
5	Yes	No	Yes	Yes	No	No
6	Yes	No	No	No	No	No
7	Yes	No	No	No	No	No
8	Yes	No	No	No	No	No

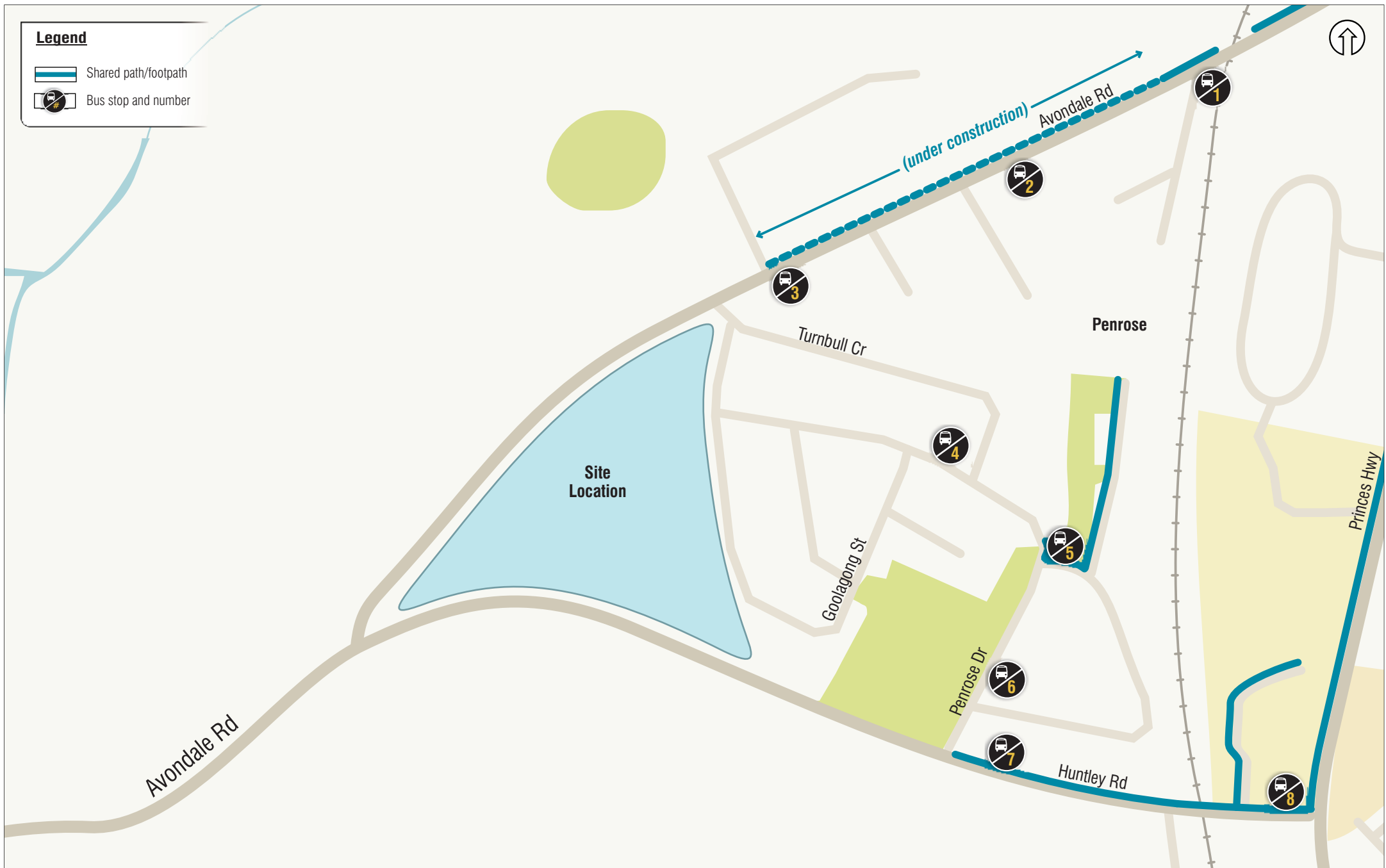
Delineation of bus stops in the area is poor, with most stops marked only by the presence of a shelter and a small yellow sign affixed to a telegraph pole which is visible from only one direction. One stop in Penrose Drive is marked only by a small concrete post and yellow paint on the kerb. There also appears to be a lengthy gap between stops 3 and 4.

Currently, only 50% of the bus stops in the vicinity have a seat. Whilst these facilities are not important for stops that effectively function as set-down-only stops, seating and shelter are required to provide a reasonable waiting environment for passengers, particularly when service frequencies are low.

Only one of the stops surveyed had a timetable and none had maps showing the bus route and/or the bus network. Travel information such as this is important for reassuring passengers who are unfamiliar with the network, especially when service frequencies are low.

Legend

-  Shared path/footpath
-  Bus stop and number



This map is indicative only and not to scale

Existing bus infrastructure

figure no: 3.12 | date: 9.04.2009 | project no: FR108121

3.3.5 Interchange Facilities

The Dapto rail station currently has facilities for interchanging via an internal road arrangement at the front of the station buildings (near Bong Bong Road). Currently bus stops, “kiss and ride” facilities and secure bicycle parking are provided along this one way service road off Station Street. Taxi ranks are located a little further away on the northern side of Bong Bong Road in close proximity to both the station and the Dapto Leagues Club. Reasonable networks of pathways connect to the rail station.

The existing facilities at the railway station are able to serve buses, rail and cyclists relatively conveniently. However, only route 33 (and route 43 on Sundays) stops adjacent to the railway station on Bong Bong Road.

Interchanging between bus and rail services is also possible by walking between the railway station and the bus stops located on the Princes Highway at Dapto Mall. This interchange movement should be completed by most travellers within 5-10 minutes. Presently, the service frequency and timing of rail and bus services are such that connections are not missed due to the additional interchange time and distance. It is considered that both increasing service frequency and coordination of rail and bus timetables would deliver superior time savings than reducing the interchanging distance.

3.3.6 Taxi Facilities

There are currently no dedicated taxi facilities within a 3 kilometre radius of the site.

3.3.7 Community Transport

Illawarra Community Services Incorporated and Wollongong City Council both operate community transport services in the Dapto area.

3.4 PEDESTRIAN & BICYCLE FACILITIES

3.4.1 Provision for Pedestrian Movement

Pedestrians play a key role in promoting sustainable transport networks. However facilities need to be safe, secure, convenient and attractive to encourage pedestrian activity.

Quality, attractive environments following pedestrian desire lines are important to pedestrian activity. Provision of shade and shelter, sufficient light to provide a secure walk at night time, drinking fountains and seating all can contribute to improving pedestrian amenity. Reducing the impact of traffic on the pedestrian environment can also improve the quality of the environment.

3.4.2 Existing Pedestrian Infrastructure

The topography of the site is characterised by a hilltop plateau sloping downwards towards Huntley Road to the south, Goolagong Street to the east, and Avondale Road to the north. The site has generally moderate grades with some short steep grades of up to 15% and elevations between RL48 and RL30. The layout of the IIHP development has been designed to reduce the need for earthworks and take advantage of the natural grades of the site. The alignment of the contours along Avondale Road provides for level access from the Obstetrics Units, Day Surgery Centre and to the hospital. This facilitates the movement of patients around the complex.

There are currently no footpaths provided along the roads adjacent to the development site, nor the immediate neighbouring residential streets. The closest footpaths are located on Avondale and Huntley Roads near the Princes Highway – at least 600 metres from the IIHP site. An extension of the existing footpath is presently being constructed on Avondale Road.

There are currently no pedestrian crossing facilities in the vicinity of the site. The closest facilities are the traffic signals on Princes Highway at Mount Brown Road, Cleveland Road and Emerson Road.

It is considered that the most important walking route in the future will be Huntley Road between the IIHP site and the proposed Huntley Railway Station. This section of Huntley Road is gently undulating, whilst steadily climbing from approximately 36 metres ASL at the station site to 44 metres ASL at the IIHP site.

Figure 3.13 shows the existing pedestrian infrastructure in the vicinity of the development site.

Legend

-  Pedestrian path
-  Traffic signals with pedestrian crossing phase

Cleveland Rd

Emerson Rd

(under construction)
Avondale Rd

Site Location

Turnbull Cr

Penrose

Goolagong St

Penrose Dr

Huntley Rd

Princes Hwy

Southern Fwy

Compton St

Avondale Rd

Pedestrian Infrastructure

figure no: 3.13 | date: 9.04.2009 | project no: FR108121

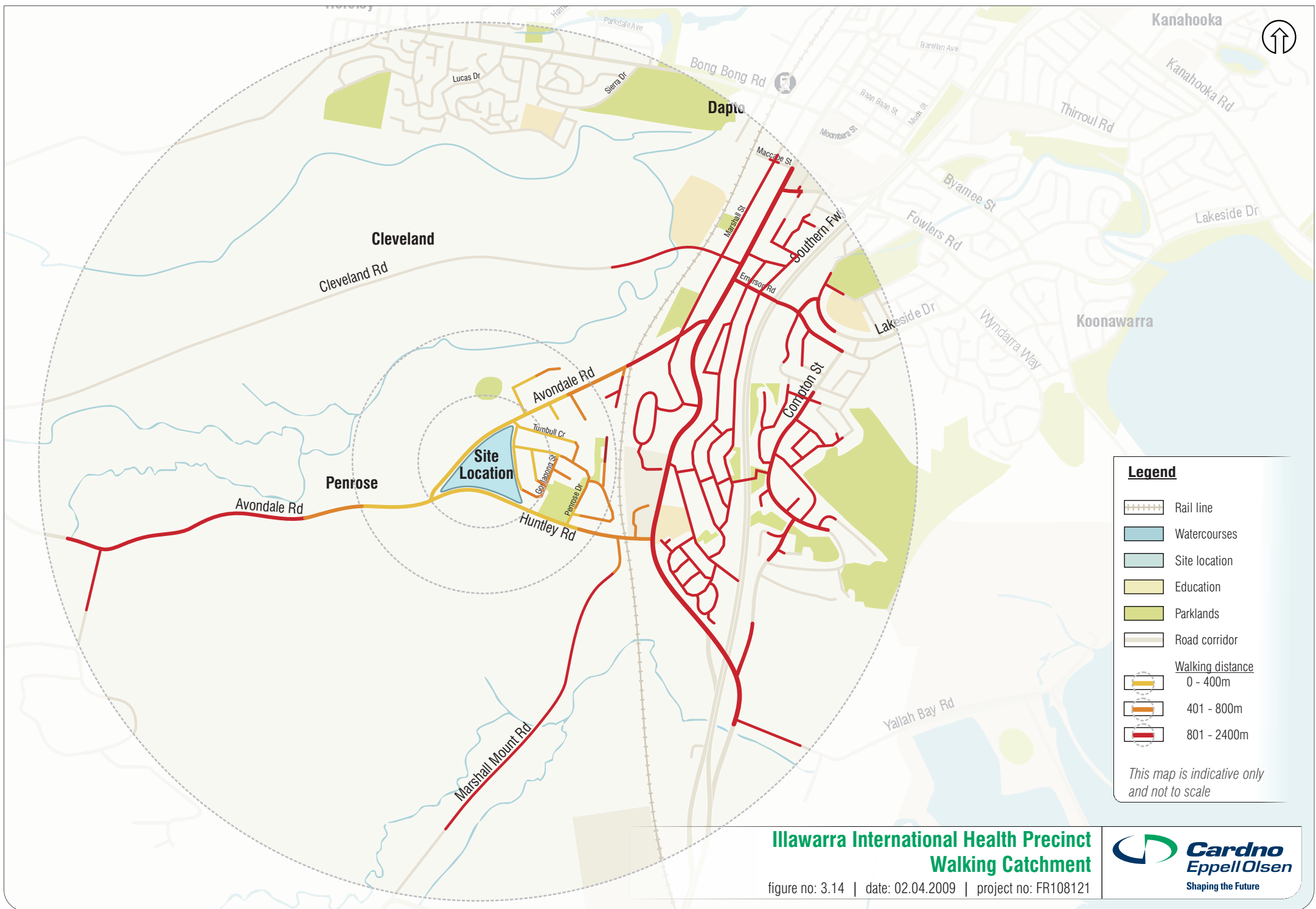


This map is indicative only and not to scale

GIS analysis was undertaken to determine the likely walking catchment of the site. Walking distances of 400m, 800m and 2400m were used to represent 5 minute, 10 minute and 30 minute walking catchments, and 400m, 800m and 2400m radius circles, measured from the centre of the site, were superimposed on the walking catchment to illustrate the relative directness of the pedestrian movement network. Actual walking distances were measured from the three corners of the site.

Figure 3.14 illustrates the results of the pedestrian catchment analysis which shows that the site is located beyond the 30 minute walking catchment of Dapto town centre and existing railway station. The proposed Huntley Railway Station is located approximately 10 minutes walk from the site, whilst the Penrose and southern Dapto residential areas are within the 30 minutes walking catchment. The analysis also shows that the future linear residential development along Avondale Road to the west of the site will result in additional residences falling within the 30 minute walking catchment.

Penetration from the site towards the Cleveland and Horsley areas is currently poor, due to road and path network connectivity issues. This will become increasingly significant as residential development increases along the Cleveland Road corridor. Road links are planned as part of the urban release area development which will increase connectivity across the Mullet Creek floodplain.



Illawarra International Health Precinct Walking Catchment

figure no: 3.14 | date: 02.04.2009 | project no: FR108121



3.4.3 Existing Cycle Facilities

Princes Highway between Haywards Bay and Huntley Road is designated as an existing cycle route in the *City of Wollongong Bicycle Plan 2006-2011*. Wide, paved shoulders are provided to facilitate safer cycling along this section of road. Cycling facilities, such as dedicated lanes or paths, are not currently provided north of Huntley Road. The proposed cycleway to Dapto Town Centre travels along Amaral Avenue, Marshall Street and Bong Bong Road. This route allows cyclists to avoid heavy traffic along the section of Princes Highway north of Amaral Avenue.

Dapto Railway Station is a significant location where cyclists can transfer to rail services for longer distance travel. Secure facilities for bicycle storage are provided at the rail station (approximately 20 bike lockers).

It is considered that Avondale Road will be the most important future cycling route, subject to pedestrian and cyclist access across the railway being retained. Avondale Road provides the shortest cycling route to/from Dapto town centre, residential areas and the F6. Between the IIHP site and Princes Highway, Avondale Road has a gentle gradient, steadily climbing towards the Princes Highway.

The F6 Freeway is designated as a future cycle route from Yallah north towards Wollongong, catering for longer distance cycling trips. The section of freeway between Princes Highway and Fowlers Road is not presently accessible to cyclists proceeding to or from the site due to the current ramp configurations.

Figure 3.15 presents the existing and proposed bicycle infrastructure in the Dapto area.

Legend

- Existing cycleways
- Proposed cycleways

Cleveland Rd

Avondale Rd

Emerson Rd

Compton St

Southern Fwy

Princes Hwy

Penrose

Turnbull Cr

Goolagong St

Penrose Dr

Huntley Rd

Site Location

Avondale Rd

Existing and Proposed Bicycle Infrastructure








figure no: 3.15 | date: 24.03.2009 | project no: FR108121

GIS analysis was undertaken to determine the likely cycle catchment of the IIHP site. With the exception of the Mount Brown area, grades in the Dapto area are generally gentle. Consequently, a distance of 6km was used to represent a comfortable 30 minute ride for the average person. A 6 kilometre radius circle, measured from the centre of the site, was superimposed onto the cycling catchment to illustrate the relative directness of the cycle network. The results are shown in **Figure 3.16**.

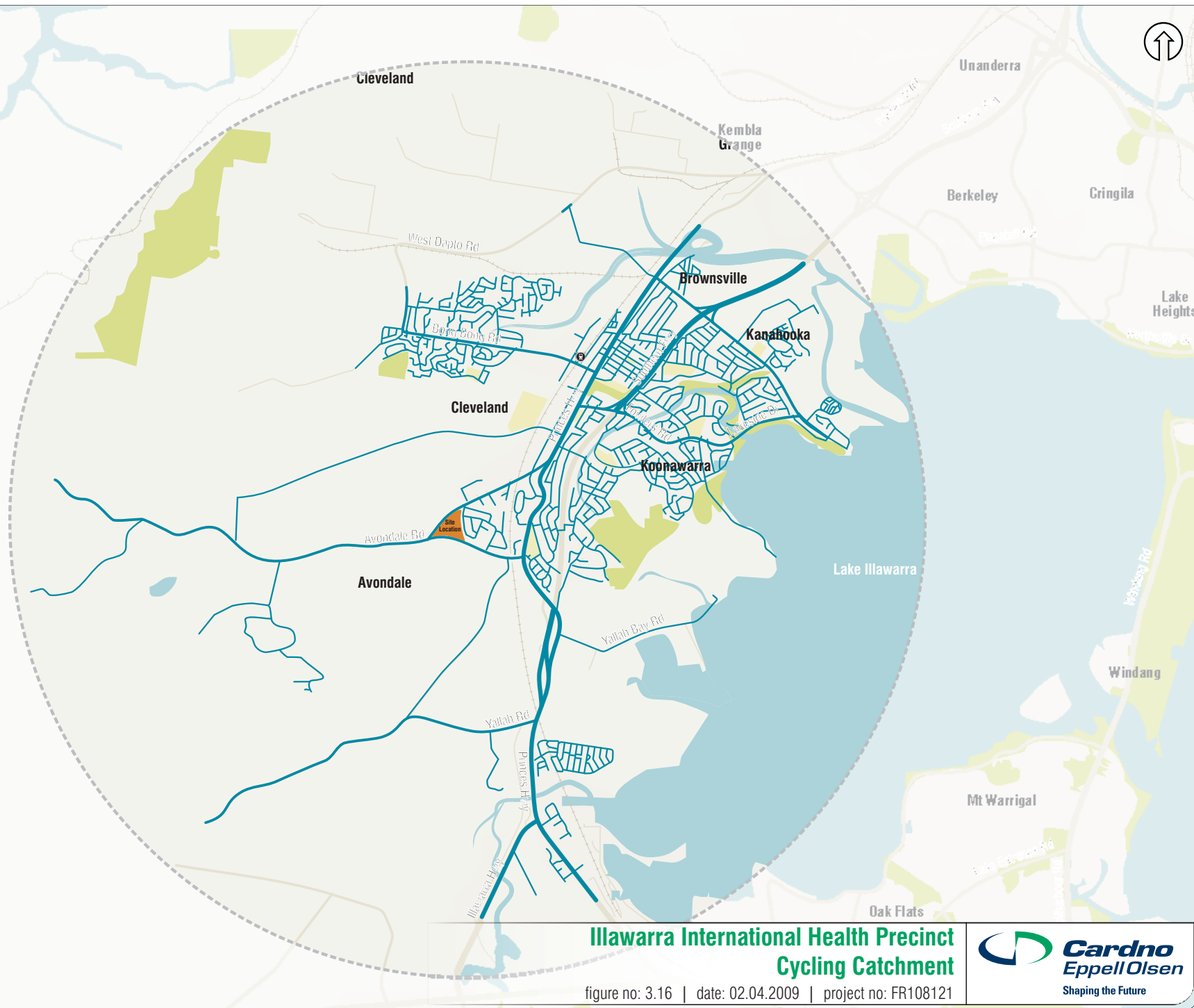
The analysis of the potential cycling catchment of the site shows that the majority of the Dapto residential suburbs – e.g. Koonawarra, Kanahooka and Horsley – are within a 30 minute bicycle ride of the site. The residential areas of Albion Park and Oak Flats are located just beyond a 30 minute bicycle ride from the site. The future Moorland and Avondale villages and the Avondale Heights residential area are located within the cycling catchment, due to the direct alignment of Avondale Road.

Horsley could be more accessible to the site by the construction of a road or cycle/pedestrian link across Mullet Creek, eliminating the circuitous route via Dapto town centre. Such a link is planned as part of the West Dapto Urban Release Area development. These linkages would also bring the future Darkes Road and Bong Bong town centres within the cycling catchment.

Legend

-  Rail line
-  Watercourses
-  Site location
-  Education
-  Parklands
-  Road corridor
-  Cycling distance
0 - 6000m

*This map is indicative only
and not to scale*



Illawarra International Health Precinct Cycling Catchment

figure no: 3.16 | date: 02.04.2009 | project no: FR108121

3.4.4 Proposed Infrastructure

The *City of Wollongong Bicycle Plan* identifies proposed bicycle routes for the whole of the local government area. As discussed in **Section 3.4.3**, Princes Highway south of Huntley Road forms part of an existing designated cycleway, whilst Amaral Avenue and Marshall Street form part of a future proposed cycleway.

The Plan, however, does not specify any infrastructure improvements that will take place along the designated new routes. **Figure 3.15** shows the existing and proposed cycleway network.

3.5 PARKING

The development site is still currently a vacant lot and at this stage there is no parking allocated on site. The adjacent external roads of Avondale Road and Huntley Road where bordering the site, are rural roads with an approximately 5 metre wide pavement and unsealed shoulders. On-street parking is not formally restricted, however it is not specifically catered for.

On-street parking on the local residential streets located to the east of the site is generally unrestricted where appropriate, including Goolagong Street which abuts the development site. The majority of these roads are wide enough to allow for parking that does not restrict the traffic flow.

4.0 JOURNEY TO WORK

Data from the Transport & Population Data Centre was analysed to reveal the travel patterns of those with an origin or destination in the Penrose and Dapto area which encompasses the development site. The data included the 2006 Journey to Work (JTW) data set.

The IIHP site will be both an origin (where people live) and a destination (where people go for health services, work, education, and retail purposes). Therefore both origin and destination data has been collated for each location.

The following tables provide mode share (percentage breakdown) for the year 2006 as total trips and percentage trips. The data is collected by the transport mode used for the purpose of accessing employment. It is split into public transport, other transport (includes walking and cycling), private vehicle (car drivers and car passengers), not stated and non-travel (work from home or unemployed).

The findings of the assessment were that the majority of trips as an origin were 81% car trips as either a driver of passenger and 78% car trips as a destination. Bus trips totalled only 1% as both an origin and destination with train trips totalling 3% as an origin and 0% as a destination.

Table 4.1 Dapto/Penrose Journey to Work Analysis Trips

Mode	2006 Trips			
	As Origin	As Destination	Internal	Total
Train	91	0	0	91
Ferry or Tram	0	0	0	0
Bus	16	6	4	26
Car as driver	2129	382	119	2630
Car as passenger	197	31	8	236
Other modes	35	22	20	77
Not Stated	55	9	3	67
Worked at Home or did not go to work	369	78	86	533
Total	2892	528	240	3660

Table 4.2 Dapto/Penrose Journey to Work Analysis Percentages

Mode	2006 Trips		
	As Origin	As Destination	Internal
Train	3%	0%	0%
Ferry or Tram	0%	0%	0%
Bus	1%	1%	2%
Car as driver	74%	72%	50%
Car as passenger	7%	6%	3%
Other modes	1%	4%	8%
Not Stated	2%	2%	1%
Worked at Home or did not go to work	13%	15%	36%
Total	100%	100%	100%

The results provide a useful indication of how people were travelling in 2006 by mode. It indicates what may be needed to overcome current trends and indicates that the site needs to encourage a more sustainable transport mode split than the existing surrounding area.

The *NSW State Plan* has a target of 25% public transport trips for JTW. As is evidenced by the review of the existing travel patterns in and around the area the site will require considerable measures to achieve this target. These proposed measures to meet this target are detailed within this report.

5.0 DEVELOPMENT PROFILE

The IIHP is an integrated medical facility providing the following in development stages:

Illawarra International Specialist and SurgiCentre (STAGE 1)

- Day surgery accommodating 4 operating theatres, 20 day beds, 33 consulting rooms, 10 overnight beds and 2 intensive care beds; and
- 2 storey plus basement parking.

Pathology and Radiology Units (STAGE 2)

- This will house the full range of Radiology and Pathology diagnostics including MRI; and
- 2 storey plus basement parking and loading dock.

24hr Medical Centre, Pharmacy and Casualty (STAGE 3)

- This will house a 24hr medical centre, 24hr pharmacy, 24hr casualty (including dental practitioners) together with administration and areas for staff education;
- 10 beds and 40 consulting rooms; and
- 2 storey plus basement parking.

Stand Alone Obstetric Unit (STAGE 4)

- Obstetric Unit accommodating 20 overnight single bed maternity suites, 6 Delivery Suites, Birthing Centre and associated facilities; and
- 2 storey plus basement parking.

Illawarra International Hospital (STAGE 5A)

- Hospital providing 400 overnight beds with 10 operating theatres, 30 consulting rooms and Intensive Care Unit; and
- 3 storey podium and 5 storey tower totalling 8 stories combined.

Retail Shopping Plaza (STAGE 5B)

- Shopping plaza with 7,700 m2 GFA to serve the IIHP and the wider Huntley community. This will incorporate a range of specialist retailers including newsagency, convenience store, florist, and café with a restaurant and professional suites on the first floor. This has been orientated toward the Huntley Avondale Road intersection and opens onto a north facing public plaza;

Laundry and Dry Cleaners (STAGE 5C)

- Ancillary support facilities including laundry, dry cleaners, maintenance workshop and storage area;

Nurses and Medical Students Accommodation (STAGE 6)

- Accommodation for nursing staff, medical students and resident medical officers and registrars. This will consist of one and two bedroom self contained residential units (2 storey); and
- 30 one bedroom units and 20 two bedroom units.

Huntley Further Education Facility (STAGE 7)

- Education Centre to support medical education within the IIHP with associated accommodation for the relatives of patients and outpatients while undertaking ongoing therapies (2 to 5 storey); and
- 80 one bedroom units.

Illawarra International Aged and Disability Centre (STAGE 8A)

- Aged care centre providing 280 predominantly high care nursing beds for the aged and disabled with dedicated accommodation for elderly parents with disabled children; and

Huntley Seniors Accommodation (STAGE 8B)

- 42 self-contained independent living units for the aged and disabled located fronting to the existing residential area in Goolagong Street. This will be in accordance with the requirements of State Environmental Planning Policy – Seniors Living 2004 (2 storey).

Indicative staging for this development is detailed below in **Table 5.1** which shows that the Illawarra International Hospital will take up the majority of the site in terms of gross floor area. The Specialist and SurgiCentre, 24hr Medical Centre and the Huntley Further Education Centre are the other larger buildings to be located on the site.

Table 5.1 Development Yields by Stage

Stage	Description of Development	Gross Floor Area (m ²)
1	Illawarra International Specialist and SurgiCentre	16,200
2	Pathology and Radiology Units	7,800
3	24hr Medical Centre, Pharmacy and Casualty	12,300
4	Stand Alone Obstetric Unit	4,100
5A	Illawarra International Hospital	94,500
5B	Retail Shopping Plaza	7,700
5C	Laundry and Dry Cleaners	3,200
6	Nurses and Medical Student Accommodation	4,000
7	Huntley Further Education Facility	15,850
8A	Illawarra International Aged and Disability Centre	4,750
8B	Huntley Seniors Accommodation	2,940

Table 5.2 Development Staging by Year

Stage	Description of Development	Year/s
1	Illawarra International Specialist and SurgiCentre	2009
2	Pathology and Radiology Units	2010
3	24hr Medical Centre, Pharmacy and Casualty	2012
4	Stand Alone Obstetric Unit	2014
5A	Illawarra International Hospital	2015
5B	Retail Shopping Plaza	2015
5C	Laundry and Dry Cleaners	2015
6	Nurses and Medical Student Accommodation	2018
7	Huntley Further Education Facility	2020
8A	Illawarra International Aged and Disability Centre	2015-2020
8B	Huntley Seniors Accommodation	2015-2020

Table 5.2 above provides indicative staging of the development. By the year 2016, it is expected that Stage 1 to 5 will be completed and operational, and by 2020 that the whole development will be complete and operational.

5.1 HOURS OF OPERATION

The hours of operation are detailed in **Table 5.3** below.

Table 5.3 IIHP Operation Hours

Stage	Description of Development	Hours
1	Illawarra International Specialist and SurgiCentre	Day Surgery 7am-7pm, Hospital 24HR
2	Pathology and Radiology Units	24HR
3	24hr Medical Centre, Pharmacy and Casualty	24HR
4	Stand Alone Obstetric Unit	24HR
5A	Illawarra International Hospital	24HR
5B	Retail Shopping Plaza	6am – 6pm
5C	Laundry and Dry Cleaners	6am – 10pm
6	Nurses and Medical Student Accommodation	-
7	Huntley Further Education Facility	24HR
8A	Illawarra International Aged and Disability Centre	24HR
8B	Huntley Seniors Accommodation	-

5.2 TRAFFIC GENERATION

The traffic generation for this development can be calculated using two different scenarios:

- The first scenario named the ‘Business as Usual’ scenario has been calculated using the RTA’s *Guide to Traffic Generating Developments*. The traffic generation for this scenario has been applied to the 2016 and 2026 traffic models. The 2016 traffic model includes traffic generation for Stages 1 to 5 and the 2026 traffic model full development.
- The second scenario named the ‘State Plan target of 25% JTW trips by Public Transport at full development’ has not been calculated as the traffic volumes will be lower than the Business As Usual Scenario and therefore

The following is a listing of the formulae utilised to derive the traffic generation rates for the various land uses for both the AM and PM peaks using the RTA’s *Guide to Traffic Generating Developments*.

Private Hospital

- $PVT = -14.69 + 0.69B + 0.31ASDS$
 - $MVT = -10.21 + 0.47B + 0.06 ASDS$
 - $EVT = -2.84 + 0.25B + 0.40ASDS$
- Where:
- PVT – peak vehicle trips
 - MVT – morning vehicle trips
 - EVT – evening vehicle trips
 - B – the number of beds
 - ASDS – the number of staff per weekday day shift

Retail A (SS) – Specialty Shops

- 2.3vph/100m2 GLFA (AM)
 - 4.6vph/100m2 GLFA (PM)
- Where:
- vph – vehicles per hour
 - GLFA – gross leasable floor area

As the RTA rate only provides for the PM peak rate, it is assumed that for retail land uses the AM peak rate is 50% of the PM peak rate.

Retail A (SM) – Supermarket – JASON please check that there is still a supermarket – not included in development profile above (only convenience store included) But is included in the tables below as Retail SM

- 7.75vph/100m2 GLFA (AM)
- 15.5vph/100m2 GLFA (PM)

As the RTA rate only provides for the PM peak rate, it is assumed that for retail land uses that the AM peak rate is 50% of the PM peak rate.

Commercial

- 2vph/100m2 GFA
- Where:
- GFA – gross floor area

Medical Centre

- 10.4vph/100m2 GFA (AM)
- 8.8vph/100m2 GFA (PM)

Residential Units

- 0.29vph/unit

Gymnasium

- 3vph/100m2 GFA

The gymnasium traffic generation rate has been used for the community centre section of this development.

Restaurant

- 2.5m2/100m2 GFA (AM)
- 5m2/100m2 GFA (PM)

As the RTA rate only provides for the PM peak rate, it is assumed that for restaurant land uses that the AM peak rate is 50% of the PM peak rate.

Aged & Disabled

- 0.2vph/bed

Tables 5.4 to 5.7 below show the respective yields, sizes, staffing, visitor and resident numbers and traffic generation rates for each land use within this development. It should be noted that the Zone A refers to the northern access in Avondale Road, Zone B the southern access in Avondale Road, Zone C the southern access in Goolagong Street, and Zone D the northern access in Goolagong Street. GLFA is assumed to be 70% of the GFA.

Table 5.4 Land Use Yields

Zone	Year	Stage No.	Land Use Category	Land Use						
				No. of units	No. of suites	No. of beds	No. of jobs	Floor Areas	GFA (DCP)	GLFA
A	2016	1	PRIVATE HOSPITAL	0	23	19	20	11500	11500	8050
A	2016	1	RETAIL - A(SS)	0	0	0	14	500	500	350
A	2016	2	PRIVATE HOSPITAL	0	0	0	80	5000	5000	3500
A	2016	3	COMMERCIAL	0	0	0	0	4000	4000	2800
A	2016	3	MEDICAL CENTRE	0	40	0	0	4000	4000	2800
A	2016	3	PRIVATE HOSPITAL	0	0	10	0	1000	1000	700
A	2016	3	RETAIL - A(SS)	0	0	0	0	500	500	350
A	2016	4	PRIVATE HOSPITAL	0	4	20	0	2350	2350	1645
A	2016	4	RETAIL - A(SS)	0	0	0	0	350	350	245
C	2016	5A	N/A	0	0	0	0	6000	0	0
C	2016	5A	PRIVATE HOSPITAL	0	30	402	200	76500	76500	53550
B	2016	5B	GYMNASIUM	0	0	0	0	700	700	490
B	2016	5B	RESTAURANT	0	0	0	0	1000	1000	700
B	2016	5B	RETAIL - A(SM)	0	0	0	0	4000	4000	2800
B	2016	5B	RETAIL - A(SS)	0	0	0	0	2000	2000	1400
D	2016	5C	PRIVATE HOSPITAL	0	0	0	0	3200	3200	2240
D	2026	6	RESIDENTIAL UNITS	50	0	0	0	4000	4000	2800
D	2026	7	COMMERCIAL	0	0	0	0	9950	9950	7000
D	2026	7	RESIDENTIAL UNITS	80	0	0	0	4500	4500	3150
D	2026	8A	AGED & DISABLED	0	0	280	0	4000	4000	2800
D	2026	8A	N/A	0	0	0	0	600	600	420
D	2026	8A	RETAIL - A(SS)	0	0	0	0	150	150	105
D	2026	8B	AGED & DISABLED	42	0	0	0	2940	2940	2940

Table 5.5 Land Use Staffing Numbers

Year	Stage No.	Land Use Category	Staffing Numbers							
			General	Admin	Shops	Nurses	Clinicians	Students	Total Jobs	Avg Jobs/day
2016	1	PRIVATE HOSPITAL	16	92	0	59	78	6	251	213.5
2016	1	RETAIL - A(SS)	0	0	14	0	0	0	14	14
2016	2	PRIVATE HOSPITAL	4	40	0	0	0	0	44	14.66667
2016	3	COMMERCIAL	0	0	0	0	0	0	0	0
2016	3	MEDICAL CENTRE	0	0	0	0	0	0	0	0
2016	3	PRIVATE HOSPITAL	4	8	0	10	22	6	50	16.66667
2016	3	RETAIL - A(SS)	0	0	14	0	0	0	14	14
2016	4	PRIVATE HOSPITAL	1	1	0	10	10	2	24	8
2016	4	RETAIL - A(SS)	0	0	0	0	0	0	0	0
2016	5A	N/A	0	0	0	0	0	0	0	0
2016	5A	PRIVATE HOSPITAL	82	50	0	514	164	0	810	270
2016	5B	GYMNASIUM	0	0	0	0	0	0	0	0
2016	5B	RESTAURANT	0	0	0	0	0	0	0	0
2016	5B	RETAIL - A(SM)	0	0	50	0	0	0	50	25
2016	5B	RETAIL - A(SS)	0	0	0	0	0	0	0	0
2016	5C	PRIVATE HOSPITAL	30	3	0	0	0	0	33	16.5
2026	6	RESIDENTIAL UNITS	6	0	0	0	0	0	6	6
2026	7	COMMERCIAL	0	0	0	0	0	0	0	0
2026	7	RESIDENTIAL UNITS	6	3	0	0	0	0	9	3
2026	8A	AGED & DISABLED	60	4	0	20	0	0	84	28
2026	8A	N/A	0	0	0	0	0	0	0	0
2026	8A	RETAIL - A(SS)	0	0	0	0	0	0	0	0
2026	8B	AGED & DISABLED	0	0	0	0	0	0	0	0

NOTE: Average jobs per day assumed to be the total / no. of shifts

Table 5.6 Land Use Visitor and Resident Numbers

Year	Stage No.	Land Use Category	Visitor Numbers				Resident Numbers		
			Patient	Facilities	Shops	Total	Permanent	Aged	Total
2016	1	PRIVATE HOSPITAL	150	24	0	150	0	0	0
2016	1	RETAIL - A(SS)	0	0	0	0	0	0	0
2016	2	PRIVATE HOSPITAL	40	0	0	40	0	0	0
2016	3	COMMERCIAL	0	0	0	0	0	0	0
2016	3	MEDICAL CENTRE	0	0	0	0	0	0	0
2016	3	PRIVATE HOSPITAL	300	0	0	300	0	0	0
2016	3	RETAIL - A(SS)	0	0	0	0	0	0	0
2016	4	PRIVATE HOSPITAL	35	10	0	45	0	0	0
2016	4	RETAIL - A(SS)	0	0	0	0	0	0	0
2016	5A	N/A	0	0	0	0	0	0	0
2016	5A	PRIVATE HOSPITAL	360	26	0	386	0	0	0
2016	5B	GYMNASIUM	0	0	0	0	0	0	0
2016	5B	RESTAURANT	0	0	0	0	0	0	0
2016	5B	RETAIL - A(SM)	0	0	1000	1000	0	0	0
2016	5B	RETAIL - A(SS)	0	0	0	0	0	0	0
2016	5C	PRIVATE HOSPITAL	0	0	0	0	0	0	0
2026	6	RESIDENTIAL UNITS	0	0	0	0	90	0	90
2026	7	COMMERCIAL	0	0	0	0	0	0	0
2026	7	RESIDENTIAL UNITS	0	64	0	64	0	0	0
2026	8A	AGED & DISABLED	60	0	0	60	0	280	280
2026	8A	N/A	0	0	0	0	0	0	0
2026	8A	RETAIL - A(SS)	0	0	0	0	0	0	0
2026	8B	AGED & DISABLED	0	0	0	0	0	50	50