

4.4 Transport Assessment

4.4.1 Parking

This Section 75W Application proposes no additional on-site parking to be provided in addition to the 2,550 spaces already approved as part of the Acute Hospital Project Application. This recognises the strong public transport availability and reasonably good staff and visitor mode share to public transport that results. By taking a minimalist approach to on-site parking, the RNSH will be promoting the use of sustainable transport modes and reducing the impact on the local road network. The additional patients and visitors will be accommodated through the significant increase in visitor parking to be provided as part of the development.

The only proposed change to the approved parking arrangement is that a number of public parking spaces along Westbourne Street will be rezoned for short term parking (maximum one hour stay) to allow drop offs to the CSB.

Staff Car Parking

Constraining on-site parking is an important and effective tool in reducing the reliance on private vehicle transport. With no additional dedicated parking spaces, the 30 additional staff movements in the AM period will be via public transport, walking and cycling. This policy recognises the strong public transport accessibility of the site, providing visitors with a viable non-car mode of access.

Appendix B of the Hyder Transport Study (see section 2.2) has identified that the hospital already adopts a minimalist car parking approach, and the 2,550 parking spaces proposed is in accordance with this existing policy. This parking provision has previously been considered sufficient and was approved under the existing RNSH Concept Plan.

Although the proposed 60 additional beds technically require an additional 15 staff car parking spaces based on Willoughby Council's Parking Guidance, the principle of minimising staff car parking will be maintained and the application of alternate measures, such as staff travel plans, will account for this technical requirement.

The additional staff movements are relatively minor when viewed in the context of the overall RNSH development. The site already has a good public transport mode share and this will improve following the completion of the development. The provision of workplace travel plans, improved linkages to public transport networks and other travel demand measures will accommodate for this relatively small increase in staff movements.

Visitor Car Parking

The additional patient throughput and increase in visitor activity will be spread throughout the day, largely outside the peak commuter periods. Although the proposed 60 additional beds technically require up to an additional 30 visitor car parking spaces based on Willoughby Council's Parking Guidance, the significant increase in visitor parking associated with the development (689 additional spaces) will accommodate the increased patient and visitor activity.

As described in Section 4.1, key intersections surrounding the site are forecast to operate well with spare capacity following the completion of the development. The additional staff and visitor movements resulting from the additional beds during the commuter peaks are relatively small in the context of the site redevelopment, and given the forecast operation of intersections, would not have the effect of inducing unreasonable vehicles delays on the local road network.

4.5 Workplace Travel Plans

The development of workplace travel plans is recommended following the completion of the development. Workplace travel plans aim to reduce car dependency and demand for parking - promoting sustainable means of transport.

The more specific objectives include:

- High modal share for public transport, cycling and walking to work and residential journeys;
- To ensure adequate facilities are provided at the site to enable staff and visitors to commute by sustainable transport modes;
- To reduce the number of car journeys associated with business travel by staff and visitors;
- To facilitate the sustainable and safe travel of new employees;
- To raise awareness of sustainable transport amongst staff; and
- To encourage car pooling and off-peak travel

The implementation of these travel plans will contribute to reducing parking demand, particularly for staff, and encourage other forms of transport to the site.

4.6 Internal Road Network

There are to be two public entrances to the CSB within the local road network, along with two additional emergency vehicle access points, shown in Figure 5:

- Main pedestrian public entry via Westbourne Street for Women's, Children's and Burns Unit (level 2);
- Emergency vehicle access for Women's, Children's and Burns Unit via Westbourne Street (level 1);
- Mental Health unit public entry and vehicle drop via the northern end of Red Road (level 2); and
- Ambulance and police access to the Mental Health Unit via the Kolling Building Access Road (level 2).

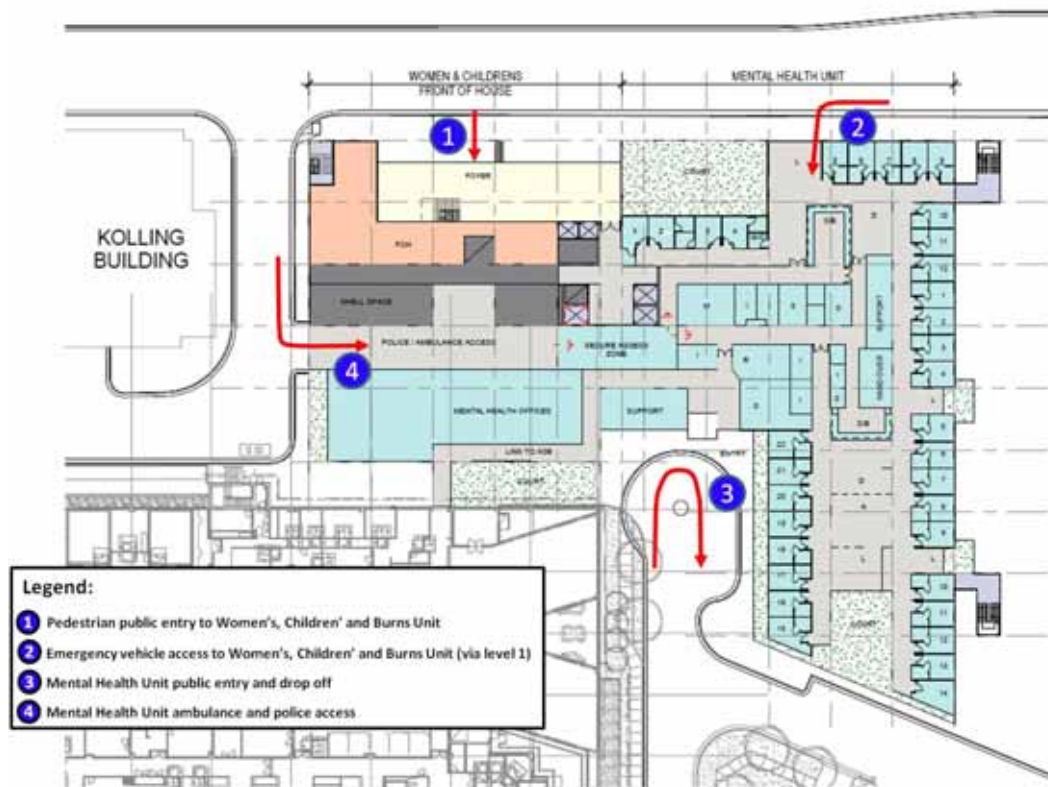


Figure 5 CSB Entry Locations

Westbourne Street will revert to two-way vehicle movement following project completion. Access to public car parking will remain via Westbourne Street, however through movements across Reserve Road will be prohibited. This road network has been designed to facilitate pedestrian and bicycle movement whilst allowing vehicles convenient access to on-site car parking. The internal and external road network is presented in Figure 6.

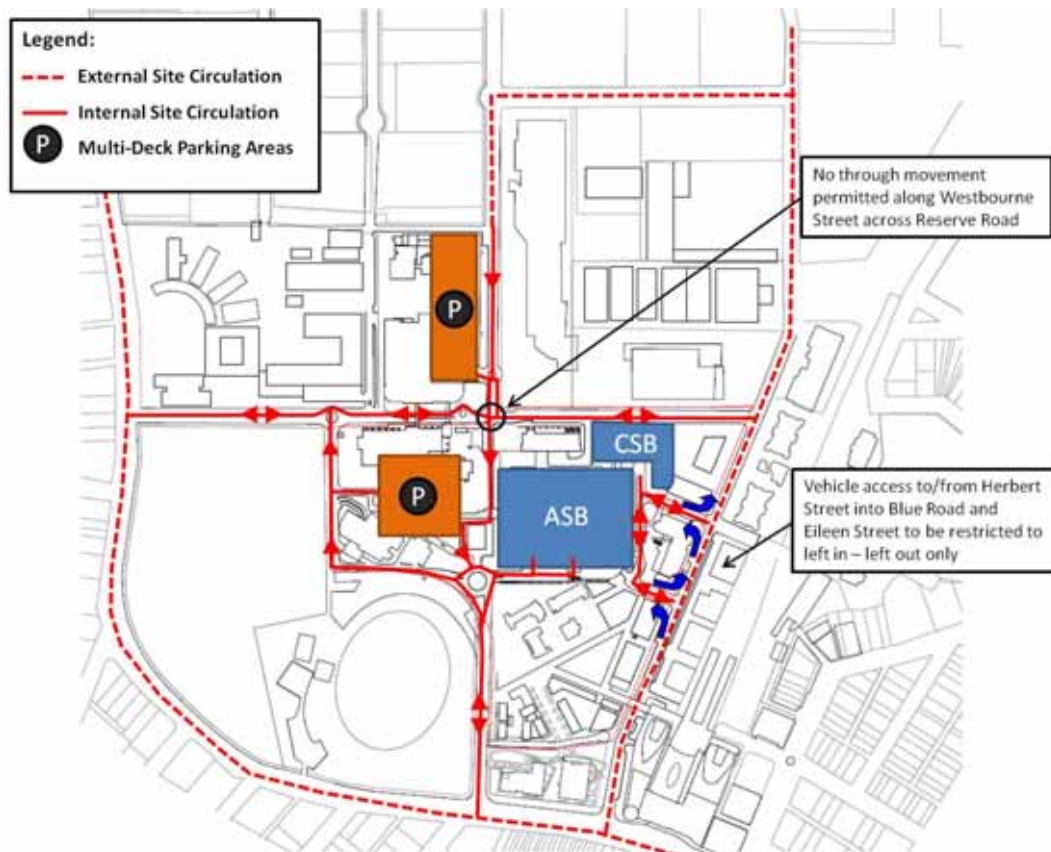


Figure 6 Internal Vehicle Site Circulation

4.7 Impacts of the Closure of Red Road

This Section 75W application proposes the expansion of the CSB to accommodate additional wards which will require the closure of the northern section of Red Road near Westbourne Street. Red Road is to provide access to the 34 bed mental health unit which is to be a component of the Clinical Services Building. The following sections describe the impact of the closure of Red Road on both the internal and wider road network.

4.7.1 Metal Health Unit – Forecast Traffic Generation

The Mental Health Unit is to consist of a 34 bed ward, with approximately 83 equivalent full time staff. As staff and visitors to the ward will access car parking areas external to Red Road, the traffic generation to the Red Road drop off area is solely dependent on the number of available patient beds.

Given the 34 beds in the ward, it is considered unlikely that the drop off area would be utilised by any more than 50 vehicles¹ on a single day. Spread over a 10 hour time period, this equates to only 5 vehicles per hour. This is considered a conservative assumption and is likely that on most days this number will be significantly lower.

It is important to note that these 50 forecast trips have been accounted for in the traffic generation forecasts for the RNSH precinct. They have only been

¹ Assumption based on a 75% turnover rate of beds on a given day

considered in this assessment for the purpose of analysing the impact on the local road network as a result of the closure of Red Road and the associated traffic redistribution.

4.7.2 Vehicle Circulation – Internal Road Network

A roundabout will be introduced at the northern end of Red Road to facilitate the new mental health unit drop off area (shown in Figure 7). Egress from the site is via Blue Road or Eileen Street. Two vehicle lay-by spaces will be provided for short-term drop offs. These should be a designated ‘kiss and ride’ area (signposted as no parking) to prevent vehicles remaining in these spaces for long periods. Drivers would be legally able to stop for two minutes to see off their passengers before proceeding elsewhere.

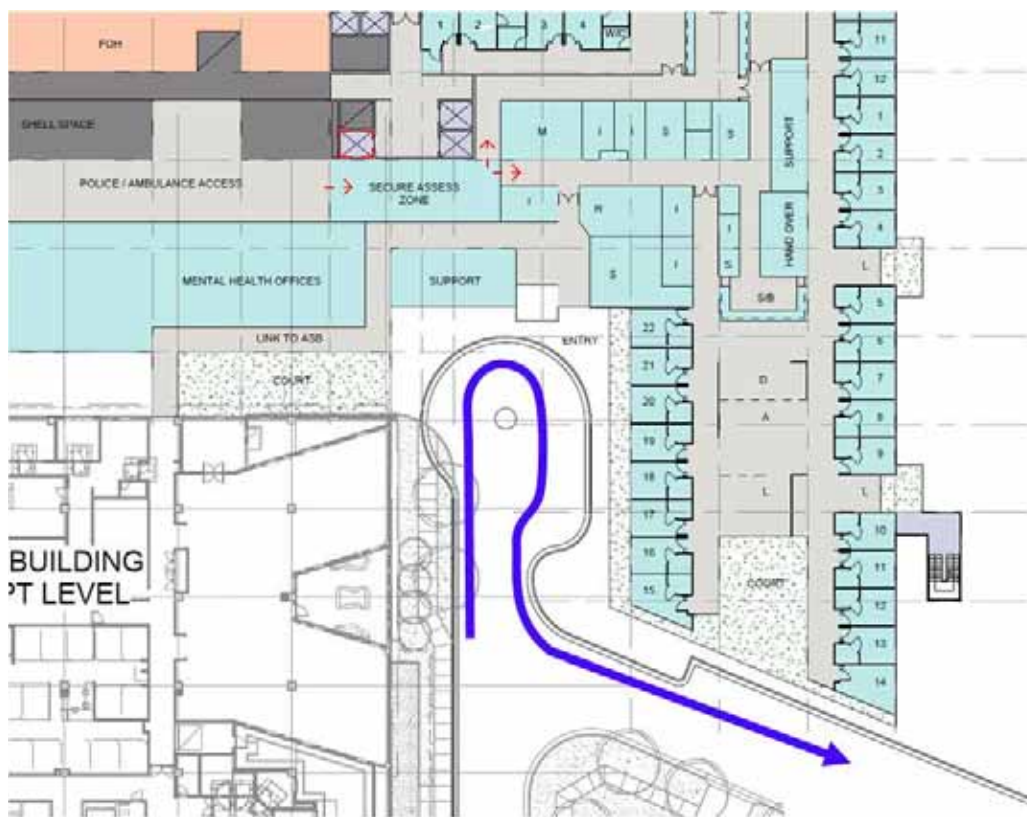


Figure 7 Mental Health Unit Vehicle Drop-Off Area

Access to the MHU police and ambulance parking area is to be provided from the Kolling Building Access Road, with this area accessible via Westbourne Street. Separating the public access for the Mental Health Unit on Red Road and emergency/public access for Women's, Children's and Burns to Westbourne Street improves legibility for vehicle circulation and wayfinding around the site.

The difference in grade that exists on Eileen Street at the intersection of Red Road acts as a physical barrier to vehicle movement between Reserve Road and Westbourne Street (see Figure 8). The closure of Red Road would therefore only affect vehicles entering the precinct via Herbert Street and not Reserve Road.

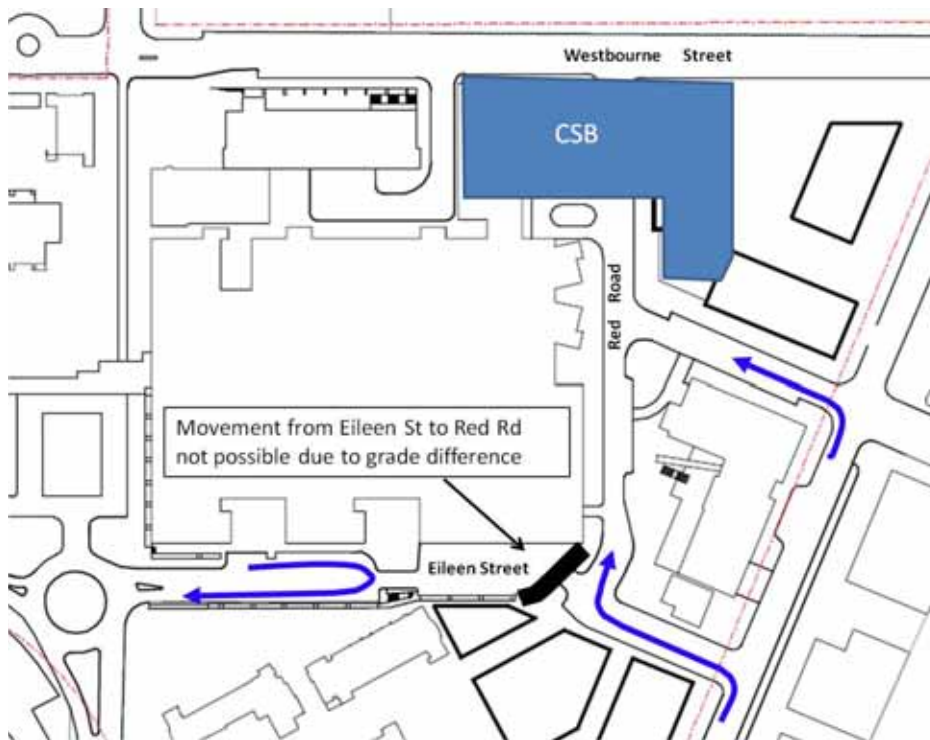


Figure 8 Eileen Street/Red Road restricted vehicle movement

4.7.3 Vehicle Circulation – Wider Road Network

The major traffic redistribution with respect to the proposed scheme will focus around local access onto Herbert Street. Previously vehicles utilising the MHU drop off on Red Road would continue through to Westbourne Street, instead they will now utilise the roundabout and exit the site via Eileen Street and Blue Road onto Herbert Street.

Previous traffic reports have proposed that both intersections off Herbert Street (Eileen Street and Blue Road) into the site be left in/left out only. This arrangement is supported on the basis that it would avoid the situation where right turning vehicles into/out of the site conflict with those queued on Herbert Street back from the Pacific Highway. Vehicles approaching the site from the north will however have to use alternative routes due to the no right turn at these locations. Possible alternatives, shown in Figure 9, include:

- Accessing the Pacific Highway via Campbell Street or Carlotta Street, travelling along the perimeter of the site before turning left in Herbert Street; and
- Turning left from Herbert Street into the no-through road section of Herbert Street, turning around, and turning right again back onto the main road

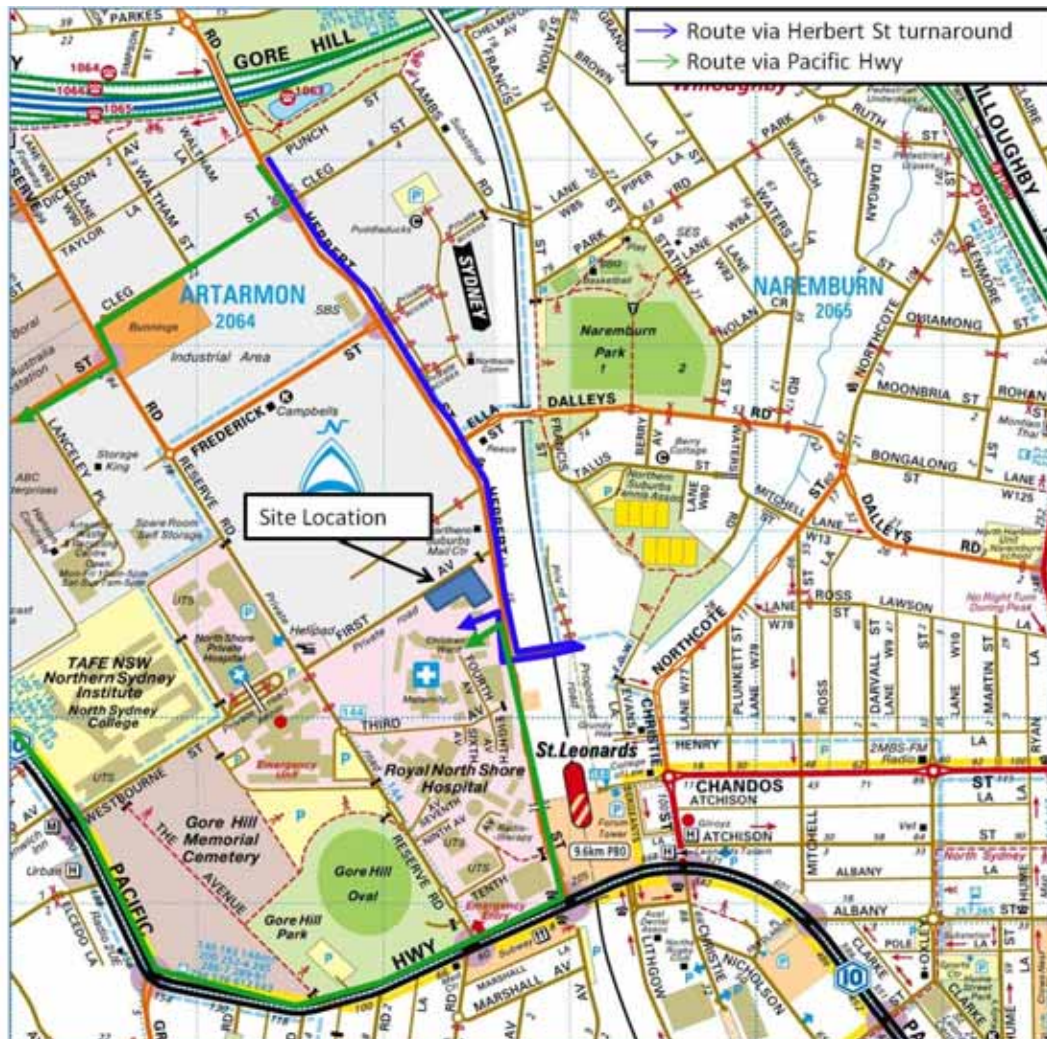


Figure 9 Alternate site access routes for northbound approaching vehicles

Given the relatively small number of daily vehicles forecast to use the Red Road drop-off, the effects of these detour routes should not induce any noticeable impacts on the local road network.

The closure of the northern end of Red Road will prevent drivers from ‘rat running’ through this section of road to access on-site public car parking. Vehicles instead would be redirected to Herbert Street and Westbourne Street, providing a more pedestrian friendly environment within the site. Intersection analysis conducted by Halcrow in August 2010 indicates this intersection will operate satisfactorily (at a level of service B or better) in both the AM and PM peak hours following the full development of the RNSH precinct.

Two-way vehicle movement on Westbourne Street, as already approved under the existing concept plan, will facilitate good vehicle circulation and will provide public and emergency access to Women’s, Children’s and Burns Unit.

4.7.4 Local Road Network Impact Assessment

The closure of the northern end of Red Road and relocation of the Women's, Children's and Burns Unit (from the Douglas Building) to Westbourne Street is forecast to have only a minor impact on the wider road network.

- With no more than 50 vehicles per day forecast to utilise the Red Road drop off area, it is unlikely that there will be any significant impacts on entry/exit locations off Herbert Street. Nearby intersections would operate at a similar, satisfactory level to that forecast in previous traffic studies;
- Red Road plays only a limited role with regards to internal and external vehicle circulation throughout the RNSH precinct. Herbert Street and Westbourne Street will continue to carry the majority of traffic associated with the CSB entering the site, with this intersection forecast to operate satisfactorily following the completion of the approved development;
- The location of staff and public car parking determines how the majority of vehicles enter and exit the hospital precinct – not public drop off areas. As a result Herbert Street and Westbourne Street will provide the key access points for staff and visitors to the CSB. This intersection is forecast to operate well following the proposed development. Directional signs at key locations would be installed to direct vehicles to appropriate access locations;
- The grade separation that exists on Eileen Street (refer to Figure 8) as a result of the campus redevelopment prevents the use of Reserve Road as a through link to Westbourne Street via Red Road. As a result vehicles would need to use Herbert Street to access the eastern end of Westbourne Street, regardless of the status of Red Road; and
- The approved opening up of Westbourne Street to permit two-way traffic flow will accommodate entries and exits to the Women's, Children's and Burns Unit for both public and emergency vehicles

4.8 Public Transport Impacts

The State Transit Bus 144 which currently runs through RNSH will be unaffected by the proposed closure of Red Road. The bus runs north on Herbert Street before turning left onto Westbourne Street and continuing on past the Kolling Building towards the Pacific Highway.

4.9 Pedestrian and Cycle Impacts

Pedestrian connections to the CSB will continue to be strong under the modified scheme. The main public access will remain via level 3 of the ASB, with at grade public connections provided on Westbourne Street and Red Road to car parks within the hospital precinct. Connections to the existing multi-storey car park will be via the Westbourne Street footpath.

Cyclists can utilise the existing marked on-road bicycle lane along Herbert Street to access the site. In addition, the masterplan proposes three new bicycle routes through the site, those being:

- The road running around the Douglas Building
- Reserve Road to the west of the ASB
- Red Road, to the east of the ASB

Under the revised scheme as described in this Section 75W application, the cycle route via Red Road will not be possible due to the expansion of the CSB footprint. However it is considered that the alternate routes described above provide cyclists good access through the RNSH campus and complement the existing bicycle and pedestrian network around the site.

An indicative sketch of the pedestrian and cycling connections between the new multi-level car park, the ASB and CSB through to Westbourne Street is shown in Figure 10.

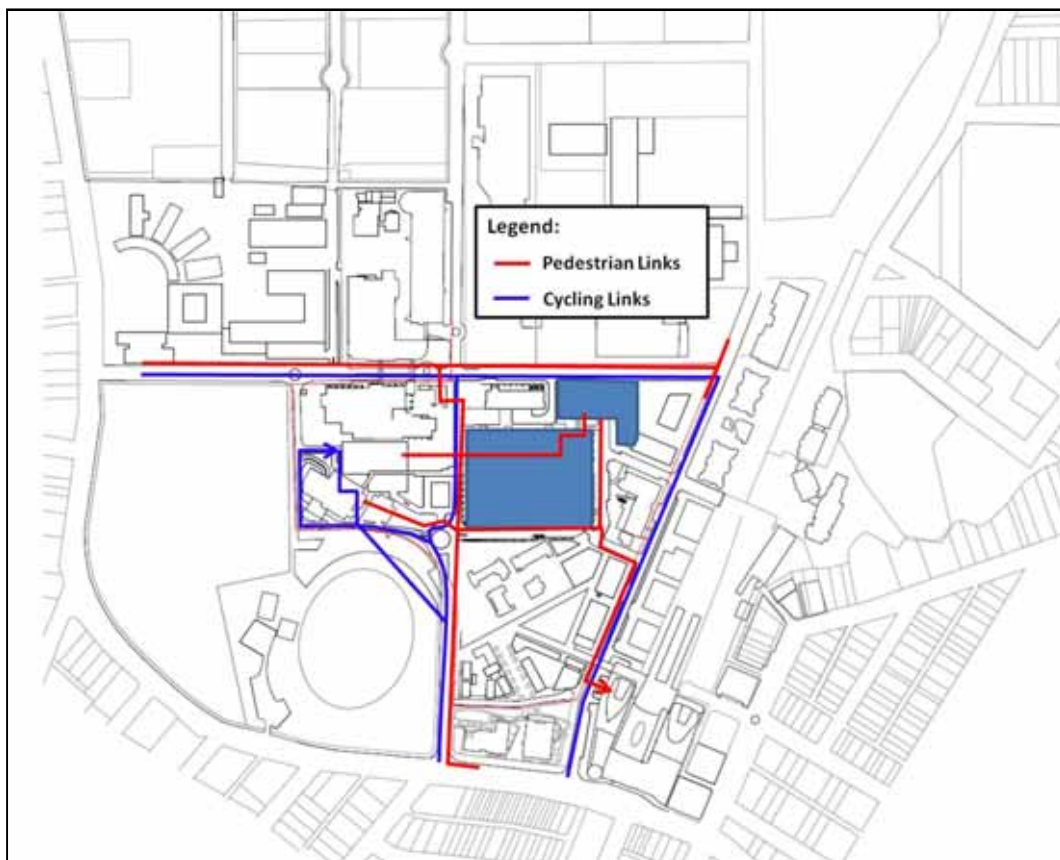


Figure 10 Pedestrian and Cycling Connections through RNSH

5 Conclusions

There will be limited traffic and transport impacts resulting from the proposed scheme:

- No additional car parking is proposed on the site, with RNSH taking a proactive approach to reducing total site traffic generation;
- There is a reduction in the number of staff car parking spaces which will encourage increased journey to work by public transport. This also allows a significant increase in patient and visitor car parking which is currently constrained;
- Traffic analysis indicates all intersections surrounding the RNSH precinct, including the Herbert Street / Westbourne Street adjacent to the CSB, will continue to operate well with spare capacity following the development;
- The additional staff and visitor movements resulting from the additional beds during the commuter peaks are relatively small in the context of the site redevelopment;
- All traffic impacts have been assessed previously as part of the RNSH Campus Redevelopment and limited change to existing levels of traffic have been predicted;
- The site is well served by public transport and the Metropolitan Strategy has earmarked the area for significant further development in the employment sector;
- The preparation of workplace travel plans will encourage non-car modes of travel and promoting sustainable means of transport such as walking and cycling; and
- The revised road system will improve legibility for movement on the campus and pedestrian and cycling connections between facilities improved as a result;
- Eileen Street and Blue Road will provide local access to the Red Road public drop off from Herbert Street, with left in-left out arrangements in place at these intersections to prevent conflicts with queued vehicles from the Pacific Highway;
- Alternative routes are available for vehicles approaching the drop off area from the north due to the banning of right turns into Blue Road and Eileen Street;
- The approved operation of Westbourne Street to permit two-way traffic flow will provide convenient access for vehicles utilising the public drop off for the Women's, Children's and Burns Unit