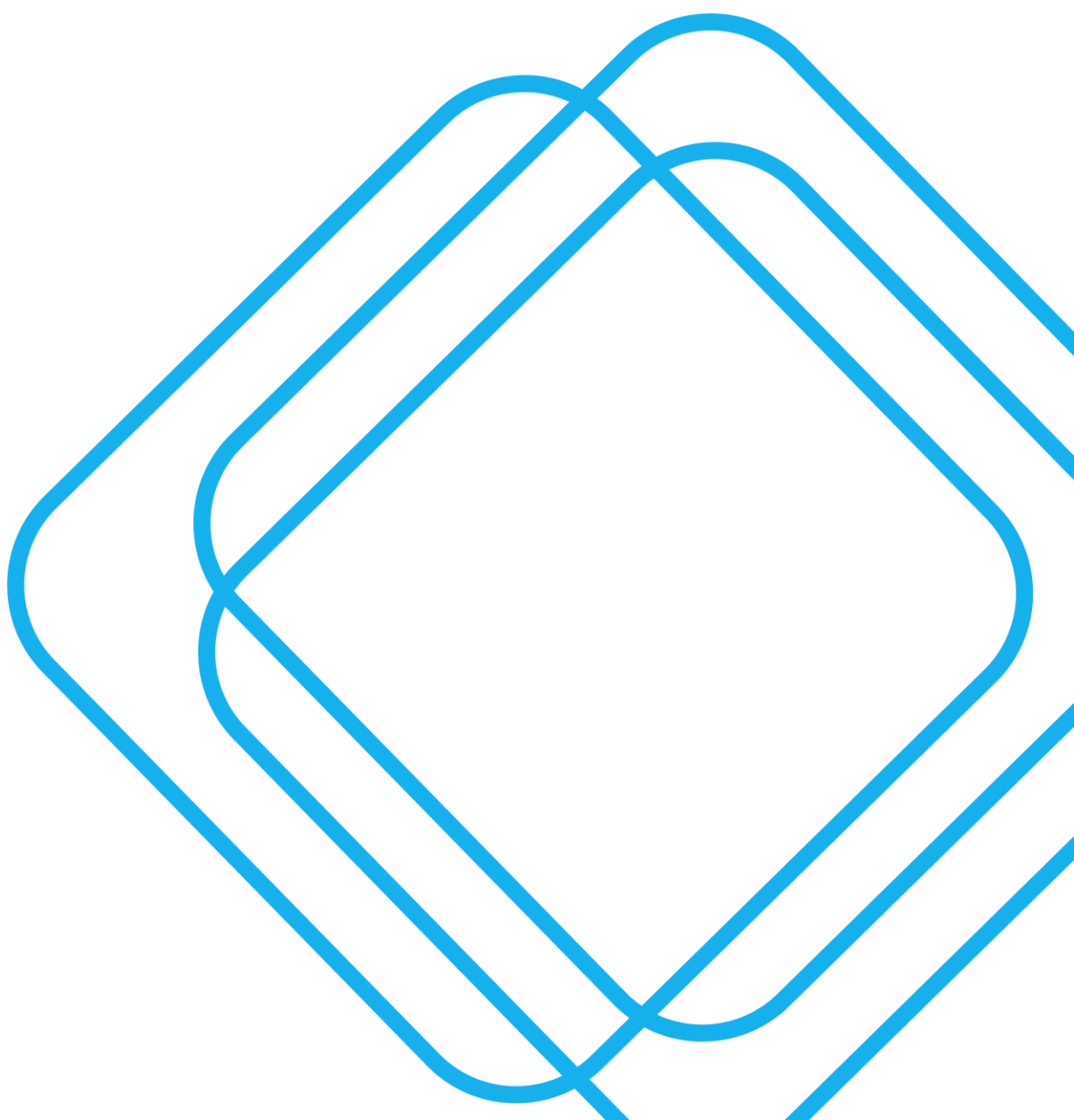


TRAFFIC AND PARKING DESIGN DEVELOPMENT REPORT


Blayney Multipurpose Service Redevelopment

14 AUGUST 2023



Quality Assurance

Project Name:	Blayney Multipurpose Service Redevelopment		
Project Number:	SCT_00374		
Document name:	Traffic and parking Design Development Report		
Client:	Health Infrastructure	ABN:	89 600 377 397
Prepared by:	SCT Consulting PTY. LTD. (SCT Consulting)	ABN:	53 612 624 058

Information	Name	Position	Signature
Author:	Matthew Chow	Senior Consultant	
Reviewer:	Seamus Christley	Director	
Authoriser:	Seamus Christley	Director	

Version	Date	Details
1.0	11 August 2023	Draft traffic and parking report for tender
2.0	14 August 2023	Final traffic and parking report for tender

© SCT Consulting PTY LTD (SCT Consulting)

SCT Consulting's work is intended solely for the use of the Client and the scope of work and associated responsibilities outlined in this document. SCT Consulting assumes no liability with respect to any reliance that the client places upon this document. Use of this document by a third party to inform decisions is the sole responsibility of that third party. Any decisions made or actions taken as a result of SCT Consulting's work shall be the responsibility of the parties directly involved in the decisions or actions. SCT Consulting may have been provided information by the client and other third parties to prepare this document which has not been verified. This document may be transmitted, reproduced or disseminated only in its entirety and in accordance with the above.

Contents

Executive Summary	i
1.0 Introduction	1
1.1 Background.....	1
1.2 Report purpose	1
2.0 Existing conditions	2
2.1 Existing site access.....	2
2.1.1 Road network.....	2
2.1.2 Public transport	2
2.1.3 Walking and cycling	2
2.2 Current health service operations	3
2.2.1 Staff numbers.....	3
2.2.2 Patient activity.....	3
2.2.3 Ambulance activity	3
2.2.4 Servicing / waste disposal.....	3
2.3 Parking facilities and parking demand	4
3.0 Proposed health service redevelopment	5
3.1 Site plan.....	5
3.2 Site access and circulation	6
3.3 Staffing increase	6
3.4 Patient and visitor activity	7
3.5 Proposed parking provision	7
3.5.1 Electric Vehicle charging points	7
3.6 Emergency vehicles / patient transport	8
3.7 Logistics and waste.....	8
3.8 Staging.....	9
4.0 Traffic, Transport and Parking Impact Assessment	10
4.1 Traffic.....	10
4.2 Parking.....	10
4.3 Walking and cycling	10
4.4 Public transport	10
4.5 Loading dock circulation	11
4.6 Ambulance access and circulation.....	12
4.7 Construction.....	12
5.0 Summary.....	13

Executive Summary

The Blayney Multipurpose Service (BMPS) is a small rural health facility located in the Southern Sector of the Western NSW Local Health District (LHD). It is the first line health provider for people within the Blayney catchment and is located in the Blayney Local Government Area (LGA). Major redevelopment of the facility is proposed to meet the current and projected demand for services.

Existing conditions

BMPS has limited public transport and cycling facilities, and all user groups at the hospital are assumed to drive. Access to the site is mainly off Osman Street, although there is also a single-lane driveway that connects to the Blayney Ambulance station to the west that can be used by NSW Ambulance.

Aside from access for cars and ambulances, BMPS requires Heavy Rigid Vehicle (HRV) access so that servicing can be completed, including waste disposal, linen, medical store and food deliveries.

Excluding fleet parking, long term parking supply available to BMPS is 54 spaces, which includes on-street parking. This is sufficient to cater for the peak parking of 40 cars, which is based on site observations and data obtained from the Clinical Services Plan and Work Force Plan. This Peak parking period occurs for around two hours around the middle of the day when afternoon and morning shift are both on site.

Proposed redevelopment

The redevelopment will be a complete rebuild and expansion of existing functions at BMPS, delivering new buildings, new internal roadways, consolidated back of house and ambulance access, and an expanded car park.

A new driveway for servicing will be established on Queen Street, providing access for HRVs and Bariatric Ambulances, separating heavy vehicles from typical patient and visitor traffic. The ambulance bay and the loading dock will all be consolidated in the back of house area to the north of the new build.

Including fleet parking, total long term parking supply at the end of the construction process will be 65 spaces. This new carparking arrangement will deliver two compliant accessible parking spaces in the vicinity of the main building entrance.

Traffic, transport and parking impact assessment

The redevelopment will lead to a marginal increase of approximately 12 vehicle trips during peak periods as a result of the increased staffing roster and expansion of facilities. These trips will have a negligible impact on the surrounding road network.

Peak parking demand once the new facility is fully operational is expected to be 60, which will be sufficiently catered for by the 65 parking spaces available to BMPS. This parking demand means that the on-street parking supply will continue to be used to serve the hospital. This is an acceptable outcome given how close the on-street parking supply is to the main hospital entrance.

A Construction Traffic Management Plan (CTMP) would be developed prior to the start of construction. The CTMP would be prepared in consultation with Transport for NSW and Blayney Council and would seek to minimise traffic, transport and parking impacts during the construction stages of the project, especially while the BMPS remains operational. The CTMP would address aspects such as type of construction vehicles, construction transport routes, dilapidation surveys, traffic control plans, including detours and signage, and details of measures to minimise conflicts with other road users or users of the site.

1.0 Introduction

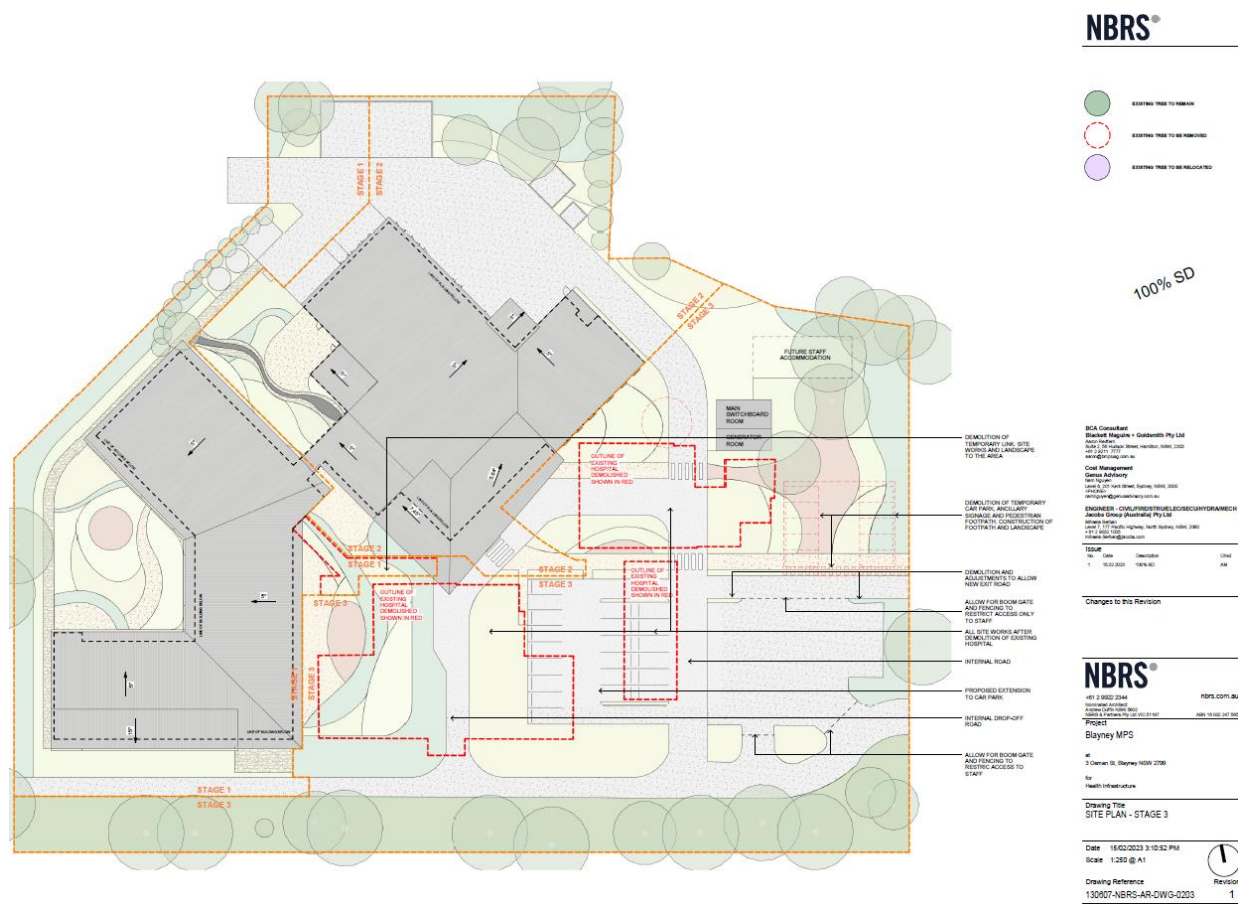
1.1 Background

The Blayney Multipurpose Service (BMPS) is a small rural health facility located in the Southern Sector of the Western NSW Local Health District (LHD). It is the first line health provider for people within the Blayney catchment and is located in the Blayney Local Government Area (LGA).

The BMPS is co-located with a HealthOne providing primary health care services. BMPS currently has 29 beds with a mixture of high care residential beds, inpatient beds and 4 treatment bays within the ED treatment space.

Major redevelopment of the BMPS, illustrated in **Figure 1-1**, is proposed to meet the current and projected demand for services. The new facility will provide Residential Aged Care (RAC), Emergency services, acute, and subacute inpatient services with a co-location of ambulatory and primary care services as well as HealthOne. The redevelopment will be a complete rebuild and expansion of existing functions at BMPS, delivering new buildings, new internal roadways, consolidated back of house and ambulance access, and an expanded car park.

Figure 1-1 Proposed site plan and outline of the existing buildings



Source: NBRS, 2023

1.2 Report purpose

This Traffic, Transport and Parking Assessment Report supports the required Review of Environmental Factors (REF). The report presents a review of existing traffic and parking operations at the current health facility, describes the planned changes, and assesses the impact of these changes on traffic and transport operations in and surrounding the proposed facility.

2.0 Existing conditions

2.1 Existing site access

2.1.1 Road network

BMPS is located to the north of the Mid Western Highway (also Martha Street) and has boundaries fronting onto Osman Street to the east and Queen Street to the north.

There are three vehicle access points, illustrated in **Figure 2-1**. The main entry provides two-way access to Osman Street, while a second driveway provides exit only movement. A third, single lane driveway is located on the west side of the site, providing direct access to Oldham Place and the ambulance station.

A roundabout on the west side of the site allows larger services vehicles to turn around, while also providing access to the fleet and dedicated staff parking.

Figure 2-1 BMPS boundary and vehicle access



2.1.2 Public transport

There are no public transport options in the vicinity of the site. The closest bus and train services are located near Blayney train station over a kilometre to the north and therefore not suitable for use for travel to and from the BMPS.

2.1.3 Walking and cycling

There are three walkways connecting to the BMPS on Osman Street, with an additional two gated walkways on Queen Street. These all connect to the footpath network which covers the vicinity of the site. Footpaths are available on the BMPS side of the road on Martha Street, Osman Street and Queen Street.

All hospital user groups are assumed to arrive to the site by car, and therefore footpath coverage should provide accessible and adequate connections between building entrances and car parking locations.

There is no dedicated bicycle infrastructure provided within or around the site.

2.2 Current health service operations

2.2.1 Staff numbers

BMPS has a full time equivalent (FTE) roster of 36.84 staff. This includes administrative staff, inpatient unit personnel, community and primary health services and hotel services. In addition to the Blayney roster, the health service also has visitor medical officers from Bathurst, Cowra and Orange, such as dietitians, radiographers and maintenance staff. The visiting roster amounts to 3.26 FTE.

The busiest time of day is during the afternoon shift crossover, where both the morning shift and afternoon shifts are on site. Including visiting medical officers, it is expected that up to 33 staff are on site during this overlapping period.

2.2.2 Patient activity

The facility has an emergency department (ED) with 4 bays, inpatient unit with 5 beds, community/primary health unit with 9 rooms and a transitional/residential aged care with 24 places. In 2019, BMPS had 1,073 ED presentations, 12,949 bed days and 2,085 outpatients.

2.2.3 Ambulance activity

The Blayney Ambulance Service is co-located with the BMPS, connected by a single-lane driveway. This driveway is currently used in both directions for ambulances approaching and departing the site. There are six staff based (five fulltime and one part-time) at the Blayney station. The station operates from 8 am until 6 pm, seven days per week and provides a 24 hour on call service.

Ambulances have a dedicated drop off area directly adjacent to the existing ED facility.

2.2.4 Servicing / waste disposal

Logistics movements at Blayney Health Service consist of medical stores, linen, waste collection and food. The loading dock at the current facility is located on the west side of the building, adjacent to the kitchen and other back of house facilities. The frequencies and size of the vehicles accessing the health service are listed in **Table 2-1**.

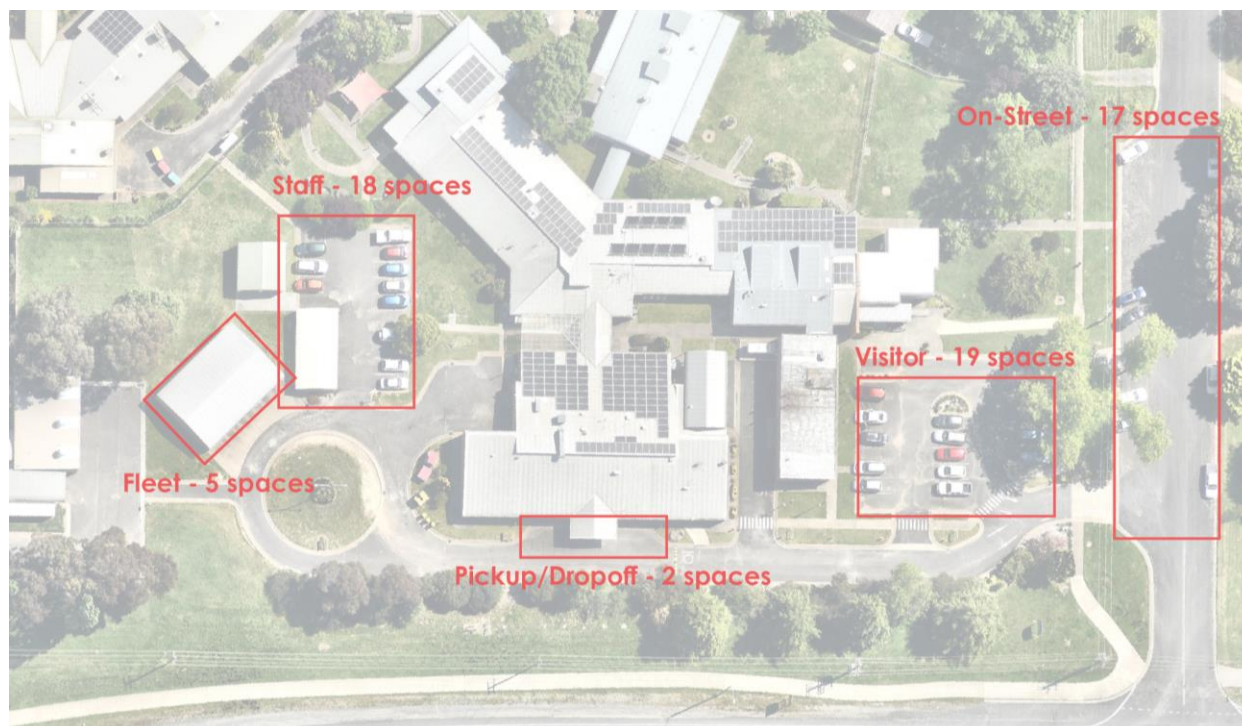
Table 2-1 Servicing / waste vehicle frequencies

Service	Largest vehicle	Frequency of vehicles (per week)
Waste disposal	Heavy Rigid Vehicle (HRV)	5
Linen	Heavy Rigid Vehicle (HRV)	4
Medical store / supplies	Medium Rigid Vehicle (MRV)	1
Food	Heavy Rigid Vehicle (HRV)	15

2.3 Parking facilities and parking demand

Existing parking supply consists of fleet parking, dedicated staff parking, a general/visitor parking area and on-street parking immediately adjacent to the site. This is illustrated in **Figure 2-2**. The total existing supply of long term parking excluding fleet parking is 54 spaces.

Figure 2-2 Existing parking supply



Base map source: Nearmap, 2022

Peak parking demand occurs during the overlap between the morning and afternoon shift, where the maximum number of staff are expected on site. This overlap is short period of time of around two hours. Based on site observations and data from the Clinical Services Plan and Work Force Plan, the peak demand is expected to be 40 vehicles. This estimate excludes fleet parking. **Table 2-2** provides the breakdown of parking demand.

Table 2-2 Existing parking demand by user group

User group	Demand
Staff – Morning and afternoon shift (Blayney roster)	29
Staff – Non Blayney roster (visiting medical officers)	4
Visitors and patient drop-off/pick-up	5
Outpatients	2
Total	40

Not all cars can be parked within the site during the peak demand period and drivers will need to make use of the on-street parking on Osman Street. Combined with the available on-site parking, the total parking supply is sufficient to meet peak parking requirements.

Drivers have been observed to utilise the on-street parking when on-site parking is relatively filled, or simply out of personal preference as on-street parking allows for a quicker park while still being a short walk from the building entrances.

3.0 Proposed health service redevelopment

3.1 Site plan

The new facility will provide Residential Aged Care (RAC), Emergency services, acute, and subacute inpatient services with a co-location of ambulatory and primary care services as well as HealthOne. An illustration of the proposed site is provided in **Figure 3-1**. The redevelopment will be a complete rebuild and expansion of existing functions at BMPS, delivering new buildings, new internal roadways, consolidated back of house and ambulance access, and an expanded car park.

People with care needs above the role delineation of the BMPS will continue to be transferred to the Bathurst or Orange Health Service, where a full complement of specialists and services are available.

Figure 3-1 Proposed site plan



Source: NBRIS, 2023

3.2 Site access and circulation

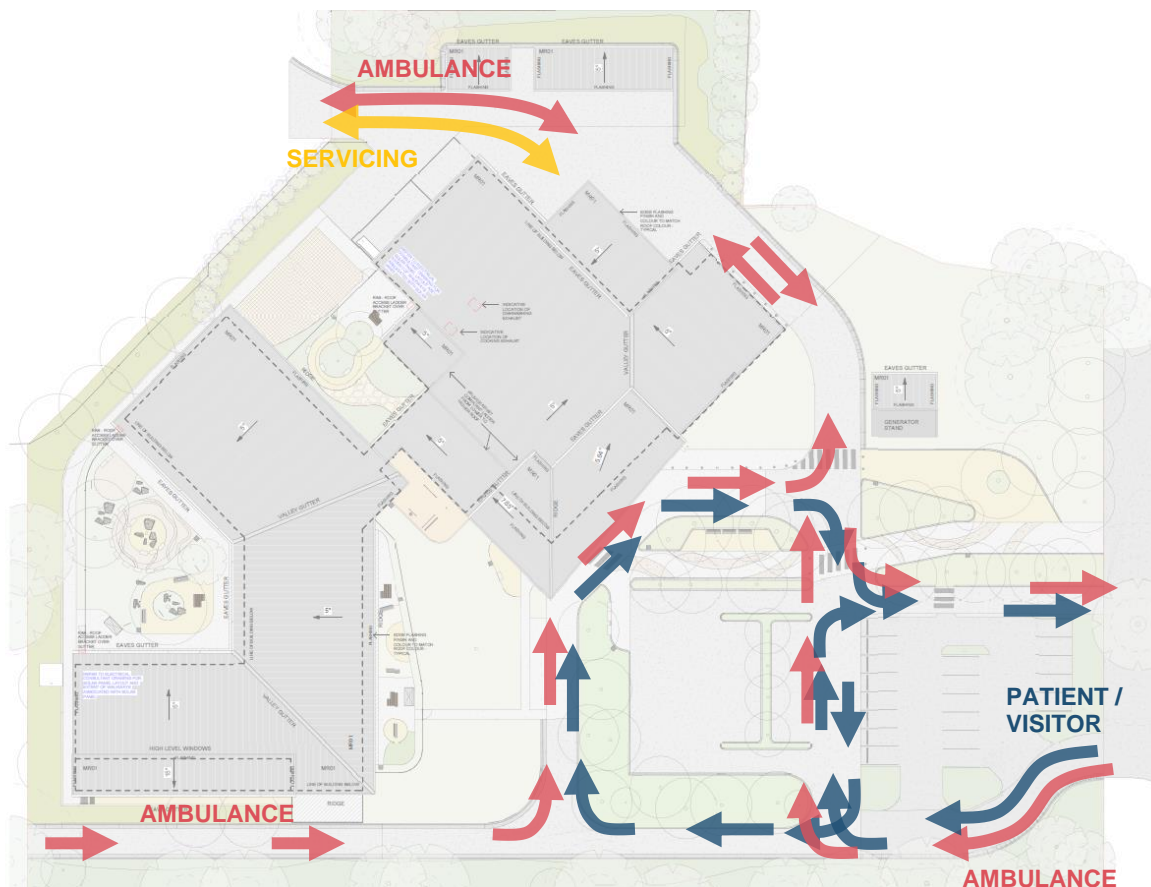
The main site access will continue to be based off Osman Steet with separated entry and exits. The existing main driveway will be converted to an entry only, while the secondary access will be widened as a dedicated exit. Osman Street access will be limited to cars and ambulances.

Larger vehicles used by servicing, waste and the fire brigade will access the site via a new driveway on Queen Street. This provides the most direct access to the north of the site where the loading dock, ambulance bay and booster assembly will be located.

The single-lane driveway to the ambulance station will be retained, but a one-way inbound direction will be imposed to allow for a narrowing of the roadway.

The proposed circulation and access locations are illustrated in **Figure 3-2**.

Figure 3-2 Vehicle access strategy for proposed site



Source: NBRS, 2023

Pedestrian access will be located on Osman Street next to the exit driveway. This footpath passes by main carpark and the provides the most direct access to the main entrance. No dedicated cycling infrastructure will be provided.

3.3 Staffing increase

The BMPS Work Force Plan (2022) projects a staff FTE of 53.56 by 2032 and an additional 0.16 FTE from the visiting staff. This is an increase of 16.88 FTE from the existing roster.

The full roster is not on site simultaneously, and therefore this growth in the staffing levels will translate to an increase of approximately 14 staff on site during the peak period, when morning and afternoon shifts are both present.

3.4 Patient and visitor activity

BMPS will have slightly expanded capacities after the proposed redevelopment. There will be an increase of three inpatient beds, two ambulatory care chairs and two outpatient spaces. The increased patient and associated visitor activity will lead to a minor increase of one person on site at a time when projected from existing patient data.

3.5 Proposed parking provision

To make space for the new buildings, the existing fleet and staff parking will be demolished, removing five fleet spaces and 18 staff spaces. Two spaces in the existing visitor parking area will also be removed to create the new exit route. The lost parking supply will be replaced by the new car parks.

The new carpark will deliver 20 parking spaces for BMPS, two of which will be accessible spaces. In addition to the main carpark, the redevelopment will also deliver new PUDO and special parking spaces outside the main entry, new fleet parking and undercover staff parking spaces. This is an increase of six long term parking spaces. The breakdown of new parking supply is listed in **Table 3-1**.

Table 3-1 Proposed parking supply

Parking asset	No. of spaces
Staff reserved parking (including 3 undercover spaces)	21
Primary parking supply	20
Fleet parking	5
On-street parking (Osman Street)	17
Pick up / Drop off (PUDO)	3
Special parking zone (for patients that may need to walk less, assigned by LHD)	2
Total	68

3.5.1 Electric Vehicle charging points

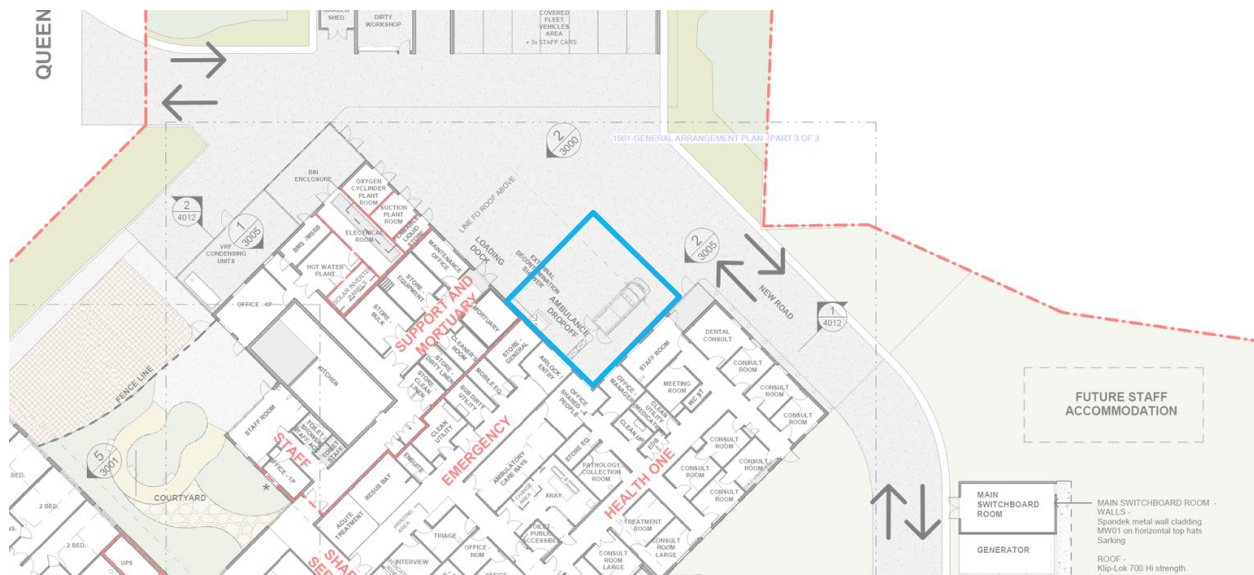
Four electric vehicle charging spaces will be provided as part of the five fleet car parking spaces located in the north part of the site. These charging facilities will not be accessible to the public. This meets HI's DGN 046 which directs hospitals to future proof power and communication conduits for 2 per cent of the total number of car parking spaces.

3.6 Emergency vehicles / patient transport

An ambulance bay will be located on the north side of the health service which has a covered drop-off point and dedicated entry (**Figure 3-3**). Regular ambulances will be able to approach the health service from Osman Street, Oldham Place and Queen Street, with bariatric ambulances accessing the site via Queen Street.

The ambulance bay is able to accommodate two ambulances parked side by side. However, due to the location of the external decontamination shower, only one bay will be used to load and offload patients.

Figure 3-3 Proposed ambulance bay



Source: NBRIS, 2023

3.7 Logistics and waste

The loading dock will be located at the northern “back of house” adjacent to the ambulance bays. The manoeuvring area is large enough to allow for HRV access and parking.

Figure 3-4 Proposed loading dock



Source: NBRIS, 2023

3.8 Staging

The existing BMPS will continue to operate during the redevelopment. Construction will be carried out in three stages:

- Stage 1: Construction of the new Residential Aged Care (RAC) and Inpatient Unit (IPU) which will require demolition of existing fleet parking and staff only parking. This will also remove the roundabout that servicing and waste vehicles use to turn around when entering from Osman Street. As a temporary measure, logistics vehicles will enter the site from Oldham Place and exit from Osman Street, removing the need to turn the vehicle around.

The loss of parking will be partially offset by a temporary car park that has been constructed as part of early works. This temporary car park will provide 10 car parking spaces until the new permanent car park can be constructed. Remaining demand will be adequately catered for by on-street parking on Osman Street directly adjacent to the BMPS site.

- Stage 2: The existing RAC will be decanted and demolished, allowing for the construction of the new hospital building, including the new back of house and ambulance bay. Logistics and ambulance access will be transferred to Queen Street upon completion of this stage.
- Stage 3: The remaining buildings from the existing health service will be demolished, allowing construction of the new carpark and circulation roadways. The temporary carpark will also be decommissioned on completion of this stage.

4.0 Traffic, Transport and Parking Impact Assessment

4.1 Traffic

Access to BMPS will be improved because of the development. PUDDO and parking locations are intuitive and within line of site of the main building entrance, while entry and exits are widened with reduced potential for conflict.

Servicing, waste and ambulance access are improved due to the new access point from Queen Street. The dedicated back of house area means that these larger vehicles will not need to share access with everyday patients and visitors. Ambulances will also have an additional access point, reducing travel distance to the ED facility during emergencies.

There will be a marginal increase of approximately 12 vehicle trips during peak periods as a result of the increased staffing roster and expansion of facilities. These trips will have a negligible impact on the surrounding road network.

4.2 Parking

Peak parking demand after the redevelopment is projected to be 60 including the fleet parking, which can be sufficiently catered by the 65 long term parking spaces on site. Additionally, the peak parking period is transient and parking demand will be significantly lower outside of these hours. The breakdown of projected parking demand can be found in **Table 4-1**.

This parking demand means that the on-street parking supply will continue to be used to serve the hospital. This is an acceptable outcome given how close the on-street parking supply is to the main hospital entrances. Users are already choosing to avoid circulating within the site and park on street due to its convenience.

Table 4-1 Peak parking demand projection post redevelopment

Demand	Demand	Assumption
Staff – Morning and afternoon	43	<ul style="list-style-type: none"> Each staff member drives to work. Peak demand occurs when both morning and afternoon shift are on-site.
Staff - Visiting	4	
Visitors and patient pick up / drop off	5	<ul style="list-style-type: none"> Each bed is assumed to have a visitor every two days, with each visitor staying for a third of the day. Patient bed days assumed to be same as existing at 16.8 days Pick up / drop off assumed to stay for two hours
Outpatients	3	<ul style="list-style-type: none"> Outpatients assumed to stay for two hours.
Fleet	5	<ul style="list-style-type: none"> Fleet parking cannot be used for other purposes so the demand will remain at five despite the vehicles not always being on site
Total	60	

4.3 Walking and cycling

Pedestrian access for BMPS will be similar to the existing layout, with a pedestrian prioritised route from Osman Street to the main hospital entrance. The distance of the main entrance to the street will be slightly reduced and the footpath width is expected to be wider than existing conditions, which is an overall improvement.

No changes are proposed which will impact people who ride.

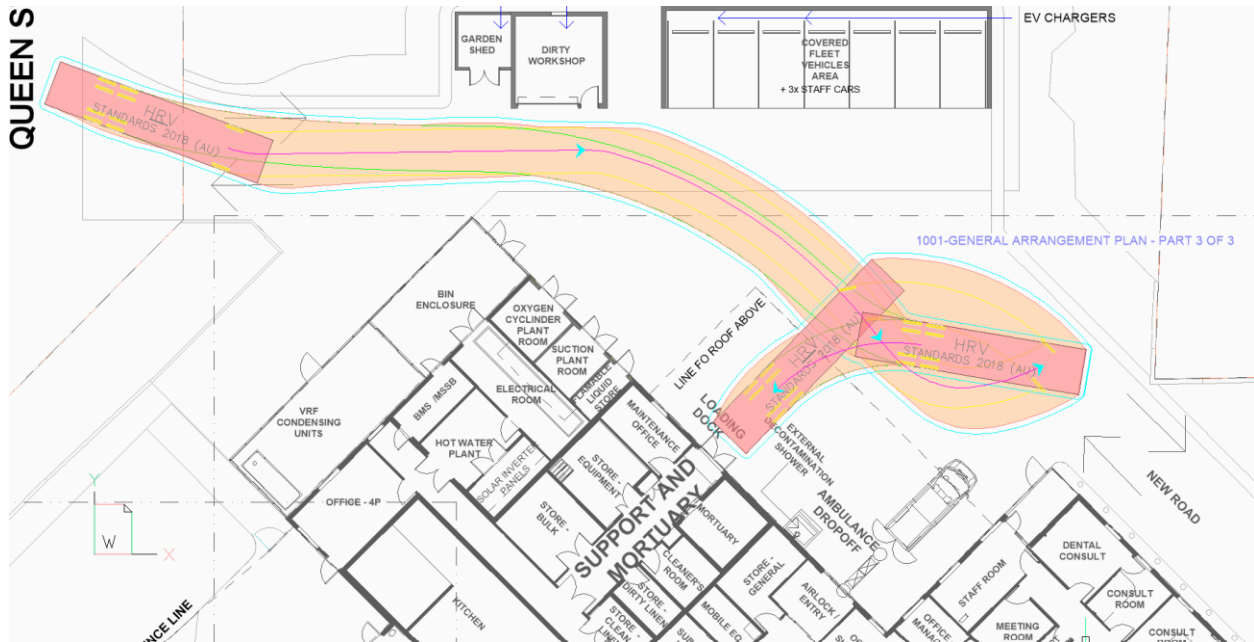
4.4 Public transport

No changes are proposed which will impact public transport services around BMPS.

4.5 Loading dock circulation

Due to the length of the vehicle and loading/unloading space required behind it, a HRV will protrude into the circulation area when parked on site. This is illustrated in **Figure 4-1**.

Figure 4-1 Heavy Rigid Vehicle entry and docking



Source: Base image NBRS, 2023

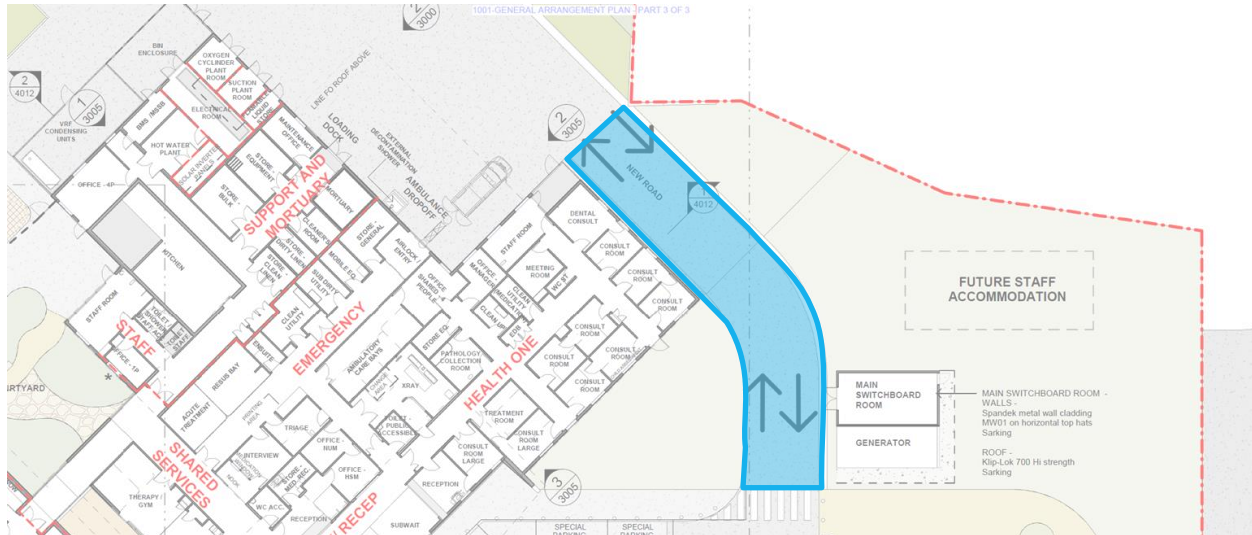
The parked position of the HRV is not expected to have major impacts on circulation due to limited desire lines crossing the loading dock location. Ambulances to the east of the loading dock arrive and depart to the east (through to Osman Street) while the fleet and logistics vehicles will arrive and depart to the west.

A mirror is recommended to assist with sightlines around a parked HRV in the case that a vehicle does need to pass around the vehicle.

4.6 Ambulance access and circulation

The new road linking the south of the site (patient facing areas) to the north of the site (logistics, fleet and ambulance bay) should be restricted to ambulance and service vehicles only. This will ensure that ambulances will face minimal conflict when moving to and from the ambulance bays and minimise the chance of the public accidentally turning into the back of house. Signage should be installed so that road users are aware of this arrangement.

Figure 4-2 Recommended ambulance and service vehicle only access



A mirror should also be installed to assist with sightlines between the new road and the proposed ambulance bay. The ambulance bay is shielded from view by the corner of the building and therefore measures should be implemented to increase awareness of arriving / departing ambulances.

4.7 Construction

A Construction Traffic Management Plan (CTMP) would be developed by the Contractor prior to the start of construction, and updated throughout the project as required. The CTMP would be prepared in consultation with Transport for NSW and Blayney Council and would seek to minimise traffic, transport and parking impacts during the construction stages of the project, especially while the health service remains operational. The CTMP would address aspects such as type of construction vehicles, construction transport routes, dilapidation surveys, traffic control plans, including detours and signage, and details of measures to minimise conflicts with other road users or users of the site.

5.0 Summary

This Traffic, Transport and Parking Assessment Report presents a review of existing traffic and parking operations at the current BMPS facility, describes the planned changes, and assesses the impact of these changes on traffic and transport in and surrounding the proposed facility.

Based on the assessments undertaken, a summary of the impacts are as follows:

- Traffic operation and performance:
 - The proposed development will lead to a marginal increase in trips generated from BMPS while increasing the access options to the site. Traffic will be distributed between Osman Street and Queen Street and the overall impact to the road network will be negligible.
 - The redevelopment is an improvement in access for ambulances, logistics and waste vehicles.
- Circulation and access:
 - The new road linking the front of the health service to the “back of house” should be restricted to ambulance and service vehicle access only to minimise conflicts, and adequately signposted so that it is clear to the public.
 - Mirrors should be installed to provide adequate sightlines around the loading dock and the ambulance bay.
- Parking:
 - Peak parking demand is projected to be 60 including the fleet parking, which can be sufficiently catered by the 66 long term parking spaces available to BMPS. This means that the on-street parking supply will continue to be used to serve the facility, which is an acceptable outcome.
- Public transport, walking and cycling:

There is an improvement to pedestrian access through the construction of a new and wider footpath to the main entrance of the building.

No changes are proposed for public transport or people who cycle.

