

# CESSNOCK HOSPITAL REDEVELOPMENT

REVIEW OF ENVIRONMENTAL EFFECTS  
TRANSPORT IMPACT ASSESSMENT

PREPARED FOR HEALTH INFRASTRUCTURE  
18 NOVEMBER 2024 | 300304237



## Cessnock Hospital Redevelopment

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## Cessnock Hospital Redevelopment

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## **Executive Summary**

### **Overview**

The Cessnock Hospital is a district level hospital within the Hunter New England Local Health District. It provides low acuity medical and sub-acute services to the local community and is networked with Maitland Hospital for higher acuity services, and John Hunter Hospital for Tertiary level services.

The clinical services provided by the project will be generally consistent with what is currently being provided at the Hospital, except changes in services where network efficiencies are identified.

The overall project scope also includes the following:

- Demolition of select existing structures.
- Construction of a new hospital building on the site's northern portion.
- Realignment of internal roads and a new primary vehicular and pedestrian entrance to the hospital campus from Jurd Street.
- Refurbishment of the existing at-grade car park.
- Installation and realignment of selected services.
- Installation of ancillary development including, but not limited to, lighting and signage.
- Landscaping.

The road network surrounding the hospital is comprised of local roads with relatively low traffic volumes throughout the day. Parking is provided on site for staff and visitors, with additional parking available in the surrounding local road network. The site has limited public transport and active transport connections.

Cessnock Hospital currently has 62 beds, and 116 staff (headcount at peak shift changeover). At this stage of planning the Clinical Services Plan (CSP) indicates there will be some minor uplift in services with potentially nine additional beds resulting in a total of 73 beds by 2031. Staff numbers are expected to increase to 151 (headcount at peak shift changeover) by 2031, resulting in an increase of 35 staff. This increase is considered a minor uplift in services, and therefore the redevelopment is anticipated to only result in a minor increase in parking demand and traffic generation for the hospital.

The existing parking demand rates at the hospital are deemed the most appropriate for assessing future demand associated with the redevelopment, noting that existing parking demand rates based on bed numbers for Cessnock Hospital are generally consistent with the regional hospital average. The existing parking demand at the hospital peaked with 147 vehicles observed to be parked on-site, representing around 57 per cent of the total on-site parking supply being occupied. It is understood that Cessnock Hospital currently has around 68 beds, with staffing levels at 116 (headcount at peak shift changeover). Overall, this demand equates to a rate of around 2.16 spaces per bed or 1.26 spaces per staff. Therefore the proposed development should provide a total of 158 to 190 parking spaces. At the completion of the development there will be 250 parking spaces provided on the campus, and therefore accommodates the expected parking demand on site for the development for both cars and any motorcycles.

As part of the redevelopment of the hospital the new front entry will be via Jurd Street and not on View Street. Therefore it is recommended that, in consultation with TfNSW and the local bus operator, the existing 161 bus route be redirected via Jurd Street, where a new bus stop will be built as part of the project, near the new hospital entry.



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# 1 Introduction

This Traffic and Transport Assessment has been prepared by Stantec Australia (Stantec) on behalf of Health Infrastructure (HI) to assess the potential environmental impacts that could arise from the redevelopment of the Cessnock Hospital health service at 24 View Street, Cessnock.

This report has been prepared to assess the traffic and transport impacts of the proposed redevelopment of the Cessnock Hospital. This report accompanies a Review of Environmental Factors that seeks approval for the construction and operation of a new two-storey clinical services building including:

- Demolition of select existing structures.
- Construction of a new hospital building on the site's northern portion.
- Realignment of internal roads and a new primary vehicular and pedestrian entrance to the hospital campus from Jurd Street.
- Refurbishment of the existing at-grade car park.
- Installation and realignment of selected services.
- Installation of ancillary development including, but not limited to, lighting and signage.
- Landscaping.

Refer to the Review of Environmental Factors prepared by Ethos Urban for a full description of works.

## 1.2 Site Description

The site is located at 24 View Street, Cessnock, in the Cessnock Local Government Area. It is occupied by Cessnock Hospital health service, a district level hospital in the Hunter New England Local Health District. The site comprises of the following lots:

- Lot 2 DP1173784
- Lot 7 DP13203
- Lot 8 DP13203
- Lot 1 DP103663
- Lot 10 DP5442
- Lot B DP103664
- Lot 2 Section 20 DP5442
- Lot 1 DP254743
- Lot 11 DP882585

An aerial image of the site is shown in Figure 1.



Figure 1: Cessnock Hospital and its environs



Source: Nearmap

### 1.3 Statement of Significance

Based on the identification of potential issues, and an assessment of the nature and extent of the impacts of the proposed development, it is determined that:

The extent and nature of potential impacts are low and the impact of the development itself and will not have significant adverse effects on the locality, community and the environment;

Potential impacts can be appropriately mitigated or managed to ensure that there is minimal effect on the locality, community.

### 1.4 Purpose of this Report

This report sets out an assessment of the anticipated transport implications of the proposed development, including consideration of the following:

- existing traffic and parking conditions surrounding the site
- suitability of the proposed parking in terms of supply (quantum) and layout
- service vehicle requirements
- pedestrian and bicycle requirements
- the traffic generating characteristics of the proposed development
- suitability of the proposed access arrangements for the site





- the transport impact of the development proposal on the surrounding road network.

## **1.5 References**

In preparing this report, reference has been made to the following:

- an inspection of the site and its surrounds
- Cessnock Development Control Plan 2010 (DCP 2010)
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 1: Off-Street Car Parking AS/NZS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2018
- Australian Standard / New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS 2890.6:2022
- traffic and car parking surveys undertaken by Stantec as referenced in the context of this report
- other documents and data as referenced in this report.



## 2 Existing Conditions

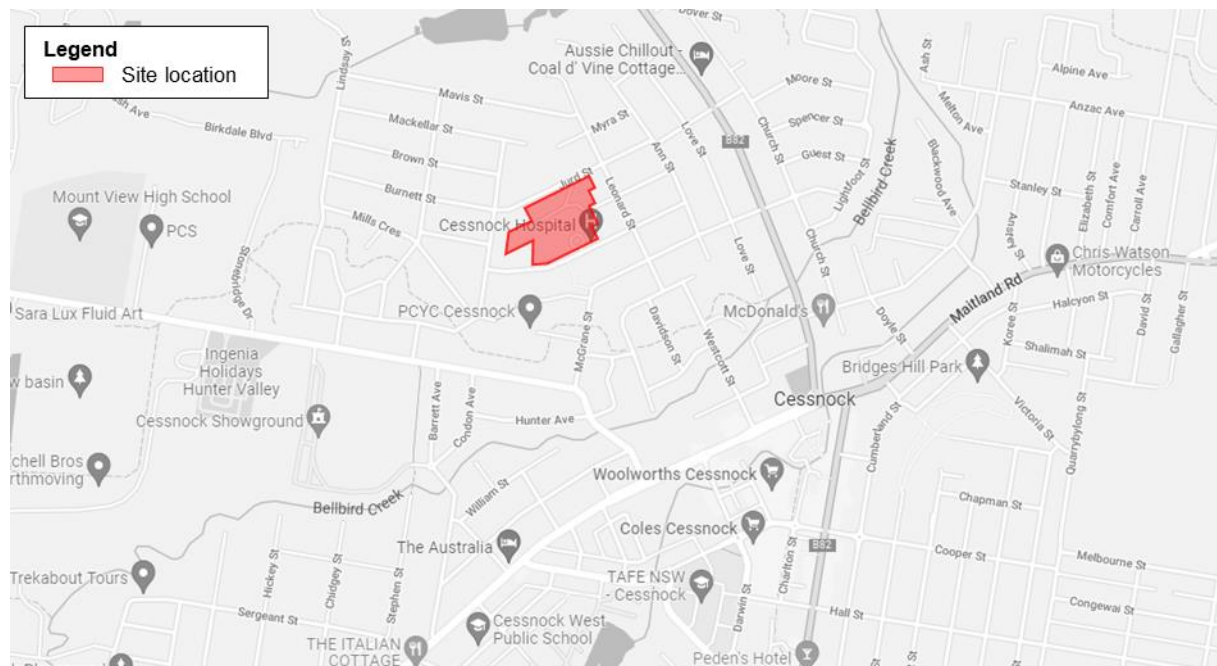
### 2.1 Location

Cessnock Hospital is located at 24 View Street, Cessnock within Cessnock Local Government Area. The hospital has a frontage of approximately 220 metres to Jurd Street along the northern boundary of the site, 215 metres to View Street along the southern boundary of the site, while Foster Street provides direct access to the hospital via the eastern boundary of the site.

The surrounding properties predominantly include low density residential uses, with Cessnock City Centre located around two kilometres south-west of the site.

The location of the subject site and its surrounding environs are shown in Figure 2.

**Figure 2: Cessnock Hospital and its environs**



### 2.2 Transport Network

#### 2.2.1 ROAD HIERARCHY

Roads are classified according to the functions they perform. The main purpose of defining a road's functional class is to provide a basis for establishing the policies which guide the management of the road according to their intended service or qualities.

In terms of functional road classification, State roads are strategically important as they form the primary network used for the movement of people and goods between regions, and throughout the State. Transport for NSW (TfNSW) is responsible for funding, prioritising and carrying out works on State roads. State roads generally include roads classified as freeways, state highways, and main



## **Cessnock Hospital Redevelopment**

### **2 Existing Conditions**

roads under the Roads Act 1993, and the regulation to manage the road system is stated in the Australian Road Rules.

TfNSW defines four levels in a typical functional road hierarchy, ranking from high mobility and low accessibility, to high accessibility and low mobility. These road classes are:

- Arterial Roads – Controlled by TfNSW, typically no limit in flow and designed to carry vehicles long distance between regional centres.
- Sub-Arterial Roads – Managed by either Council or TfNSW under a joint agreement. Typically, their operating capacity ranges between 10,000 and 20,000 vehicles per day, and their aim is to carry through traffic between specific areas in a sub region or provide connectivity from arterial road routes (regional links).
- Collector Roads – Provide connectivity between local sites and the sub-arterial road network, and typically carry between 2,000 and 10,000 vehicles per day.
- Local Roads – Provide direct access to properties and the collector road system and typically carry between 500 and 4,000 vehicles per day.

#### **2.2.2 SURROUNDING ROAD NETWORK**

##### **View Street**

View Street is a local road aligned in an east-west direction along the southern boundary of the site. It is a two-way road with one lane in each direction, set within an approximately 12-metre-wide carriageway. Unrestricted kerbside parking is available on the southern side of the road whilst the northern side has 2P parking restrictions from 8:30am to 6pm on weekdays and 8:30am to 12:30pm on Saturday. View Street has a posted speed limit of 50 kilometres per hour and is shown in Figure 3.

##### **Jurd Street**

Jurd Street is a local road aligned in an east-west direction along the northern boundary of the site. It is a two-way road with one lane in each direction, set within an approximately 10.5-metre-wide carriageway. Jurd Street facilitates access to the main hospital car park on the western side of the site. Unrestricted kerbside parking is available on both sides of the road. Jurd Street has a posted speed limit of 50 kilometres per hour and is shown in Figure 4.

##### **Leonard Street**

Leonard Street is a local road aligned in a north-south direction to the east of the site. It is a two-way road with one lane in each direction, set within an approximately 12-metre-wide carriageway. Unrestricted kerbside parking is available on both sides of the road and has a speed limit of 50 kilometres per hour and is shown in Figure 5.

##### **Foster Street**

Foster Street is a local road aligned in an east-west direction providing direct access into the hospital along the site's eastern boundary. It is a two-way road with one lane in each direction, set within an approximately 11-metre-wide carriageway. Foster Street facilitates access to eastern car park



## Cessnock Hospital Redevelopment 2 Existing Conditions

adjacent to the Emergency Department, which in turn also provides connection to the main hospital car park on the western side of the site. Unrestricted and accessible kerbside parking is available on both sides of the road. Foster Street has speed limit of 50 kilometres per hour and is shown in Figure 6.

**Figure 3: View Street (looking west)**



**Figure 4: Jurd Street (looking west)**



**Figure 5: Leonard Street (looking north)**



**Figure 6: Foster Street (looking east)**

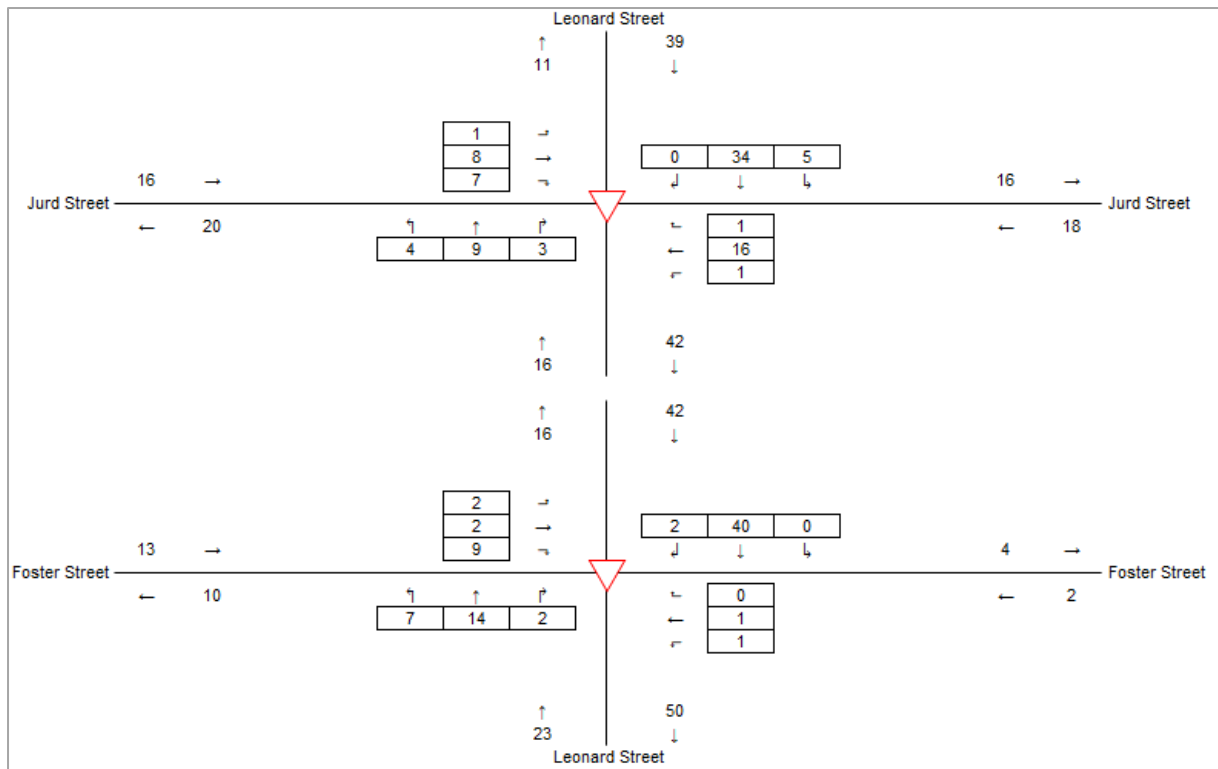


### 2.3 Traffic Volumes

Stantec completed spot counts at the Leonard Street/ Jurd Street and Leonard/ Foster Street intersections on Wednesday 19 October 2022 from 2:30pm-3:00pm which corresponded with when peak activity was observed to occur at the hospital car park on Foster Street. A total of 23 vehicle trips were recorded on Foster Street during the 30-minute period, with the majority of these associated with the hospital. The recorded traffic volumes at the nominated intersections during the 30-minute period are shown in Figure 7.



**Figure 7: Existing PM peak traffic volumes (30 minutes)**



Based on the above, the Foster Street car park is estimated to generate around 46 vehicle trips during the hospital peak hour (based on doubling the 30-minute counts).

## 2.4 Intersection Operation

Noting the roads surrounding the hospital are local roads with relatively low traffic volumes throughout the day, a site visit completed in October 2022 confirmed that key surrounding intersections including Jurd Street/ Leonard Street, Leonard Street/ Foster Street and View Street/ Leonard Street currently operate well, with minimal queues and delay observed on all approaches to the intersections throughout the day.

## 2.5 Site Access

Main vehicular access to the Hospital is via View Street and Foster Street coming off Leonard Street and Buckland Avenue. Back of house entry to the site is available via Jurd Street and two key drop off zones are located at ED and the main hospital entry at View Street.



## Cessnock Hospital Redevelopment 2 Existing Conditions

Figure 8: Aerial view of subject site and access points



Base Image source: Nearmap

### 2.6 Car Parking

Stantec completed car parking demand surveys on Wednesday 19 October 2022 for off-street car parking provided at the hospital and on-street along the frontages of the hospital.

The car parking survey area is shown indicatively in Figure 9, with the breakdown of the car parking supply, corresponding restrictions and parking demand detailed in Table 1.



## Cessnock Hospital Redevelopment 2 Existing Conditions

Figure 9: Car parking survey area



Base image source: Nearmap



**Cessnock Hospital Redevelopment**  
**2 Existing Conditions**

**Table 1: Car parking supply and demand**

Location	Area	Restriction/ description	Supply	Demand						
				9am	10am	11am	12pm	1pm	2pm	3pm
Off-street	A	Ambulance	2	0	0	1	0	0	0	0
		Accessible	3	2	2	1	1	1	1	0
		VMO	3	2	2	2	2	2	0	0
		Standard	30	29	28	29	26	26	26	24
	B	Standard	140*	63	65	61	58	56	65	55
		Trades only	2	1	1	1	2	1	2	2
		Fleet	18	11	8	8	12	15	15	15
	C	Standard/ loading	3	2	2	2	2	1	0	0
		Trades only	5	3	3	3	4	3	3	5
	D	Pathology	2	0	0	0	1	0	0	1
	E	Standard	17	10	10	10	11	13	13	13
	F	Doctors	4	3	3	3	3	3	3	2
		General Manager HVS	1	1	1	1	1	1	1	1
		Hospital Service Manager	1	0	0	0	1	0	0	0
	G	Dental Clinic accessible	2	2	0	0	2	1	2	1
		Dental Clinic standard	10	7	8	8	7	5	5	5
Community Health accessible		1	1	0	0	1	0	1	0	
Community Health standard		12	10	10	10	10	10	9	8	
<b>Off-street total</b>			<b>254</b>	<b>147</b>	<b>143</b>	<b>139</b>	<b>144</b>	<b>138</b>	<b>146</b>	<b>132</b>
On-street	Jurd Street	Unrestricted	67	11	13	13	12	12	12	8
	Foster Street	Unrestricted	17	10	14	14	15	13	13	11
		Accessible	2	0	1	1	1	0	2	0
	Leonard Street	Unrestricted	36	4	5	5	5	5	3	3
	View Street	2P (8:30am-6pm Mon-Fri, 8:30am-12:30pm Sat)	20	2	5	5	5	7	5	2
		Unrestricted	36	14	15	15	11	11	13	12
	<b>On-street total</b>			<b>178</b>	<b>41</b>	<b>53</b>	<b>53</b>	<b>49</b>	<b>48</b>	<b>48</b>

\* Current line marking for Area B is faded and as such, parking supply has been estimated based on the number of spaces that would likely be achievable within the available area.





## **Cessnock Hospital Redevelopment**

### **2 Existing Conditions**

Table 1 indicates that peak parking demand at the hospital peaked at around 9am with 147 vehicles observed to be parked on-site, representing around 57 per cent of the total on-site parking demand being occupied. It is understood that Cessnock Hospital currently has around 68 beds and 116 staff (headcount at peak shift changeover). Overall, this demand equates to a rate of around 2.14 spaces per bed.

On-street parking demand was relatively low throughout the day, with peak demand generally equating to only around 30 per cent of the total available on-street parking supply along roads surrounding the hospital.

### **2.7 Public Transport**

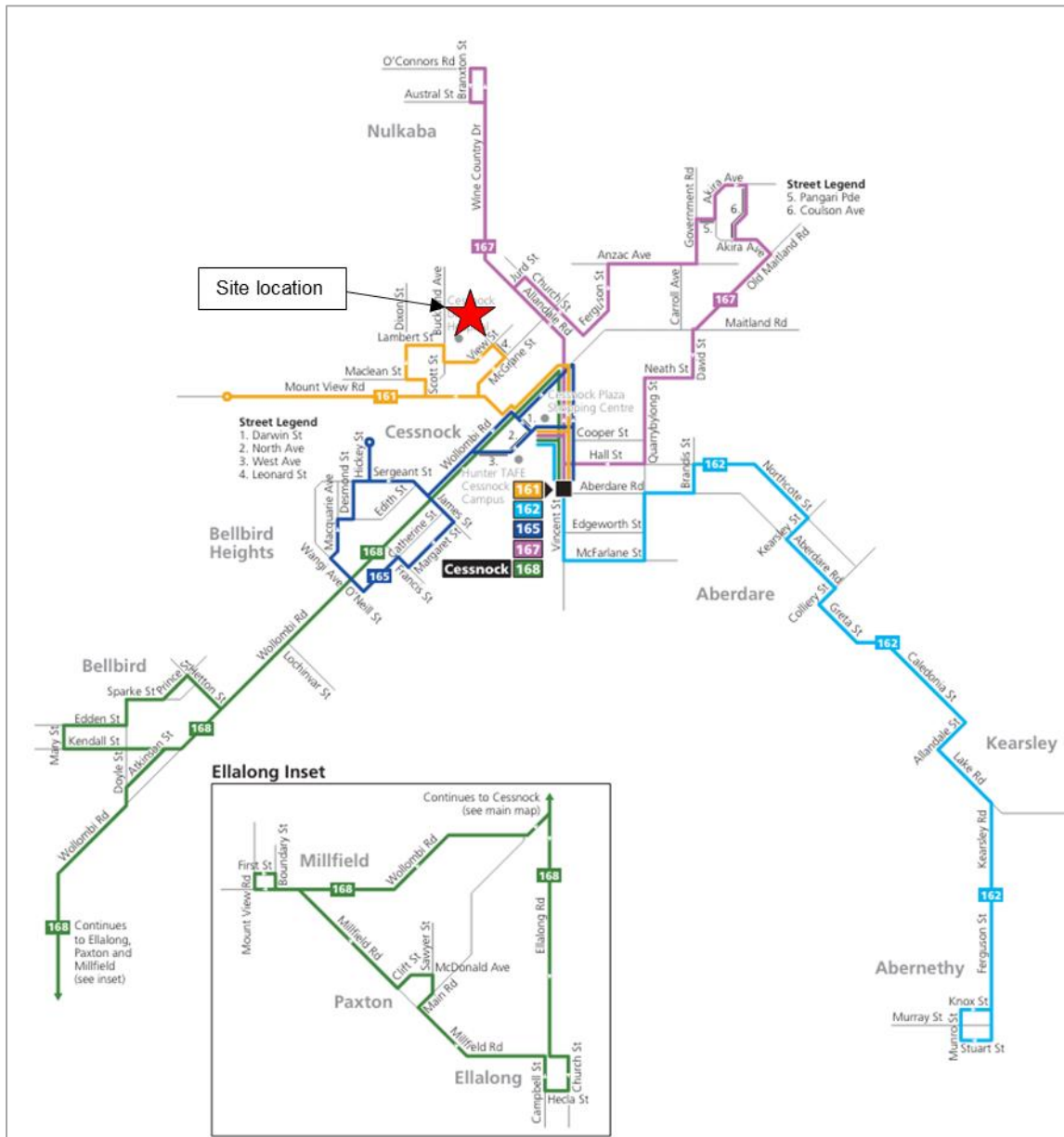
Public transport servicing the site is quite limited, with the 161 bus route the only service providing direct connection to the hospital bus stop on View Street. The 161 is a loop service that runs from Cessnock to Hospital Hill and Vineyard Grove, with only four services throughout the day. The surrounding public transport network is shown indicatively in Figure 10.



# Cessnock Hospital Redevelopment

## 2 Existing Conditions

Figure 10: Surrounding public transport network



Base image source: <https://transportsw.info/documents/timetables/42-161-Cessnock-to-Hospital-Hill-Vineyard-Grove-Loop-Service-20221010-20221216.pdf>, accessed June 2024

## 2.8 Walking and Cycling Infrastructure

Pedestrian infrastructure near the site is fairly limited, with pedestrian paths generally only provided on View Street. There is a pedestrian (zebra) crossing on View Street connecting the hospital to the south side of View Street as shown in Figure 12.

There is limited cycling infrastructure near the hospital, with cyclists generally required to mix with traffic on-road.



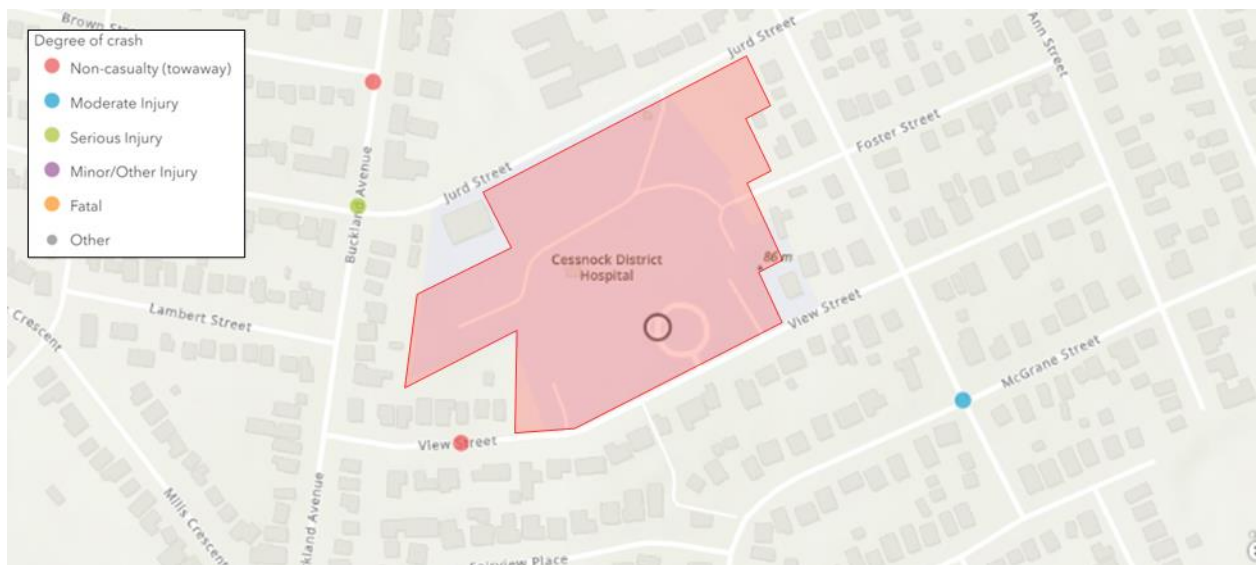
Figure 11: View Street pedestrian (zebra) crossing



## 2.9 Crash History

An analysis of the most recent five-year period of available crash data from 2018 to 2022 has been undertaken based on crash data obtained from the TfNSW Centre for Road Safety for the roads surrounding the site, this is the most recent available as of August 2024. The locations and severity of the crash data for the five-year period is shown in Figure 12.

Figure 12: Crash map from 2018 to 2022



Base image source: <https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/index.html>, accessed August 2024

**Cessnock Hospital Redevelopment**  
**2 Existing Conditions**

**Table 2: Recorded crashes from 2018 to 2022**

Year	Location	Severity	Description
2019	McGrane Street/ Leonard Street	Moderate injury	Collision between two vehicles travelling in adjacent directions (cross traffic)
2019	View Street	Non-casualty	Vehicle left carriageway and collided with an object or parked vehicle
2021	Buckland Avenue/ Jurd Street	Serious injury	Collision between two vehicles travelling in adjacent directions (cross traffic)
2022	Brown Street/ Buckland Avenue	Non-casualty (towaway)	Vehicle left carriageway collided within an object or parked vehicle

Considering the limited number of crashes that have occurred over the five-year study period and that all these crashes have occurred in separate locations, the available crash data does not indicate there is an existing road safety issue near the site.



### **3 Development Proposal**

The Cessnock Hospital Redevelopment will provide contemporary facilities and models of care, in a secure and safe environment for both patients and staff through asset replacement.

The clinical services provided by the project will be generally consistent with what is currently being provided at the Hospital, except changes in services where network efficiencies are identified.

The project scope includes the following clinical services:

- Emergency Department (ED)
- Medical Imaging
- Perioperative Suite
- Sterilizing Services Unit (SSU)
- 2 x 28 Bed Inpatient Units (IPUs)
- Pharmacy
- Mortuary
- Front of House (FOH) services

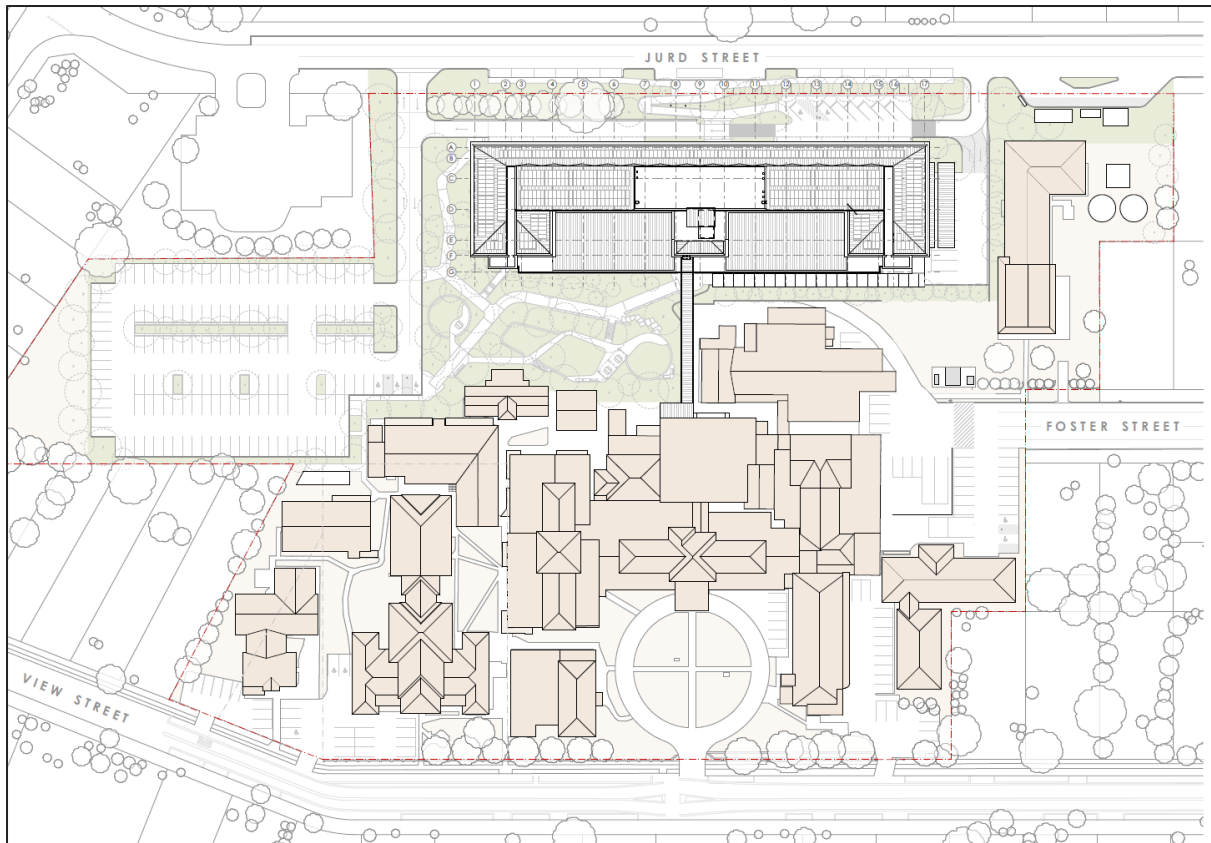
The overall project scope also includes the following:

- Demolition of select existing structures.
- In-ground infrastructure and enabling works
- A new acute services building containing the above clinical services
- A new primary vehicular and pedestrian entrance to the hospital campus from Jurd Street
- New vehicular drop-off
- Refurbishment of the existing on-grade car park
- A new connection between the new hospital building and the existing
- Landscaping.



# Cessnock Hospital Redevelopment 3 Development Proposal

Figure 13: Site Plan



Source: Site Plan, REF Planning Submission Draft 3, dated 3 October 2024, prepared by Fitzpatrick + Partners



## 4 Parking

### 4.1 Car Parking Requirements

#### 4.1.1 OVERVIEW

This section outlines the various options for determining suitable car parking requirements for this development based on:

- Cessnock DCP 2010
- Existing hospital parking supply ratios
- Transport for NSW Guide to Traffic Generating Developments 2002 (Guide 2002).

Cessnock Hospital currently has 62 beds, and 116 staff (headcount at peak shift changeover). At this stage of planning the Clinical Services Plan (CSP) indicates there will be some minor uplift in services with potentially nine additional beds resulting in a total of 73 beds by 2031. Staff numbers are expected to increase to 151 (headcount at peak shift changeover) by 2031, resulting in an increase of 35 staff. This increase is considered a minor uplift in services, and therefore the redevelopment is anticipated to only result in a minor increase in parking demand and traffic generation for the hospital.

There is not expected to be any increase to existing operational/ fleet vehicles.

#### 4.1.2 CESSNOCK DEVELOPMENT CONTROL PLAN 2010

The parking requirements for a hospital facility is outlined in the Cessnock Development Control Plan 2010 (DCP 2010). The car parking requirements are summarised in Table 3.

**Table 3: DCP 2010 car parking requirements**

Use	Car parking rate
Hospital	1 space per 2 employees plus 1 space per 5 beds

Based on the DCP 2010, and a total of 151 staff and 73 beds the hospital requires a total of 91 car spaces.

#### 4.1.3 TFNSW GUIDE TO TRAFFIC GENERATING DEVELOPMENTS

Car parking requirements for different development land uses is also set out in the Guide 2002. The rate closest to the specified land use is the rate provided for private hospitals and is outlined as follows:

$$\text{peak parking accumulation (PPA)} = -19.56 + 0.85B + 0.27ASDS$$

where 'B' represents number of beds and 'ASDS' is the average staff per day shift.

The above formula estimates that the project is to provide a total of 83 parking spaces on site.



#### 4.1.4 EXISTING HOSPITAL PARKING SUPPLY RATIOS

We have reviewed several NSW regional hospital examples to establish a ratio between parking supply, the number of staff and number of beds, summarised in Table 4.

**Table 4: Car parking demand ratios for NSW Hospitals**

Car parking ratio	Cessnock	Muswell-brook	Bowral	Tumut	Coffs Harbour	New Maitland	Range	Average
Spaces per staff (includes public provision)	1.26	0.78	0.81	0.66	1.05	0.71	0.66-1.05	0.80
Spaces per bed (includes staff provision)	2.16	2.95	2.08	1.08	2.86	2.42	1.08-2.95	2.26

The existing parking demand rates at the hospital is considered to be the most appropriate for assessing future demand associated with the redevelopment, noting that existing parking demand rates based on bed numbers for Cessnock Hospital are generally consistent with the regional hospital average.

As outlined in Section 2.6 the existing parking demand at the hospital peaked with 147 vehicles observed to be parked on-site, representing around 57 per cent of the total on-site parking supply being occupied. It is understood that Cessnock Hospital currently has around 68 beds, with staffing levels at 116 (headcount at peak shift changeover). Overall, this demand equates to a rate of around 2.16 spaces per bed or 1.26 spaces per staff.

Based on the above, with the proposed development a total of 158 to 190 parking spaces are required on site. At the completion of the development there will be 250 parking spaces provided on the campus, and therefore accommodates the expected parking demand on site for the development.

#### 4.1.5 ACCESSIBLE SPACES

Accessible car parking requirements for different development types are set out in the National Construction Code (NCC) 2022.





**Table 5: Accessible parking requirement NCC 2022 <sup>[2]</sup>**

<b>Class 9a <sup>[1]</sup></b>	<b>No. of car parking spaces required</b>
(a) Hospital (non-outpatient area)	1 space for every 100 car parking spaces or part thereof
(b) Hospital (outpatient area)	
(i) up to 1000 car parking spaces; and	1 space for every 50 car parking spaces or part thereof
(ii) for each additional 100 car parking spaces or part thereof in excess of 1000 car parking spaces	1 space
(c) Nursing home	1 space for every 100 car parking spaces or part thereof
(d) Clinic of day surgery not forming part of a hospital	1 space for every 100 car parking spaces or part thereof

<sup>[1]</sup> Class 9a is defined in the BDA 2004 as a *health care building*

<sup>[2]</sup> National Construction Code (NCC 2019 Volume 1, Amendment 1 Part D3, Table D3.5. [Part D4 Access for people with a disability | NCC \(abcb.gov.au\)](#)

Based on a proposed supply of 250 parking spaces, five accessible spaces are required. Ten accessible spaces have been provided with two located within the Foster Street carpark, three within the main carpark, three within the community and oral health carpark and the remaining located near the drop off area.

Accessible spaces are required to be 2.5 metres wide and 5.4 metres long with an adjacent shared area of 2.5 metres wide by 5.4 metres next to the parking space in accordance with the SHCPIP Hospital Car Park Guidelines, noting this exceeds the minimum requirements set out in the Australian Standard for Off Street Car Parking for People with Disabilities (AS/NZS 2890.6:2009).

#### **4.1.6 MOTORCYCLE PARKING**

DCP 2010 provides a rate of 1 motorcycle space per 20 car parking spaces provided for hospitals. Based on a parking supply of 250 car parking spaces, the hospital requires 13 motorcycle spaces. However, the DCP parking calculations result in a requirement for 91 parking spaces, which is significantly less than the 250 spaces provided. Site observations indicate that the use of motorcycles is sporadic and typically low, correlating with the hospital location, staff catchment and relative safety of the surrounding road network for motorcycle use. As such, motorcycle parking is accommodated within the available car parking supply (i.e. motorcycles can parking in car spaces), providing flexibility for users.

#### **4.1.7 ELECTRIC CHARGING STATIONS**

Health Infrastructure's SHCPIP, Hospital Car Park Design Guidelines V1.2 (May 2019) note that Electric Vehicle (EV) charging is to be considered on a case-by-case basis in consultation with the LHD. As a minimum, provision for later installation of parking equipment shall be made, including provisions for electric car charging system, associated access control and potential dedicated transformer.



## Cessnock Hospital Redevelopment

### 4 Parking

Health Infrastructure Design Guidance Note 46<sup>1</sup> outlines a minimum requirement for provision of electric charging stations for at least two per cent of total parking spaces. The Design Guidance Note states "LHD's can then chose to install charging stations and additional points as they see appropriate."

The HNELHD Sustainable Healthcare Together Towards Zero strategy indicates a move towards HNE fleet vehicles being hybrid electric and the implementation of e-charging stations across HNE facilities.

Electrical supply is being provided to allow the installation of up to 20 EV chargers on the campus. The number of EV chargers installed will be subject to further review in consultation with the LHD and to meet their fleet requirements.

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<sup>1</sup> Design Guidance Note No 046, Electric Vehicle Charge Points in Hospital Car Parks, Version 2, Health Infrastructure, 7 July 2 022



## 5 Traffic Impact

### 5.1 Design Rates

The Guide 2002 has been referenced to understand the impact of the proposed development. The trip rate closest to the specified land use is the rate provided for private hospitals.

The following trip generation rates based on the number of beds and the average number of staff per weekday shift:

- Peak Vehicle Trips (PVT) =  $-14.69 + 0.69B + 0.31ASDS$
- Morning Vehicle Trips (MVT) =  $-10.21 + 0.47B + 0.06ASDS$
- Evening Vehicle Trips (EVT) =  $-2.84 + 0.25B + 0.40ASDS$ .

where 'B' represents the number of beds proposed and 'ASDS' is the average staff per day shift.

### 5.2 Estimated traffic generation

As discussed, it is known that the redevelopment will accommodate 73 inpatient beds and 151 FTE staff. Table 6 provides a summary of the expected existing and proposed traffic generation.

**Table 6: Existing and proposed traffic generation**

	Traffic Generation (veh/h)		
	Current	Proposed	Net Increase
Peak vehicle trips (PVT)	64	82	<b>18</b>
Morning vehicle trips (MVT)	26	33	<b>7</b>
Evening vehicle trips (EVT)	59	76	<b>17</b>

As outlined in Table 6 the proposal is expected to increase the current on-site traffic generation by around 18 vehicles in the peak hour.

Based on the main entrance moving to Jurd Street and the location of parking within the site there is expected to be a redistribution of traffic from what is currently occurring. Based on the total peak vehicle trips proposed as outlined in Table 6 the expected traffic distribution post development is as follows:

- Jurd Street – 70 per cent = 57 vehicles per hour
- Forester Street – 15 per cent = 12 vehicles per hour
- View Street – 15 per cent = 12 vehicles per hour.

Observations of the surrounding road network indicate there is spare capacity to accommodate the additional 18 vehicles in the peak hour and the redistribution of existing trips around the site with the new main entrance being from Jurd Street.

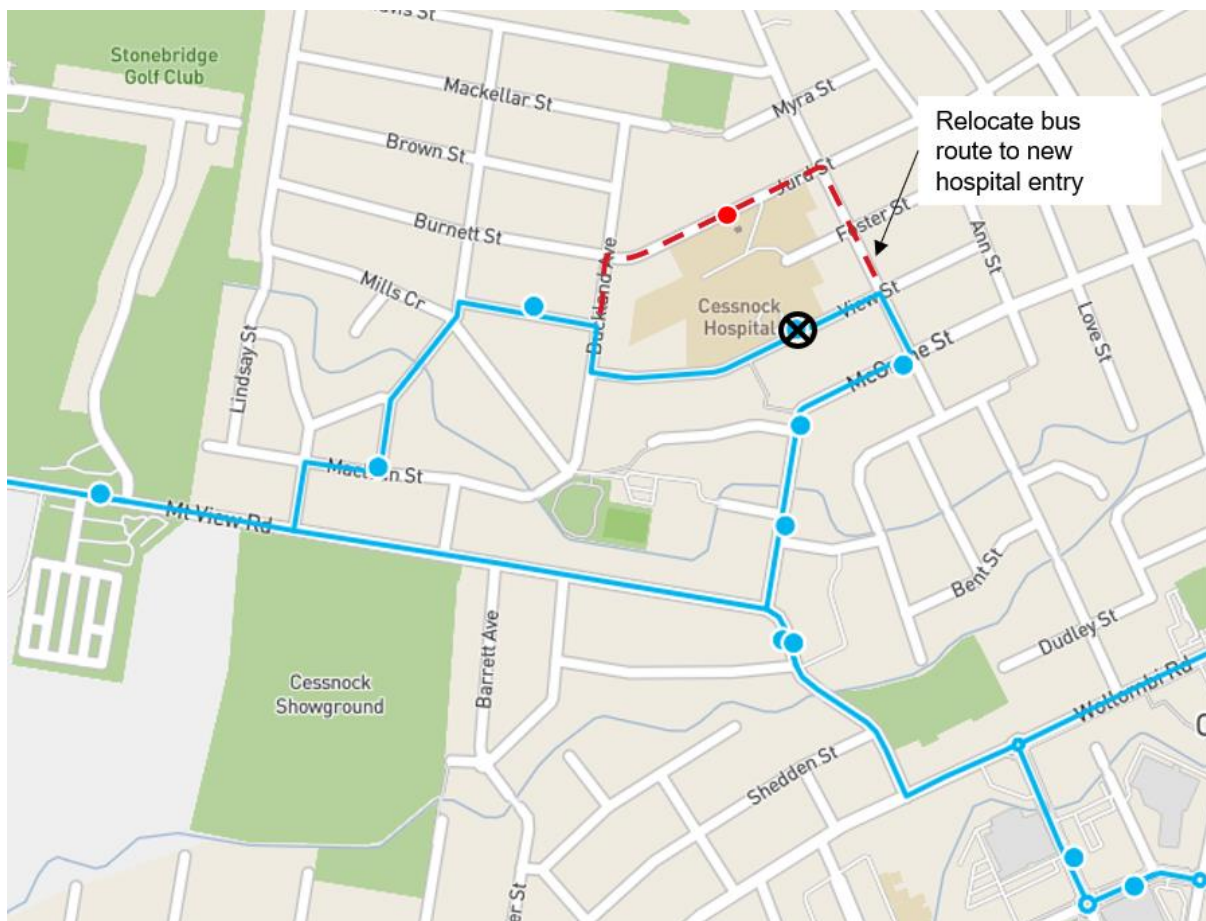


### 5.3 Recommended Changes to Public Transport

As outlined in Section 2.7 public transport servicing the site is limited, with the 161 bus route being the only service providing direct connection to the existing hospital bus stop on View Street.

As part of the redevelopment of the hospital the new front entry will be via Jurd Street and not on View Street, therefore it is recommended that the existing 161 bus route be redirected via Jurd Street with a new bus stop located near the new hospital entry as shown in Figure 14. This adjustment will ensure that public transport users have easy and direct access to the hospital, reducing the need for long walks or transfers. As bus routes are the responsibility of TfNSW and the local bus operator, consultation will be required prior to the opening of the new hospital entry to facilitate this bus service change.

**Figure 14: Proposed Bus Route/ Stop Relocation**



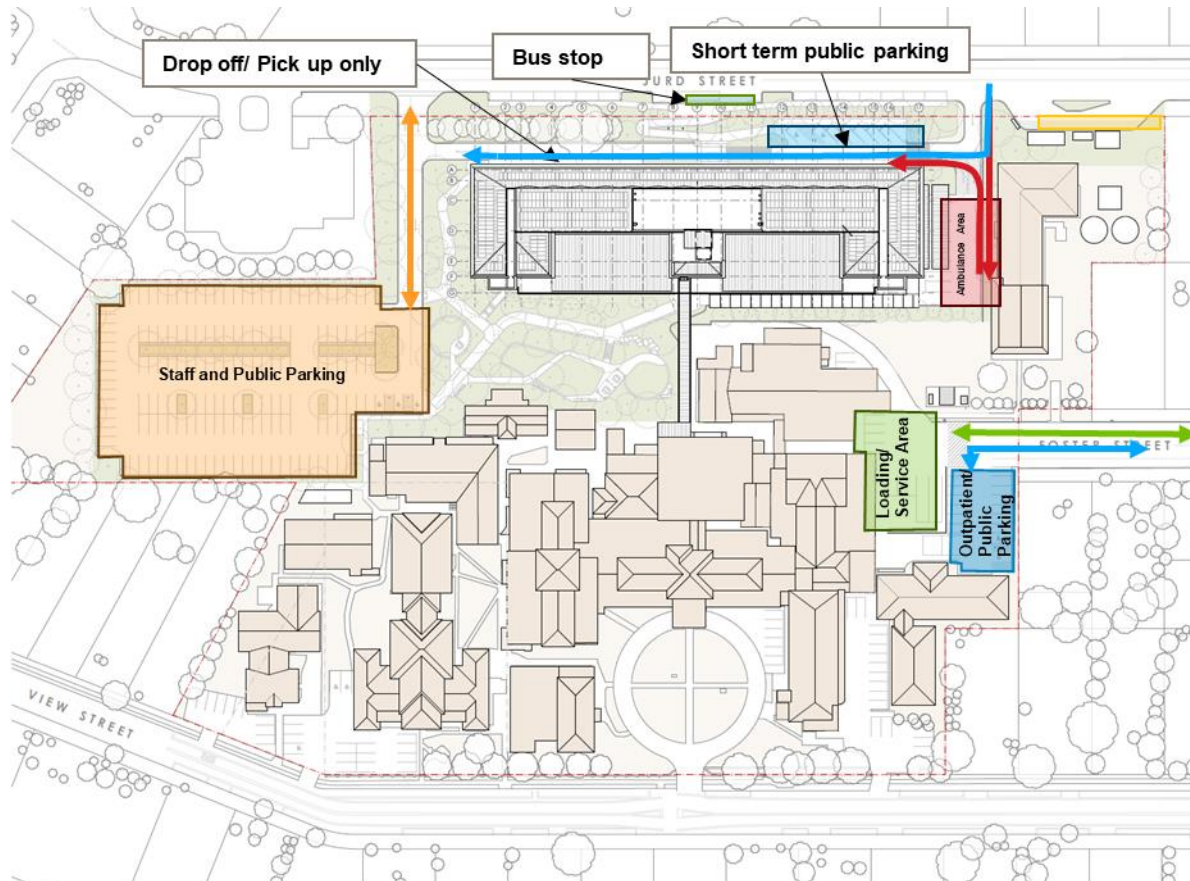
Base image source: [161-Cessnock to Hospital Hill & Vineyard Grove \(Loop Service\) | transportnsw.info](https://transportnsw.info)

## 6 Design Review

### 6.1 Proposed Vehicle Access Arrangements

An overview of the proposed site access and parking plan is provided in Figure 15.

Figure 15: Vehicle Access Plan



Base image source: Site Plan Fitzpatrick + Partners

The hospital main entry will relocate from View Street to Jurd Street as part of the redevelopment with drop off and pick up occurring along the building frontage and adjacent short term angle parking. For longer stay parking visitors would proceed to the combined staff and public parking area on the western side of the site.

A new bus stop will be constructed as part of the project on View Street, adjacent to the new hospital entrance. A dedicated bus bay will be provided on the northeastern corner of the redeveloped hospital.

Ambulance access will also occur from Jurd Street to a dedicated ambulance bay area adjacent to the new Emergency Department (ED).



Parking for outpatient and community health services will remain as is and accessed from Foster Street.

A dedicated loading/ service area will be provided with access to and from Foster Street.

## **6.2 Car Parking**

### **6.2.1 OVERVIEW**

The design of each parking area seeks to meet the requirements outlined in the following documents:

- Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009)
- Sustainable Hospital Car Park Investment Program Volume 3, Hospital Car Park Design Guidelines V1.2, Health Infrastructure, May 2019.

A compliance review of the design plans is provided in Appendix A. On the basis of the compliance review, Stantec confirms that the design is capable of complying with the above requirements and the specific dimensions set out in the following sections.

### **6.2.2 STAFF AND PUBLIC CAR PARK**

Parking spaces in the staff and public car park near Jurd Street are designed to be at least 2.6 metres wide 5.4 metres wide which caters for both staff and visitor parking requirements to meet the Health Infrastructure guidelines. Internal aisle widths are designed to be a minimum of six metres which meets the minimum requirements of AS/NZS2890.1.

Accessible spaces are required to be 2.5 metres wide and 5.4 metres long with an adjacent shared area of 2.5 metres wide by 5.4 metres next to the parking space in accordance with the SHCPIP Hospital Car Park Guidelines.

## **6.3 Pick up/ Drop off area**

The redevelopment will provide a pick-up and drop off area adjacent to the new building entrance. The drop off area is accessed via one way circulation from Jurd Street. Once the drop off has occurred it is intended that vehicles can proceed to the public car park located on the western end of the site for long term parking.

10 angled parking spaces are provided adjacent to the pick-up/ drop off area, designed to be at least 2.6 metres wide by 5.4 metres long with an internal aisle of 4.5 metres to comply with the minimum requirement under AS/NZS2890.1. The drop off/ pick up area should be designed to accommodate accessible drop off by providing a flush kerb with 2.6 metre wide spaces and bollards located 0.3m behind the space to facilitate ease in drop off/ pick up activities. Swept path assessment is provided in Appendix A.



## **6.4 Loading/ Service Area**

The loading/ service area is designed to accommodate up to eight service vehicles including three loading vehicles on western side of the car park and five on the southern side. Swept paths indicate that the car park can accommodate vehicles up to 12.5 metre HRVs.

Swept path assessment is provided in Appendix A.

## **6.5 Ambulance Area**

Access to the Ambulance area is shared with the drop off and pick up area via Jurd Street. The redevelopment will provide a total of three ambulance bays, two other bays for corrections/ emergency vehicles and one mortuary bay. These spaces are designed in accordance with NSW Ambulance Specifications for Hospitals.

Ambulances will reverse into the parking bays which will provide the adequate spatial requirements for each ambulance to load/ unload from either side of rear doors, including a 6.5 metre long bay, 5.5 metre width and 5.5 metre long area to comply with minimum requirements under AS/NZS2980.1.

A swept path assessment has been completed and is provided in Appendix A.

## **6.6 Bus Stop**

Further to the discussion in Section 5.3, the proposed new bus stop on Jurd Street is an indented bay adjacent to the main entrance. The bus stop has been designed to accommodate one bus with dimensions as per the Bus Infrastructure Guidelines. A review of the bus stop is provided in Appendix A.

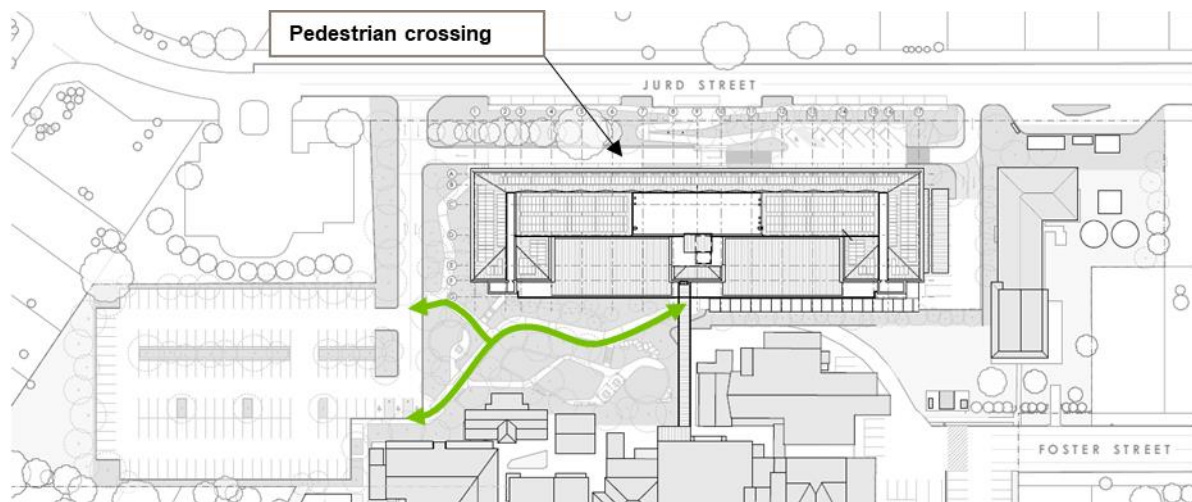
## **6.7 Walking and cycling**

Given the proposed new main entry for the hospital will be on Jurd Street, consideration and consultation with Council should be undertaken to review connecting the main entrance into the Council pedestrian and cycling network.

It is proposed that pedestrian crossing will be provided on adjacent to the main entry opposite the proposed new bus stop location. An accessible pedestrian connection is also proposed within the site between the staff/ visitor car park at the west of the site into the new ASB building.



Figure 16: Pedestrian Access Plan



Base image source: Site Plan, REF Planning Submission Draft 3, dated 3 October 2024, prepared by Fitzpatrick + Partners

The Austroads Guide to Traffic Management Part 11 provides guidance for bicycle parking provision rates. The bicycle parking provision rates most appropriate for the site are the general hospitals rate, in summary the rates are:

- 1 space per 15 beds for staff
- 1 space per 30 beds for visitors.

Based on the above rates the hospital is to provide a total of eight bicycle parking spaces including five staff spaces and three visitor spaces. A minimum of 10 bicycle parking spaces will be provided as part of the proposal held in a secure enclosure with power to charge e-bikes. Three bicycle hoops will be located near the main entrance for visitor use. The exact location of the enclosure and the hoops will be determined as part of detailed design stage.

DCP 2010 does not specify any requirements for dedicated end of trip facilities.

It is proposed that end-of-trip facilities in the form of shower/ change room facilities will be provided on the ground floor in the front of house area.



## 7 Preliminary Construction Traffic and Pedestrian Management Plan

### 7.1 Overview

This overview of construction traffic impacts associated with construction activity aims to ensure the safety of all workers and road users in the vicinity of the construction site. The primary objectives of the Construction Traffic and Pedestrian Management Plan (CTPMP) outlined below includes the following:

- To identify the need for adequate and compliant traffic management requirements within the vicinity of Cessnock Hospital.
- To ensure continuous, safe and efficient movement of traffic for both the general public and construction workers.
- Establishment of a safe pedestrian environment in the vicinity of the site.
- To inform the Principal Contractor and set the ground rules for managing the construction traffic associated with the construction site.

### 7.2 Key Objectives

The overall principles of traffic management during the construction activity include:

- Provide an appropriate and convenient environment for pedestrians.
- Minimise the impact on pedestrian movements.
- Maintain appropriate capacity for pedestrians at all times on footpaths around the site.
- Maintain appropriate public transport access.
- Maintain current levels of parking within the precinct.
- Maintain permanent access to/ from the hospital accesses for emergency services.
- Restrict construction vehicle movements to designated routes to/ from the site.
- Manage and control construction vehicle activity in and around the site.
- Minimise impacts to general traffic around the site.

### 7.3 Work Hours

Works associated with the development is anticipated to be carried out during the following hours:

- Monday to Friday                      7:00am and 6:00pm
- Saturday                                      8:00am and 1:00pm
- Sunday/ public holiday                  no work.



## Cessnock Hospital Redevelopment 7 Preliminary Construction Traffic and Pedestrian Management Plan

In addition to regular work hours, there will be occasions where specific out-of-hours works are required. The Principal Contractor will be responsible for instructing and controlling all subcontractors regarding the hours of work.

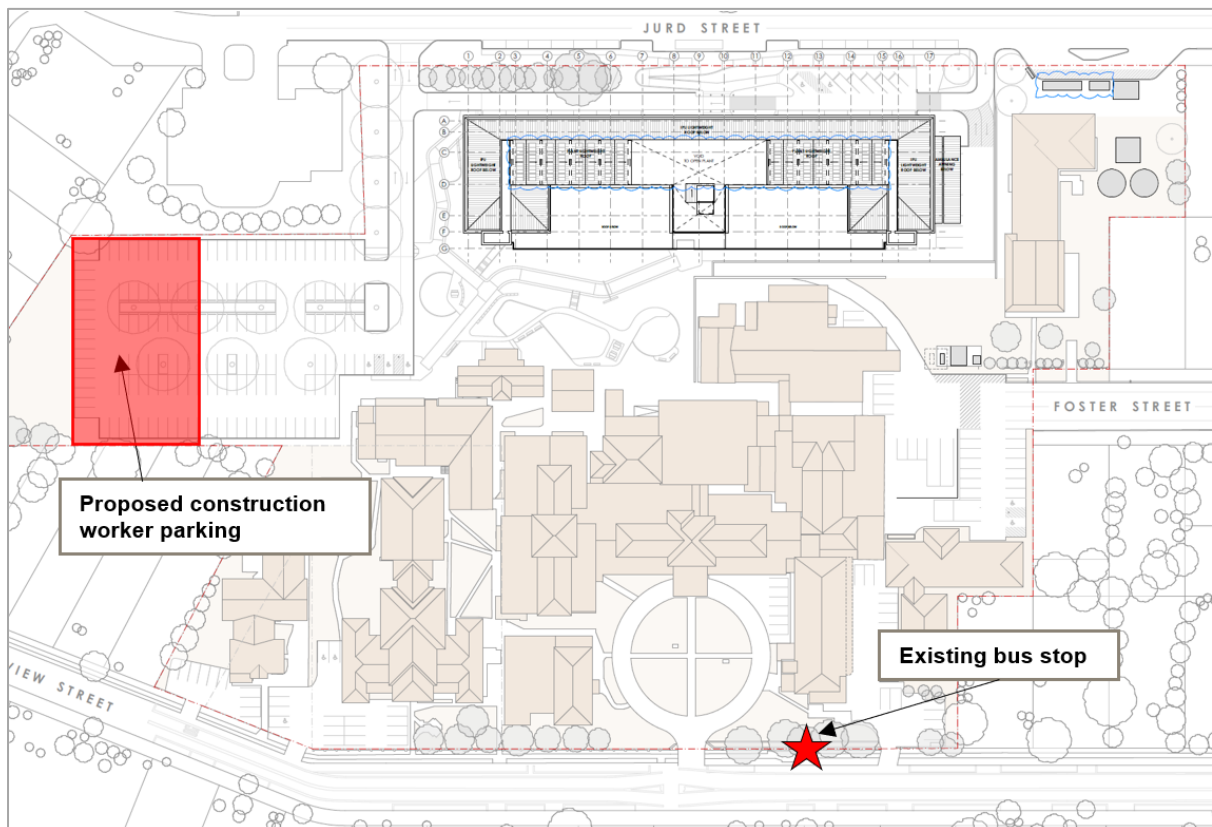
The actual duration of the works is currently unknown and will be scheduled once the contractor is appointed. For the purposes of this assessment, it is expected that the duration of the construction works could be around 24 months.

### 7.4 Construction Worker Parking and Traffic

The number of construction workers is currently unknown and will depend on the methodology of the appointed contractor. However, to provide a preliminary assessment the average number of workers during peak activities is anticipated to be up to 100 workers on-site at any given time.

Construction worker parking is to be provided on within the existing car park on the western portion of the site as shown in Figure 17. As discussed in Section 2.6, the site currently has a supply of 178 spaces across all car parks, including 67 car spaces in the Jurd Street car park. Peak usage of the Jurd Street car park was observed to be 13 spaces at 10am, equivalent to approximately 20 per cent of its total capacity supply. Therefore, the existing on-site parking supply can satisfactorily accommodate construction worker parking. Should peak construction activity and the number of construction workers exceed expectations, on-street parking is also available. Any such temporary use of on-street parking would have a minor impact and is considered satisfactory.

**Figure 17: Proposed construction worker parking**



**Cessnock Hospital Redevelopment**  
**7 Preliminary Construction Traffic and Pedestrian Management Plan**

Workers would also be encouraged to use public transport to access the site where practical. During site induction, workers should be informed of the existing bus network servicing the site. Appropriate arrangements should be made for any equipment/ tool storage and drop-off requirements.

Construction worker arrivals and departures by vehicle are likely to be outside of the AM network peak hour, however, could occur within the PM peak.

### 7.5 Construction Traffic Volumes

The site will have various types of construction vehicles accessing the site. The largest construction vehicle accessing the site would likely be 19 metre semi-trailers and truck and dog combinations.

It is expected that the peak construction vehicle activity and will result in up to 20 trucks (40 two-way movements) in and out of the site per day. These movements are expected to be spread throughout the day and therefore a conservative 20 per cent is assumed to occur within the peak hours.

**Table 7: Construction traffic volumes**

Type	AM peak		PM peak		Daily	
	In	Out	In	Out	In	Out
Light vehicles	100	-	-	100	100	100
Heavy vehicles	4	4	4	4	20	20

Generally, construction workers are expected to arrive before the AM peak period, however, could likely depart during the PM peak period. Table 7 conservatively assumes that should construction vehicles arrive and depart in the peak periods there could potentially be an additional 100 light vehicles and eight heavy vehicles in the peak hours for the redevelopment of the hospital. The additional construction vehicles are considered minor in the context of overall road network activity and unlikely to have any material impact on the surrounding road network.

### 7.6 Site Access

General construction vehicle access for workers and heavy vehicles including 12.5m HRVs and truck-and-dog combinations are expected to be via Jurd Street.

The appointed contractor will be responsible for obtaining appropriate disruption notices with the LHD.

Queuing or marshalling of construction vehicles will not be permitted on the road network, with call-up procedures to be put in place to manage arrivals.

### 7.7 Construction Vehicle Routes

Generally, construction vehicles will have origins and destinations from a wide variety of locations. However, all construction vehicles will be restricted to the State and Regional Road network where practicable. The main access routes for construction vehicles are from the Allandale Road and Maitland Road. The construction vehicle routes are detailed below and shown in Figure 18. No queuing or marshalling of construction vehicle will be permitted on public roads.



# Cessnock Hospital Redevelopment

## 7 Preliminary Construction Traffic and Pedestrian Management Plan

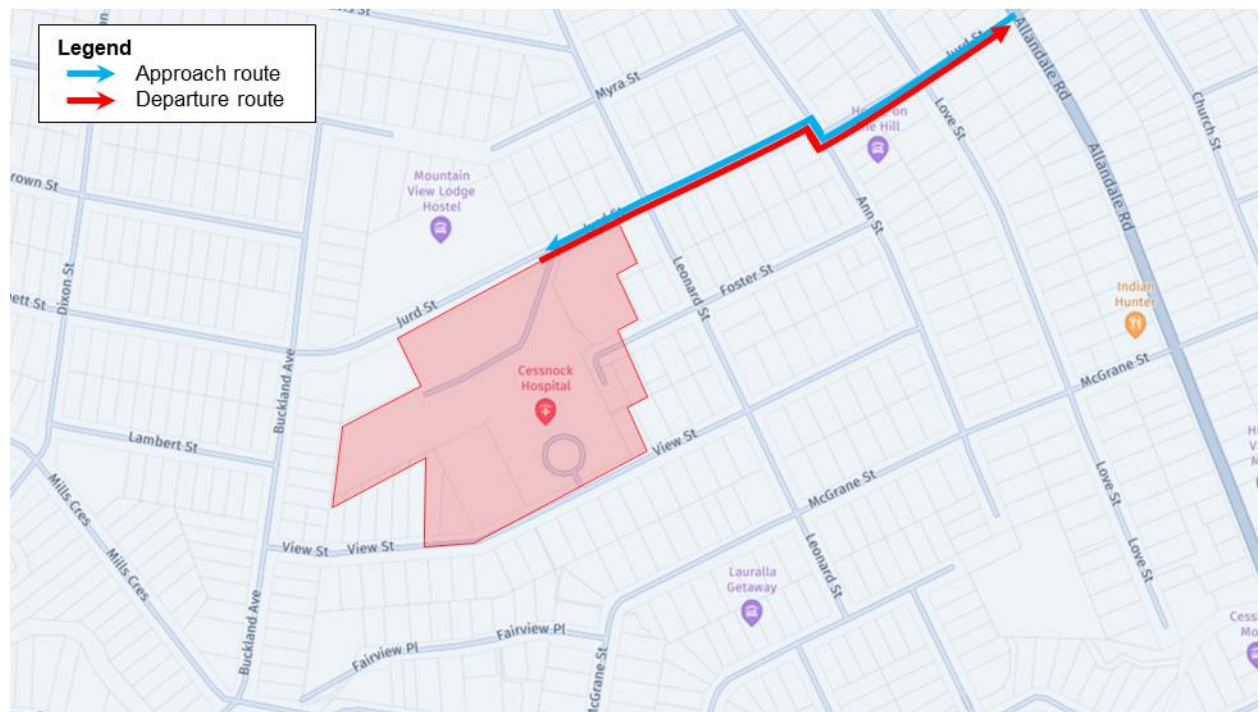
### Approach Routes

- East: Allandale Road, Jurd Street.

### Departure Routes

- East: Jurd Street, Allandale Road.

**Figure 18: Construction vehicle approach and departure route**



Base image source: Nearthmap

## 7.8 Traffic Guidance Schemes

Detailed information for work site operations is contained in the Traffic Control at Work Sites manual (TfNSW, 2022). The control of traffic at work sites must be undertaken with reference to SafeWork NSW requirements and any other Workplace Health and Safety manuals.

The Principal Contractor will be required to provide Traffic Guidance Schemes (TGS') for the proposed works which will generally consider the following:

- Construction vehicle activity, including the loading/ unloading of trucks to be conducted within the work site.
- Pedestrians and all passing vehicles will maintain priority.
- Clear definition of the work site boundary to be provided by erection of A Class hoardings/ fencing around the site boundaries.
- All construction vehicle activity will be minimised during peak periods, where possible.



## **7.9 Pedestrian and Cyclist Management**

During the construction period, pedestrian and cyclist movements are to be maintained as much as feasible. There is not expected to be any impact to existing pedestrian or cyclist paths by the proposed construction works.

## **7.10 Public Transport**

Given the anticipated heavy vehicle movements associated with the construction works, the overall impact to existing public transport services is expected to be negligible. This includes the impact on the identified local area bus services.

## **7.11 Existing and Future Developments**

It is the Principal Contractor's responsibility to liaise with Health Infrastructure and other landowners should there be other potential future developments under construction at the same time. A coordinated approach to traffic management and wayfinding signage is logical in such instances.

## **7.12 Traffic Movements in Adjoining Areas**

No adverse effects are expected from the movement of heavy vehicles through adjacent council areas.



## 8 Overview Green Travel Plan

### 8.1 Introduction

#### 8.1.1 TRAVEL PLAN FRAMEWORK

Transport is a necessary part of life, but it has economic, public health and environmental consequences. The transport sector is one of the fastest growing emissions sectors in Australia, and therefore is one of the key opportunities for reducing greenhouse gases. As well as delivering better environmental outcomes, providing a range of travel choices with a focus on walking, cycling and public transport will have major public health benefits and will ensure a strong and prosperous community.

The physical infrastructure being provided as part of the development is only part of the solution. A green travel plan (GTP) will ensure that the transport infrastructure, services and policies both within and external to the site are tailored to the users and coordinated to achieve the most sustainable outcome possible.

#### 8.1.2 WHAT IS A GTP?

A GTP is a package of measures aimed at promoting sustainable travel and reducing reliance on the private car. It is not designed to be 'anti-car' however it will encourage and support people's aspirations for carrying out their daily business in a more sustainable way. Travel plans can provide both:

- measures which restrict car use (disincentives or 'sticks')
- measures which encourage or support sustainable travel, reduce the need to travel or make travelling more efficient (incentives or 'carrots').

The travel plan would promote the use of transport, other than the private car, provide choice for staff to travel to and from the site, which is more sustainable and environmentally friendly.

Indeed, there are a range of "non-car" transport options that are available at the site which have been described in this report.

Given the developments aim to reduce private travel to the site, the implementation of a GTP would be beneficial.

### 8.2 Key Objectives

The aim of the GTP is to bring about better transport arrangements for working at the site. The key objectives of the Travel Plan are:

- To encourage walking.
- To encourage cycling.
- To encourage the use of public transport.



## **Cessnock Hospital Redevelopment**

### **8 Overview Green Travel Plan**

- To reduce the use of the car, in particular single car occupancy.
- Where it is necessary to use the car, encourage more efficient use.

It is the intention therefore that the travel plan will deliver the following benefits:

- Enable higher public and active travel mode share targets to be achieved.
- Contribute to greenhouse gas emission reductions and carbon footprint minimisation.
- Contribute to healthy living for all.
- Contribute to social equity and reduction in social exclusion.
- Improve knowledge and contribute to learning.

### **8.3 Site Specific Measures**

Several opportunities exist to provide Cessnock staff and visitors with incentives to consider alternative modes of travel to and from site.

The following potential measures and initiatives could be implemented to encourage more sustainable travel modes:

#### **Active Travel**

- Provide high quality and prominent bicycle parking, including e-bike charging facilities and change/ shower facilities.
- Provide clear pedestrian and cyclist wayfinding.
- Provide shelters along walkways or near internal bus stops and street lighting.
- Encourage cultural change through:
  - creating a bike user group (targeting staff living within five kilometres of the hospital)
  - events such as annual 'ride to work' day
  - providing information detailing opportunities and facilities available to staff. This may include providing maps of the available cycling routes to and within the hospital.

#### **Promote Car-Pooling**

- Provide prioritised carpool parking spaces on-site, including consideration for incentives such as prices, location and proximity to services.
- Limiting on-site parking allocation to staff.
- Encouraging staff that drive to work and park on surrounding roads to carpool through creation of a carpooling club or registry/ forum.

#### **Public Transport**

- Provide a Travel Access Guide (TAG) which would be provided to all staff and publicly available to all visitors. The document would be based on facilities available at the site and include detail on



the surrounding public transport services and active transport initiatives. The TAG would be updated as the surrounding transport environment changes.

### **8.3.1 TRAVEL ACCESS GUIDE**

A TAG provides information to staff and visitors on how to travel to the site using sustainable transport modes such as walking and public transport. The information is presented visually in the format of a map (or app) showing the site location and nearby transport modes highlighting available pedestrian and cycle routes. The information is usually presented as a brochure (or app) to be included in a welcome pack or on the back of company stationery and business cards.

### **8.3.2 INFORMATION AND COMMUNICATION**

Several opportunities exist to provide staff and visitors with information about nearby transport options. Connecting staff and visitors with information would help to facilitate journey planning and increase their awareness of convenient and inexpensive transport options which support change in travel behaviour.

These include:

- Transport NSW provides bus, train and ferry routes, timetables and journey planning through their Transport Info website: <http://www.transportnsw.info>.
- Council provides a number of services and a range of information and events to encourage people of all levels of experience to travel by bicycle:  
<https://www.cessnock.nsw.gov.au/Council/Forms-and-documents/Plans-and-strategies/Cycling-Strategy>

In addition, connecting staff and visitors via social media may provide a platform to informally pilot new programs or create travel-buddy networks and communication.

### **8.3.3 MONITORING OF THE GTP**

There is no standard methodology for monitoring the GTP, but it is suggested that it be monitored to ensure that it is achieving the desired benefits and modify it if required. It will not be possible at this stage to state what additional modifications might be made as this will be dependent upon the particular circumstances prevailing at that time.

The GTP should be monitored on a regular basis, e.g. yearly, by carrying out travel surveys. Travel surveys will allow the most effective initiatives of the GTP to be identified, and conversely less effective initiatives can be modified or replaced to ensure the best outcomes are achieved. It will clearly be important to understand people's reasons for travelling the way they do; any barriers to changing their behaviour, and their propensity to change.

To ensure the successful implementation of the GTP, a Travel Plan Coordinator (TPC) should be appointed to ensure the successful implementation of the GTP. This could be someone from the LHD.





## 8.4 Summary

The proposal would be able to develop and utilise a travel plan to actively promote increased use of sustainable transport modes. Although it is difficult to predict what measures might be achievable, the above measures provide a framework for the site and implementation of a future travel plan.

## 9 Mitigation Measures

Table 8 summarises the identified mitigation measures.

**Table 8: Mitigation Measures**

Project Stage	Mitigation Measures	Relevant Section of Report
C	<p>Construction Traffic Management</p> <p>An overview Construction Traffic Management Plan (CTMP) has been prepared detailing measure to mitigate impacts to hospital staff and visitors. A detailed CTMP would be prepared by the appointed contractor.</p>	Section 7
O	<p>Bus Service Access</p> <p>To mitigate walking distance from the 161 bus route to the new main entrance on Jurd Street, a new bus stop has been proposed and consultation with TfNSW and the local bus operator will occur prior to opening to address the recommended route change to align with the new bus stop.</p>	Section 5
O	<p>Green Travel Initiatives</p> <p>An overview Green Travel Plan (GTP) has been prepared as part of this REF Report, providing an overview of measure to promote more sustainable modes of transport to/ from the hospital. A detailed GTP would be prepared at a future date.</p> <p>New pathways would be constructed to connect the main entrance to new pedestrian infrastructure along the site frontage of Jurd Street and to the new bus stop.</p> <p>Bicycle parking would also be provided.</p>	Section , 6 & 8

[1] D = Design Stage, C = Construction Stage, O = Operation Stage



## **10 Conclusion**

Based on the analysis and discussions presented within this report, the following conclusions are made:

The Cessnock Hospital Redevelopment will provide a new building to address capacity and functional deficiencies by providing contemporary inpatient units, emergency department, operating suite, recovery spaces and support services in a secure and safe environment for both patients and staff.

It is understood that post development the Cessnock Hospital is anticipated to accommodate 73 beds, with a total of 151 staff (maximum staff on site at shift changeover).

The proposed development would require a total of 158 to 190 parking spaces on site. At the completion of the development there will be 250 parking spaces provided on the campus, and therefore accommodates the expected parking demand on site for the development, inclusive of any motorcycle parking demand.

The proposal is expected to increase the current on site traffic generation by around 18 vehicles in the peak hour. Based on the main entrance moving to Jurd Street and the location of parking within the site there is expected to be a redistribution of traffic from what is currently occurring.

Observations of the surrounding road network indicate there is spare capacity to accommodate the additional 18 vehicles in the peak hour and the redistribution of existing trips around the site with the new main entrance being from Jurd Street. Given only a minor increase in traffic generation is expected for the site, the redevelopment is not expected to warrant any traffic modelling assessment.

As part of the redevelopment of the hospital the new front entry will be via Jurd Street and not on View Street, therefore it is recommended that the existing 161 bus route be redirected via Jurd Street with a new bus stop located near the new hospital entry.

The loading/ service area is proposed to be designed to accommodate one 12.5 metre HRV bay and two MRV/ SRV bays with additional spaces for contractor parking, the design of the loading dock area is still being finalised and will require further review as the design develops.

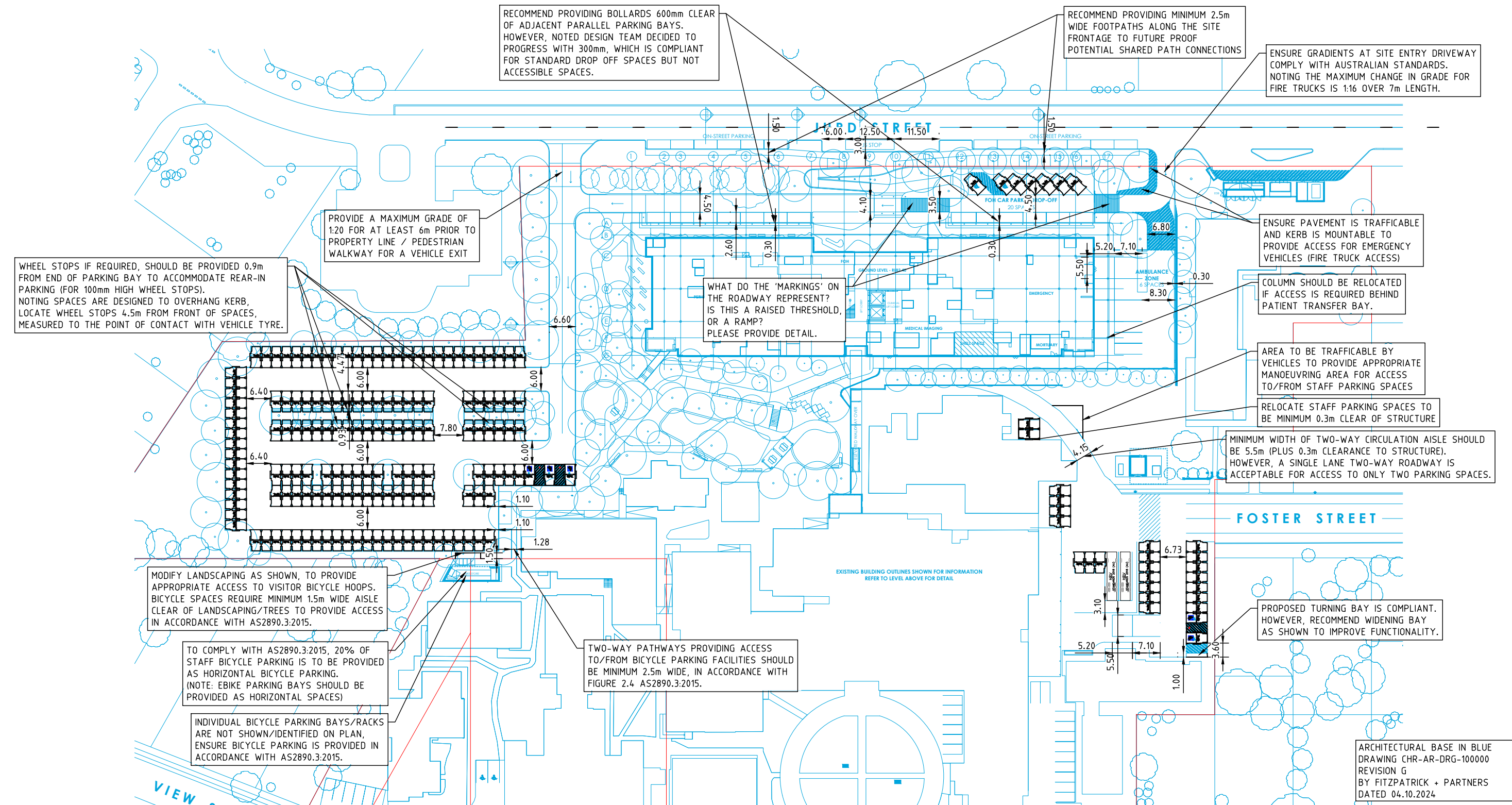
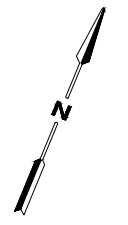


## Appendix A Compliance Review and Swept Path Assessment



MINIMUM HEIGHT CLEARANCES TO STRUCTURE AND SERVICES SHOULD BE PROVIDED AT;  
 4.5m ABOVE SERVICE VEHICLE ACCESS AND LOADING DOCK AREAS  
 3.8m ABOVE AMBULANCE ACCESS AND LOADING AREAS  
 2.5m ABOVE DISABLED PARKING BAYS (AS2890.6:2022)  
 2.2m ABOVE CIRCULATION AISLES AND PARKING SPACES.

NO GRADES AND/OR RLs HAVE BEEN SHOWN ON PLAN. CAN NOT CHECK GRADES. PLEASE PROVIDE RELEVANT INFORMATION.



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**PRELIMINARY PLAN**  
 FOR DISCUSSION PURPOSES ONLY  
 SUBJECT TO CHANGE WITHOUT  
 NOTIFICATION

**WARNING**  
 BEWARE OF UNDERGROUND SERVICES  
 THE LOCATIONS OF UNDERGROUND SERVICES ARE  
 APPROXIMATE ONLY AND THEIR EXACT POSITION  
 SHOULD BE PROVEN ON SITE. NO GUARANTEE IS  
 GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

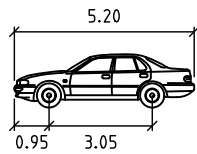
DESIGNED  
 M.RIMAC  
 DESIGN CHECK  
 K.McNATTY  
 APPROVED BY  
 K.McNATTY  
 DATE ISSUED  
 8 OCTOBER 2024

SCALE  
 A3 0 5 10 20 1:1000  
 CAD FILE NO.  
 300304237-07-P8.DWG

**CESSNOCK HOSPITAL  
 GROUND FLOOR**  
**CAR PARK COMPLIANCE REVIEW**  
 DRAWING NO. 300304237-07-01 SHEET 01 OF 18 ISSUE P8

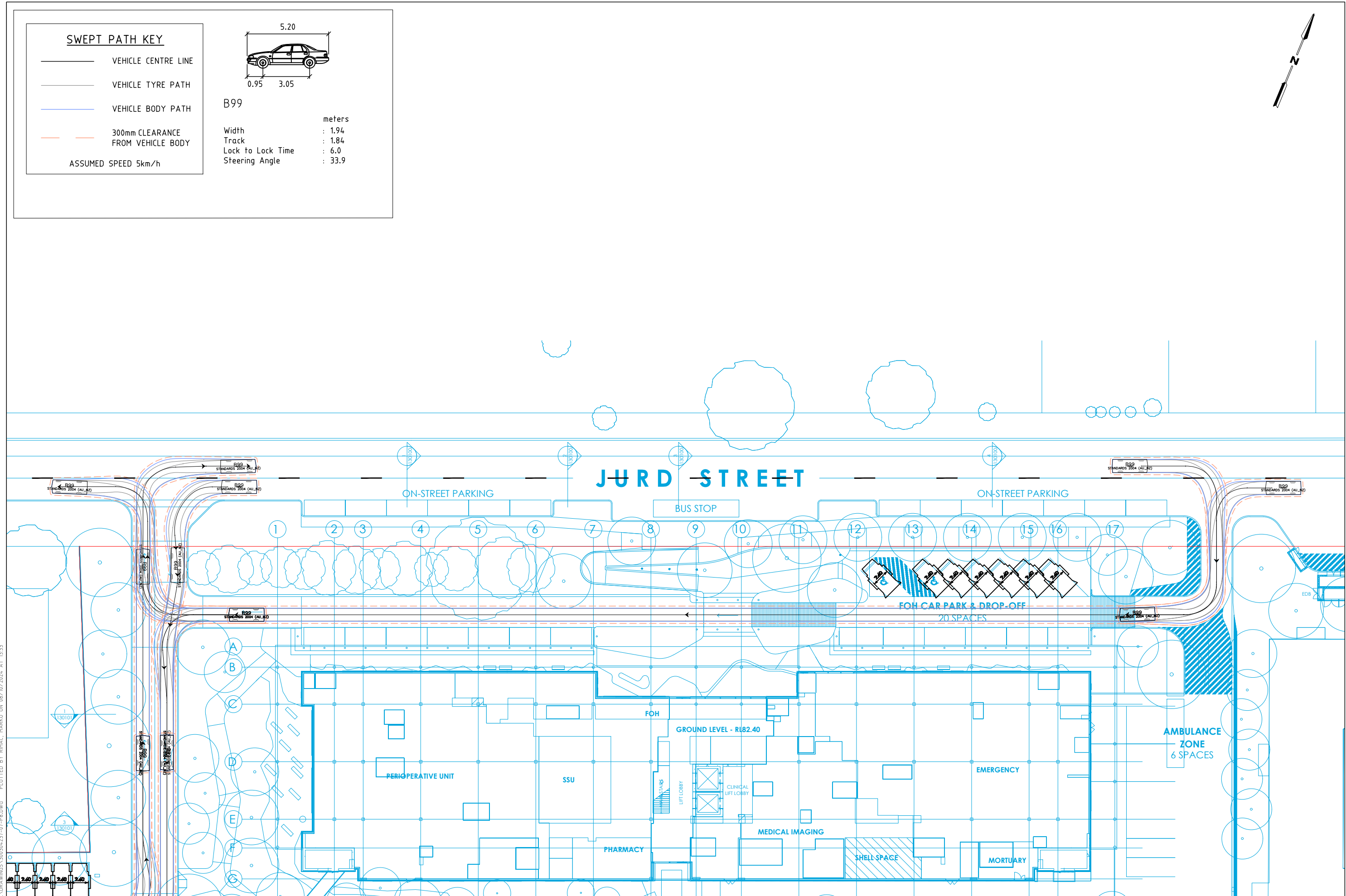
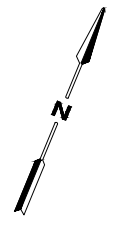
**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
  - VEHICLE TYRE PATH
  - VEHICLE BODY PATH
  - 300mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



B99

- Width : 1.94 meters
- Track : 1.84
- Lock to Lock Time : 6.0
- Steering Angle : 33.9



U:\300304237\TECHNICAL DRAWINGS\300304237-07-P8.DWG PLOTTED BY RIMAC, MARKO ON 08/10/2024 AT 13:33



**PRELIMINARY PLAN**  
FOR DISCUSSION PURPOSES ONLY  
SUBJECT TO CHANGE WITHOUT  
NOTIFICATION

**WARNING**  
BEWARE OF UNDERGROUND SERVICES  
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DESIGNED  
M.RIMAC

APPROVED BY  
K.McNATTY

DESIGN CHECK  
K.McNATTY

DATE ISSUED  
8 OCTOBER 2024

SCALE  
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CAD FILE NO.  
300304237-07-P8.DWG

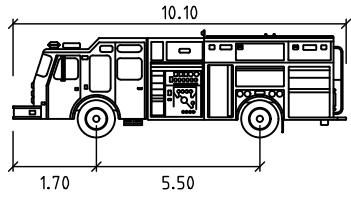
**CESSNOCK HOSPITAL  
GROUND FLOOR**

**VEHICLE SWEEP PATH ASSESSMENT**

DRAWING NO. 300304237-07-02 SHEET 02 OF 18 ISSUE P8

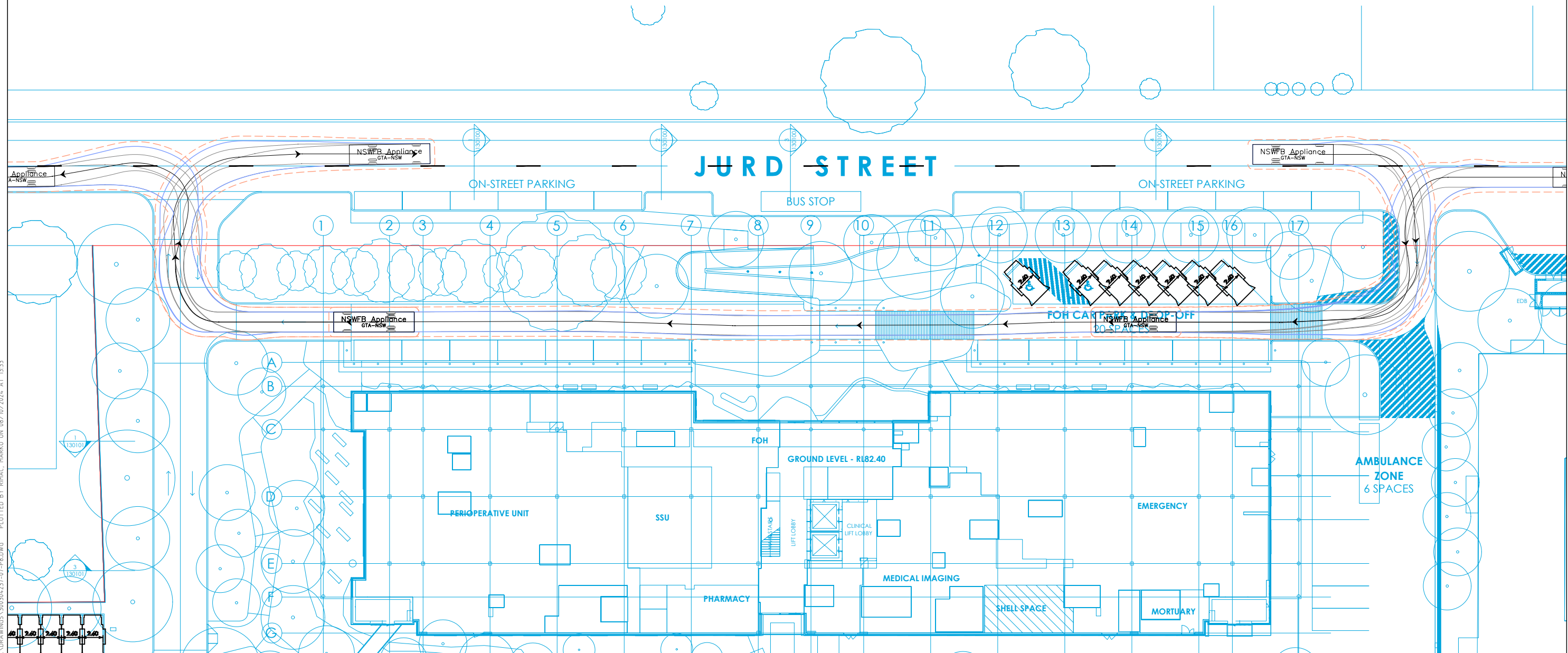
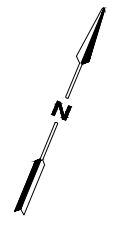
**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
  - VEHICLE TYRE PATH
  - VEHICLE BODY PATH
  - - - 600mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



**NSWFB Appliance**

Width	: 2.50	meters
Track	: 2.50	
Lock to Lock Time	: 6.0	
Steering Angle	: 38.7	



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SCALE  
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CAD FILE NO.  
300304237-07-P8.DWG

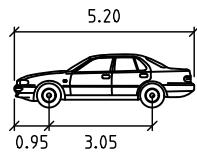
**CESSNOCK HOSPITAL  
GROUND FLOOR**

**VEHICLE SWEEP PATH ASSESSMENT**

DRAWING NO. 300304237-07-03 SHEET 03 OF 18 ISSUE P8

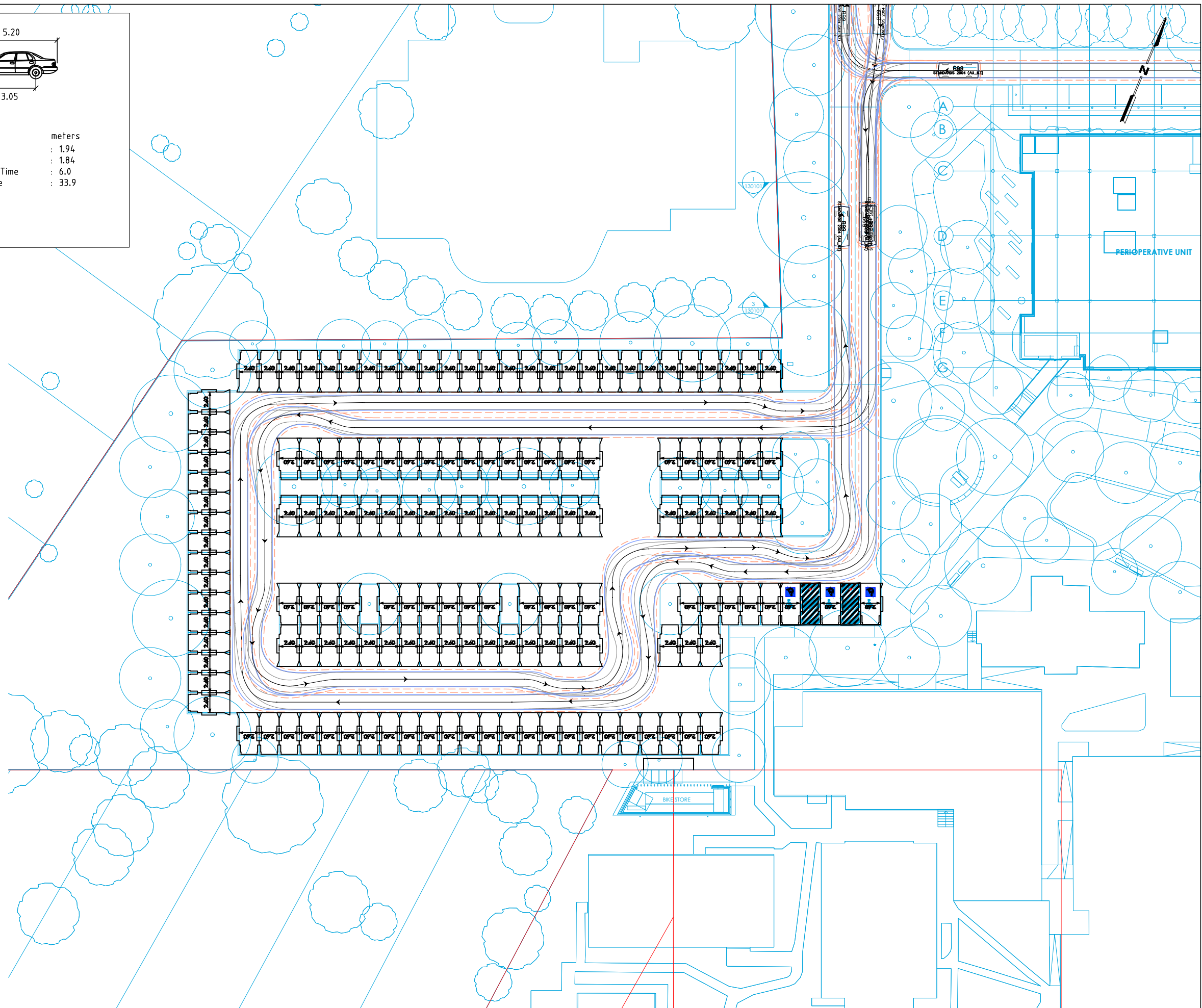
**SWEPT PATH KEY**

-  VEHICLE CENTRE LINE
  -  VEHICLE TYRE PATH
  -  VEHICLE BODY PATH
  -  300mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



B99

	metres
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9



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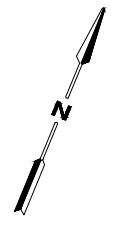
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CAD FILE NO.  
300304237-07-P8.DWG

**CESSNOCK HOSPITAL  
CAR PARKING AREA**

**VEHICLE SWEEP PATH ASSESSMENT**

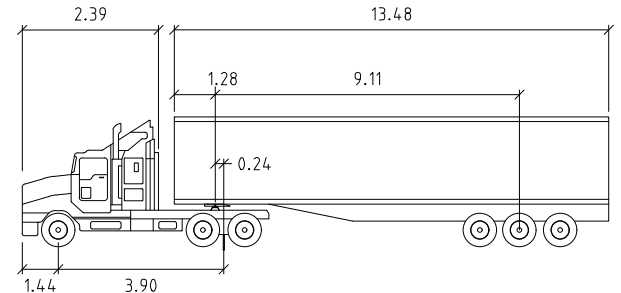
DRAWING NO. 300304237-07-04 SHEET 04 OF 18 ISSUE P8



**SWEPT PATH KEY**

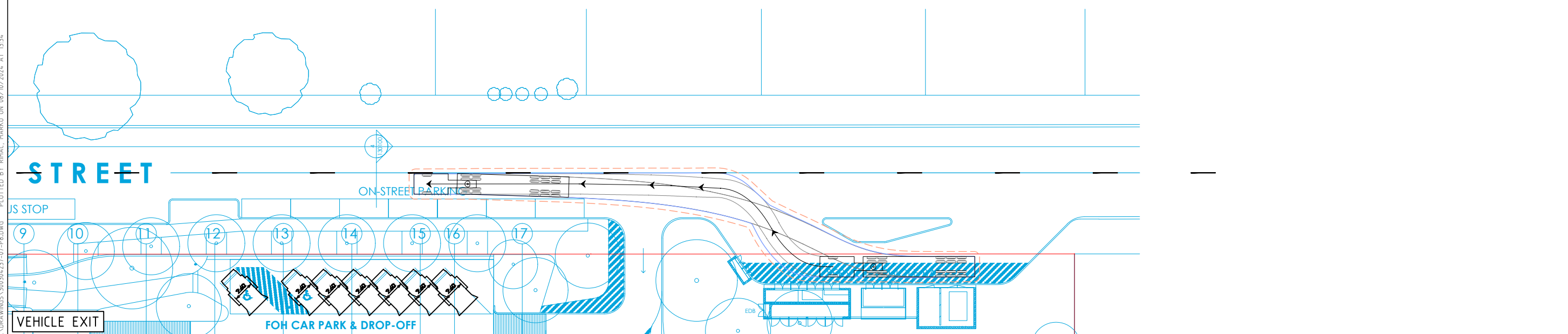
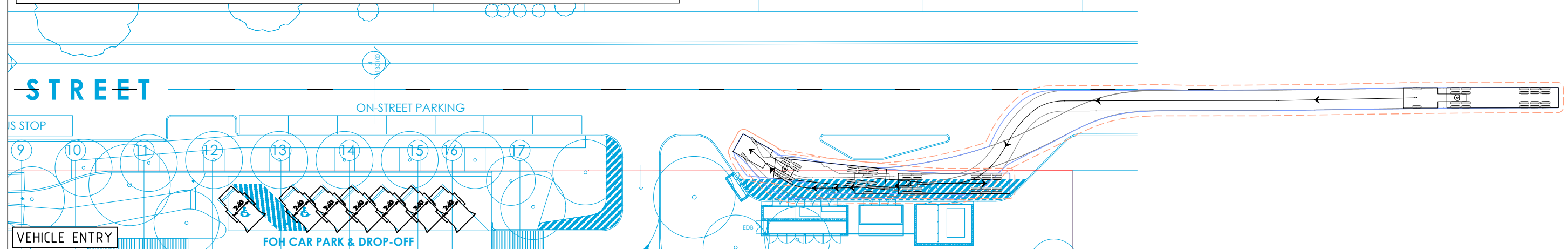
- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- - - 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



17.3m ARTICULATED VEHICLE

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 39.6
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		



U:\300304237\TECHNICAL DRAWINGS\300304237-07-P8.DWG PLOTTED BY RRMAC, MARKO ON 08/10/2024 AT 13:34



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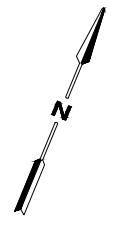
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300304237-07-P8.DWG

CESSNOCK HOSPITAL  
OXYGEN DELIVERY BAY

VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300304237-07-05 SHEET 05 OF 18 ISSUE P8

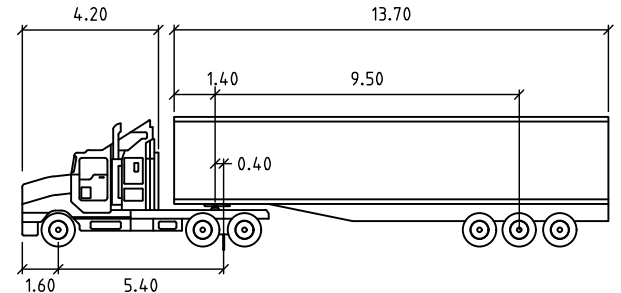




**SWEPT PATH KEY**

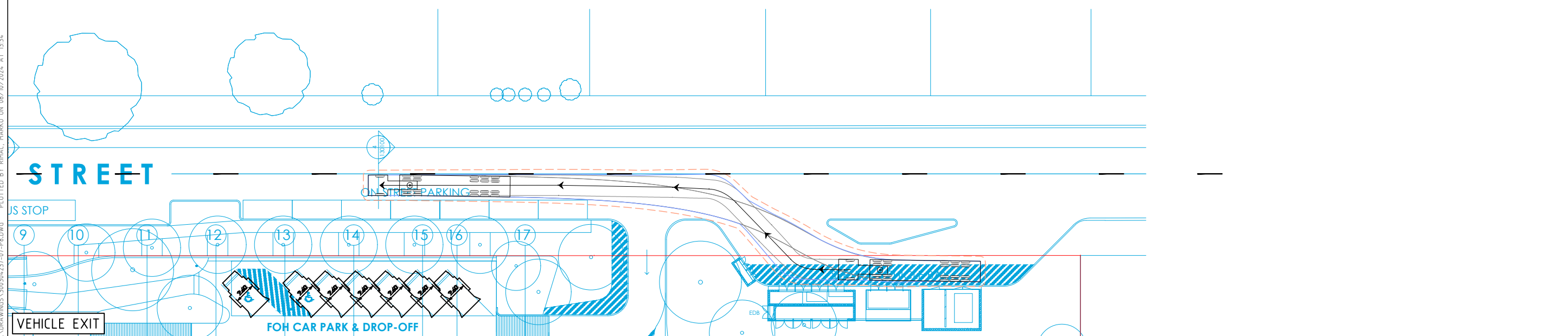
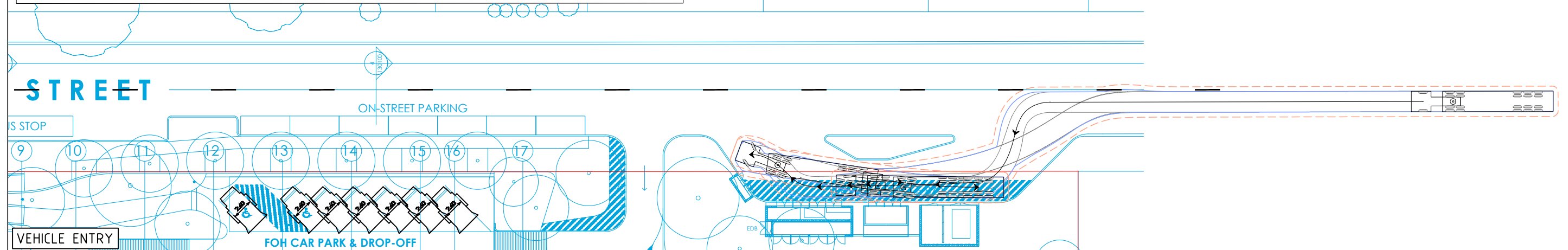
- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- - - 600mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



AV AS2890.2 19m

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		



U:\300304237\TECHNICAL DRAWINGS\300304237-07-P8.DWG PLOTTED BY RRMAC, MARKO ON 08/10/2024 AT 13:34



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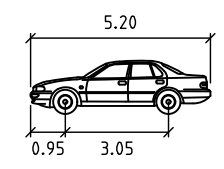
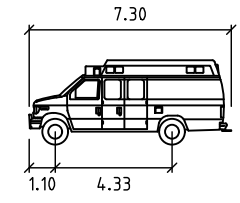
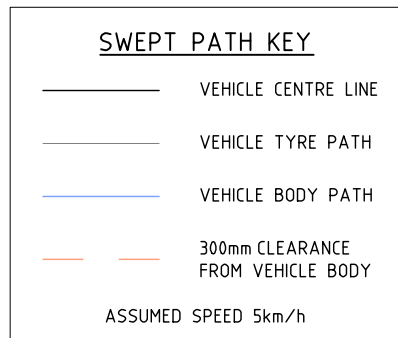
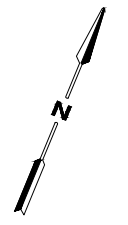
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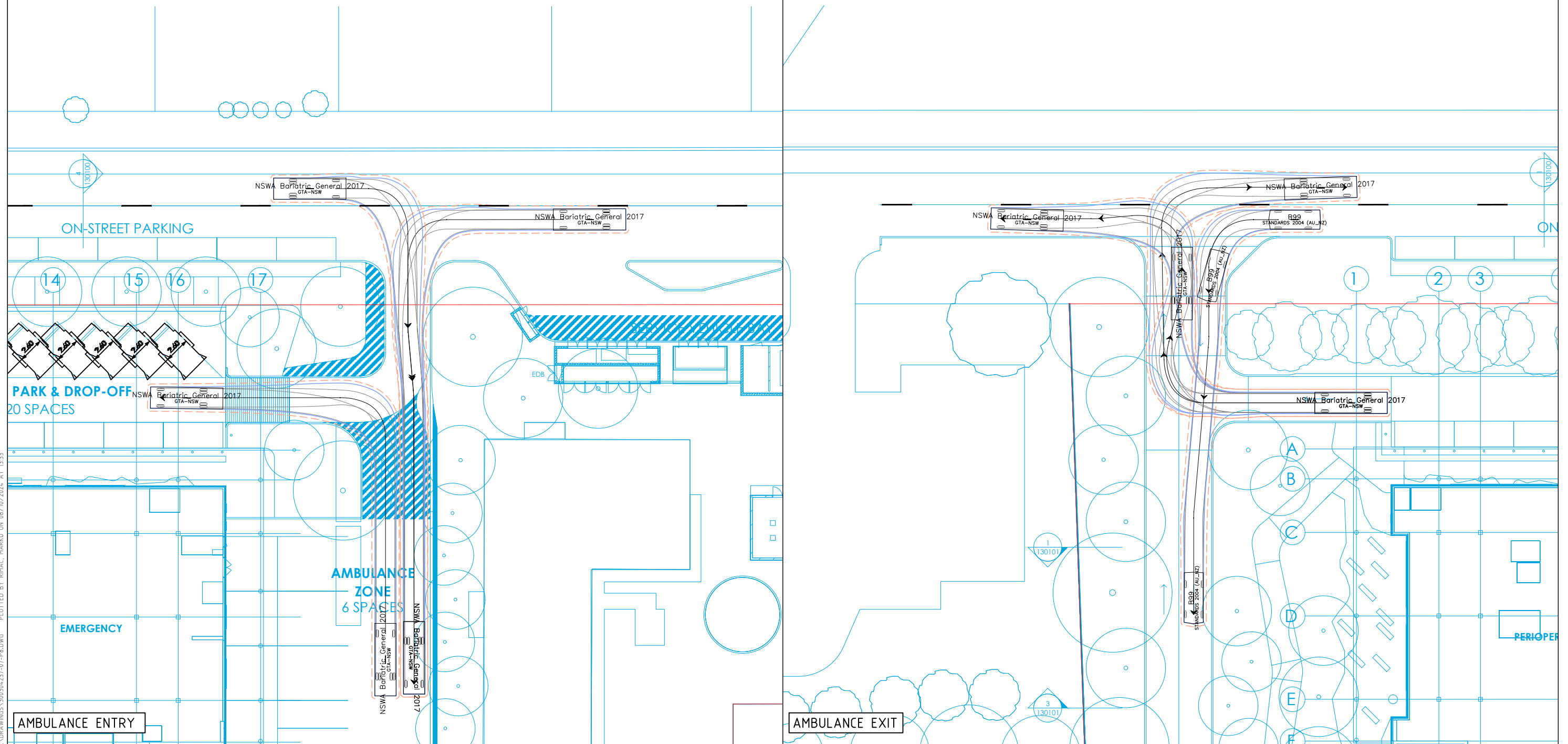
CESSNOCK HOSPITAL  
OXYGEN DELIVERY BAY

VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300304237-07-06 SHEET 06 OF 18 ISSUE P8



NSW Bariatric General 2017		B99	
	meters		meters
Width	: 2.14	Width	: 1.94
Track	: 1.96	Track	: 1.84
Lock to Lock Time	: 6.0	Lock to Lock Time	: 6.0
Steering Angle	: 45.1	Steering Angle	: 33.9



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**PRELIMINARY PLAN**  
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8 OCTOBER 2024

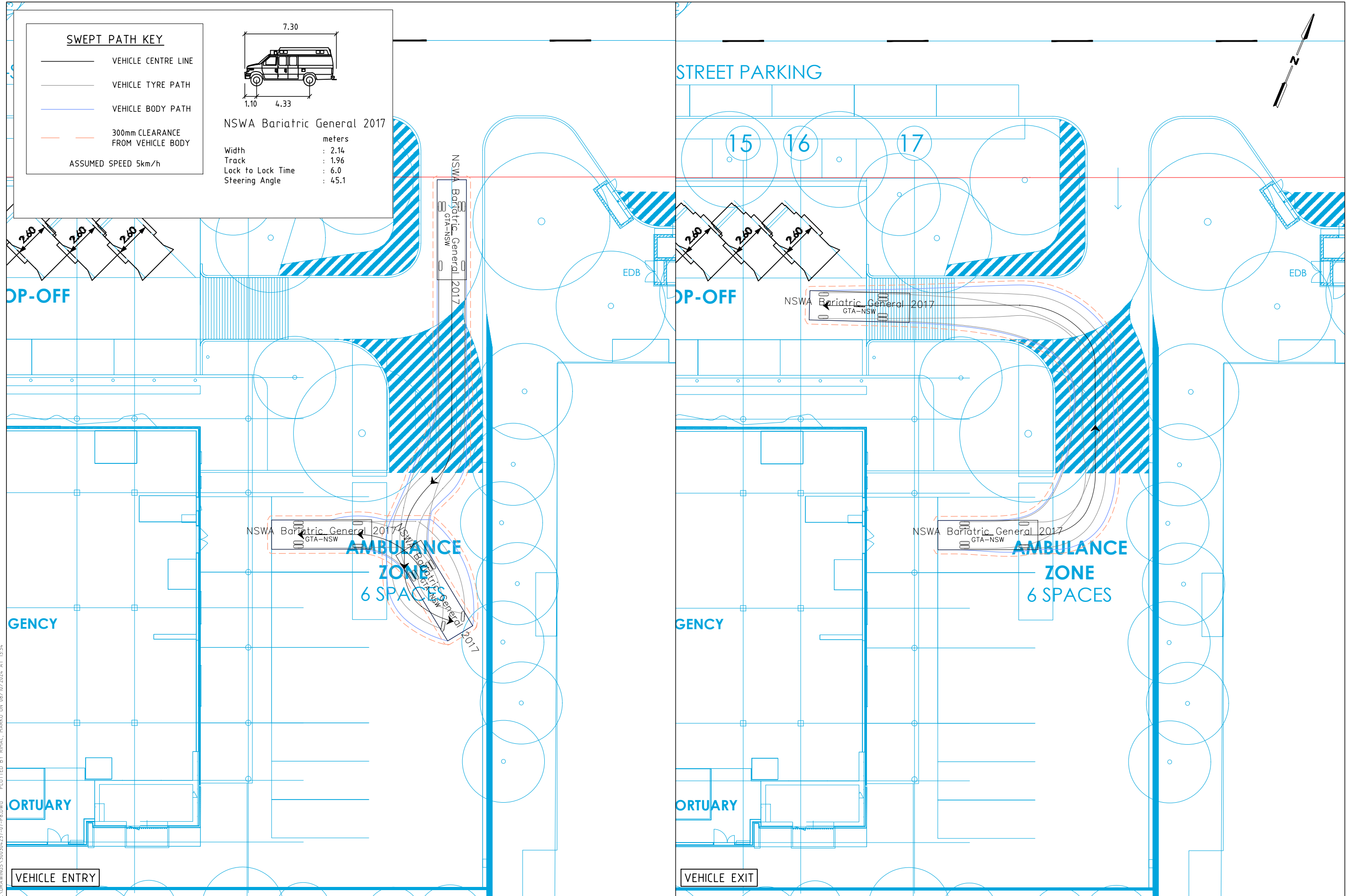
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CAD FILE NO.  
300304237-07-P8.DWG

**CESSNOCK HOSPITAL  
AMBULANCE ACCESS**

**VEHICLE SWEEP PATH ASSESSMENT**

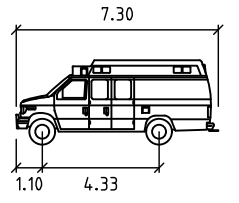
DRAWING NO. 300304237-07-07 SHEET 07 OF 18 ISSUE P8



**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- - - 300mm CLEARANCE FROM VEHICLE BODY

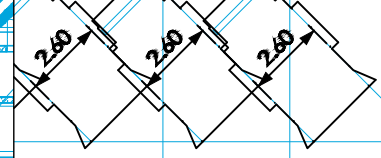
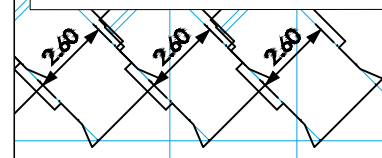
ASSUMED SPEED 5km/h



**NSW Bariatric General 2017**

units: meters

- Width : 7.30
- Track : 4.33
- Lock to Lock Time : 6.0
- Steering Angle : 45.1



GENGY

GENGY

MORTUARY

MORTUARY

VEHICLE ENTRY

VEHICLE EXIT

U:\300304237\TECHNICAL DRAWINGS\300304237-07-P8.DWG PLOTTED BY RIMAC, MARKO ON 08/10/2024 AT 13:34



**PRELIMINARY PLAN**  
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DATE ISSUED  
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SCALE  
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CAD FILE NO.  
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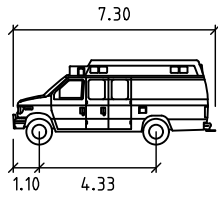
CESSNOCK HOSPITAL  
AMBULANCE BAYS

VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300304237-07-08 SHEET 08 OF 18 ISSUE P8

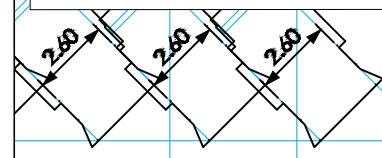
**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
  - VEHICLE TYRE PATH
  - VEHICLE BODY PATH
  - - - 300mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



NSW Bariatric General 2017

	metres
Width	: 7.30
Track	: 4.33
Lock to Lock Time	: 6.0
Steering Angle	: 45.1



**STREET PARKING**

15 16 17

OP-OFF

OP-OFF

GENCY

GENCY

ORTUARY

ORTUARY

VEHICLE ENTRY

VEHICLE EXIT

**AMBULANCE ZONE**  
6 SPACES

**AMBULANCE ZONE**  
6 SPACES



**PRELIMINARY PLAN**  
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CAD FILE NO.  
300304237-07-P8.DWG

CESSNOCK HOSPITAL  
AMBULANCE BAYS

VEHICLE SWEEP PATH ASSESSMENT

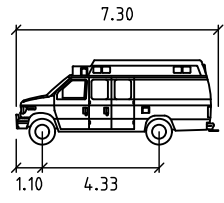
DRAWING NO. 300304237-07-09 SHEET 09 OF 18

ISSUE P8

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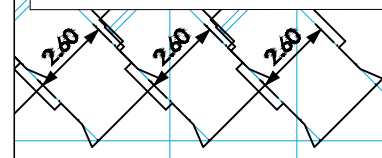
**SWEPT PATH KEY**

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  - VEHICLE BODY PATH
  - 300mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



NSW Bariatric General 2017

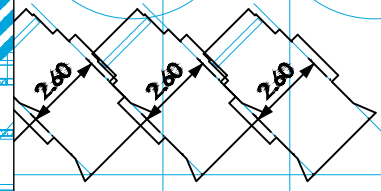
	metres
Width	: 2.14
Track	: 1.96
Lock to Lock Time	: 6.0
Steering Angle	: 45.1



OP-OFF

STREET PARKING

15 16 17

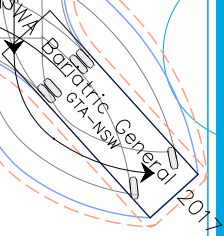


OP-OFF

GENCY

AMBULANCE ZONE  
6 SPACES

NSW Bariatric General 2017  
GTA-NSW



MORTUARY

VEHICLE ENTRY

GENCY

AMBULANCE ZONE  
6 SPACES

NSW Bariatric General 2017  
GTA-NSW

MORTUARY

VEHICLE EXIT



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DATE ISSUED  
8 OCTOBER 2024

SCALE  
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CAD FILE NO.  
300304237-07-P8.DWG

CESSNOCK HOSPITAL  
AMBULANCE BAYS

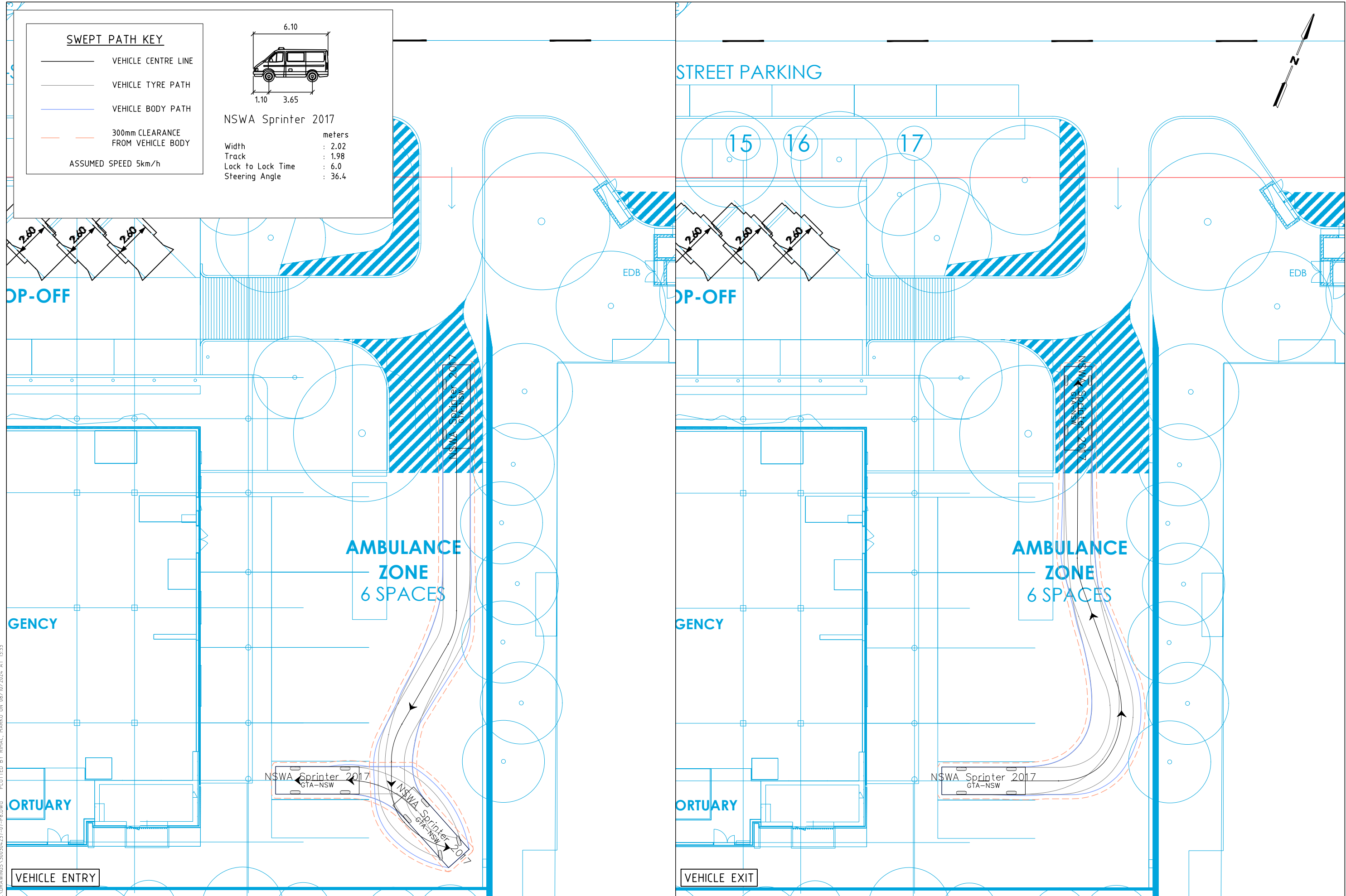
VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300304237-07-10

SHEET 10 OF 18

ISSUE P8

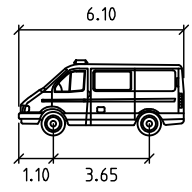
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**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- - - 300mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



NSWA Sprinter 2017

Width : 2.02 meters  
 Track : 1.98  
 Lock to Lock Time : 6.0  
 Steering Angle : 36.4

U:\300304237\TECHNICAL DRAWINGS\300304237-07-P8.DWG PLOTTED BY RIMAC, MARKO ON 08/10/2024, AT 13:33



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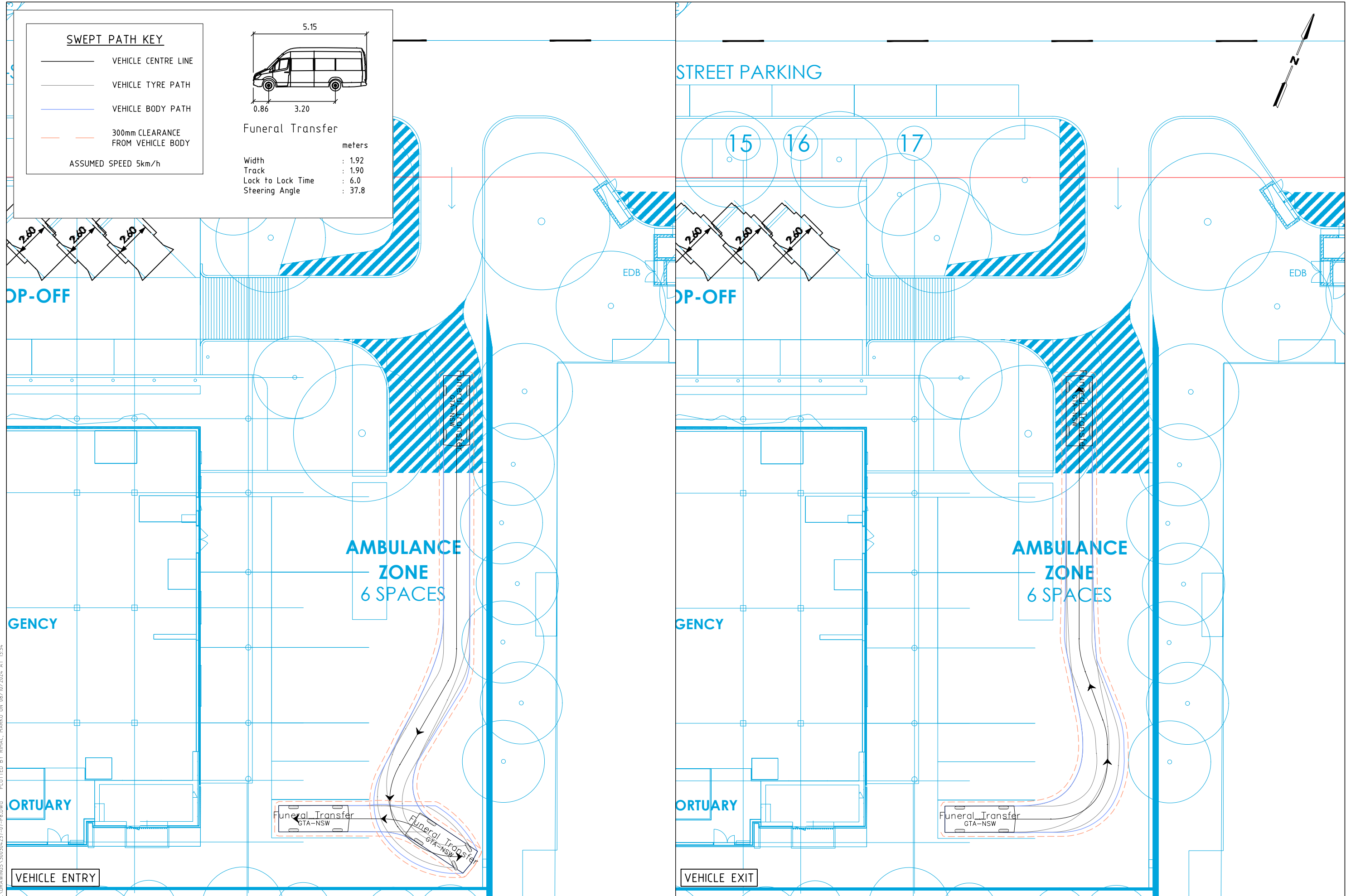
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CAD FILE NO.  
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CESSNOCK HOSPITAL  
PATIENT TRANSFER BAY

VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300304237-07-11 SHEET 11 OF 18 ISSUE P8



U:\300304237\TECHNICAL DRAWINGS\300304237-07-P8.DWG PLOTTED BY RIMAC, MARKO ON 08/10/2024, AT 13:34



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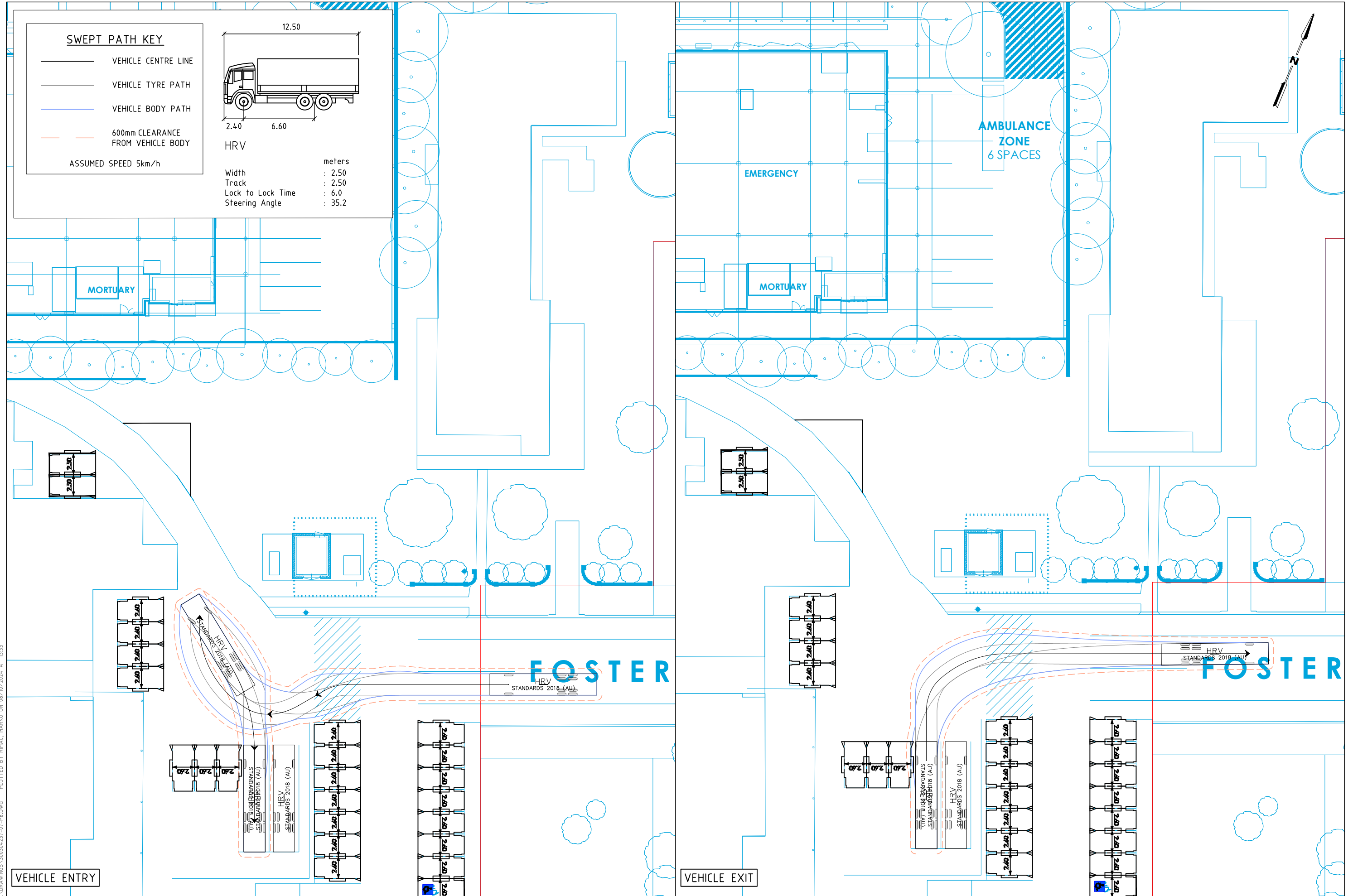
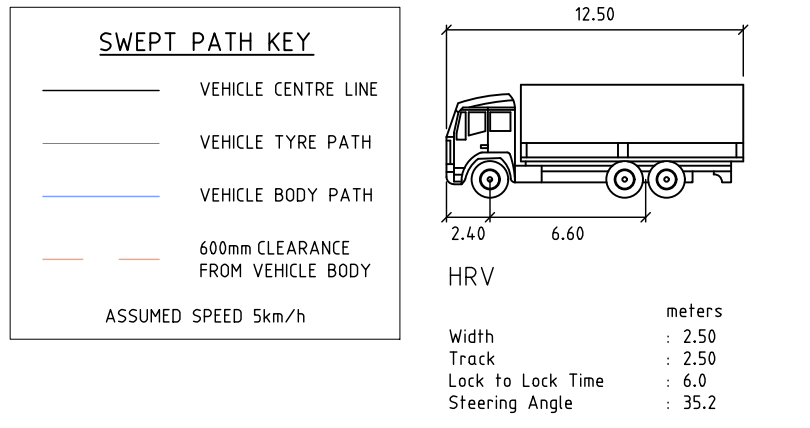
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CAD FILE NO.  
300304237-07-P8.DWG

CESSNOCK HOSPITAL  
MORTUARY BAY

**VEHICLE SWEEP PATH ASSESSMENT**  
DRAWING NO. 300304237-07-12 SHEET 12 OF 18 ISSUE P8

U:\300304237\TECHNICAL DRAWINGS\300304237-07-P8.DWG PLOTTED BY RIMAC, MARKO ON 08/10/2024 AT 13:33



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M.RIMAC

APPROVED BY  
K.McNATTY

DESIGN CHECK  
K.McNATTY

DATE ISSUED  
8 OCTOBER 2024

SCALE  
A3 0 2 4 8 1:400

CAD FILE NO.  
300304237-07-P8.DWG

CESSNOCK HOSPITAL  
LOADING DOCK

VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300304237-07-13

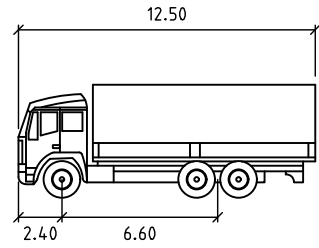
SHEET 13 OF 18

ISSUE P8



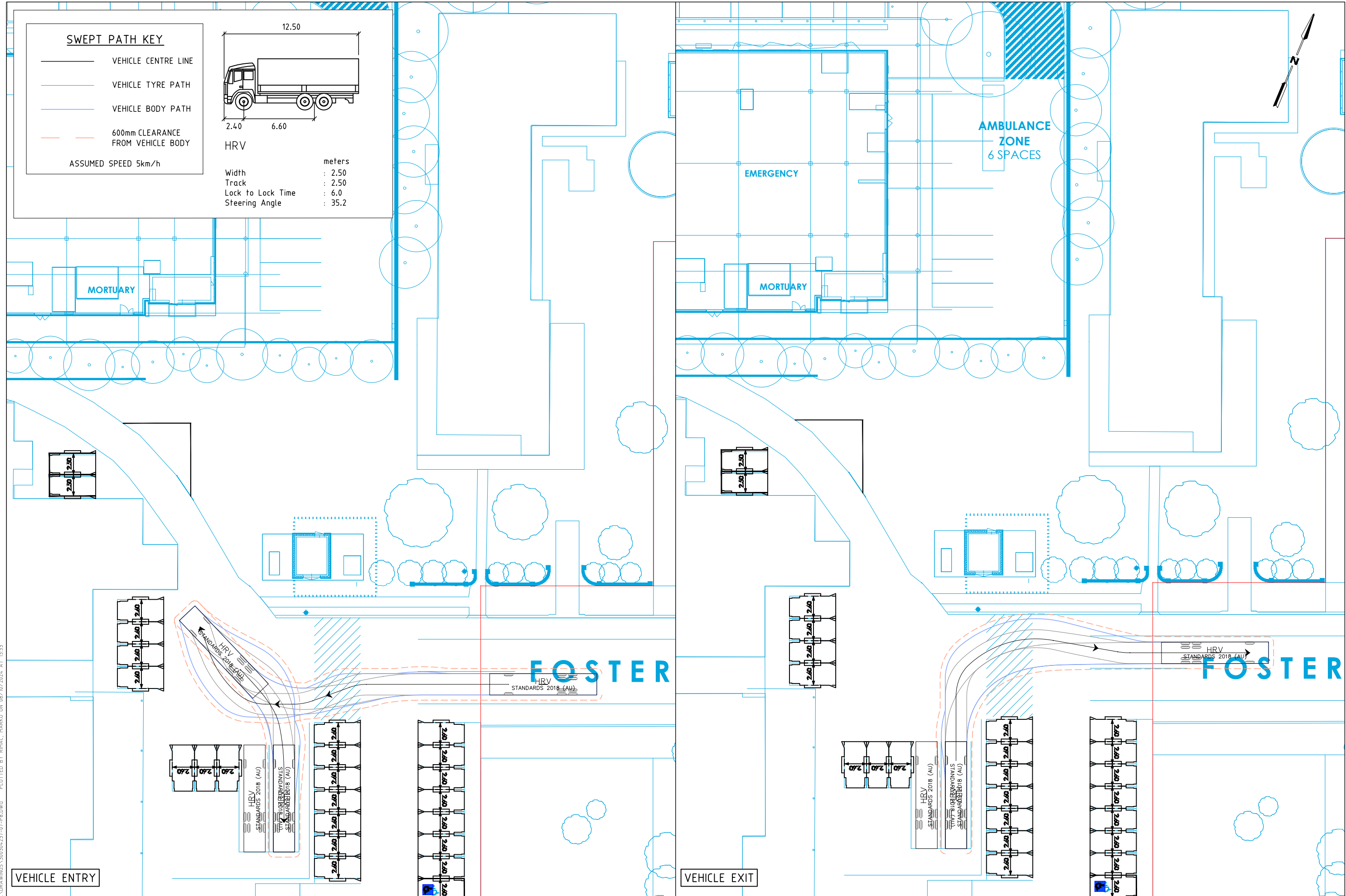
**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY



HRV  
 Width : 2.50 meters  
 Track : 2.50  
 Lock to Lock Time : 6.0  
 Steering Angle : 35.2

ASSUMED SPEED 5km/h



U:\300304237\TECHNICAL DRAWINGS\300304237-07-P8.DWG PLOTTED BY RIMAC, MARKO ON 08/10/2024 AT 13:33

VEHICLE ENTRY

VEHICLE EXIT



**PRELIMINARY PLAN**  
 FOR DISCUSSION PURPOSES ONLY  
 SUBJECT TO CHANGE WITHOUT  
 NOTIFICATION

**WARNING**  
 BEWARE OF UNDERGROUND SERVICES  
 THE LOCATIONS OF UNDERGROUND SERVICES ARE  
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DESIGNED  
M.RIMAC  
  
 APPROVED BY  
K.McNATTY

DESIGN CHECK  
K.McNATTY  
  
 DATE ISSUED  
8 OCTOBER 2024



SCALE  
A3  
0 2 4 8 1400  
 CAD FILE NO.  
300304237-07-P8.DWG

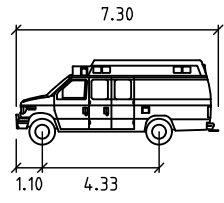
CESSNOCK HOSPITAL  
LOADING DOCK

VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300304237-07-14 SHEET 14 OF 18 ISSUE P8

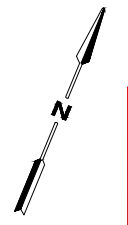
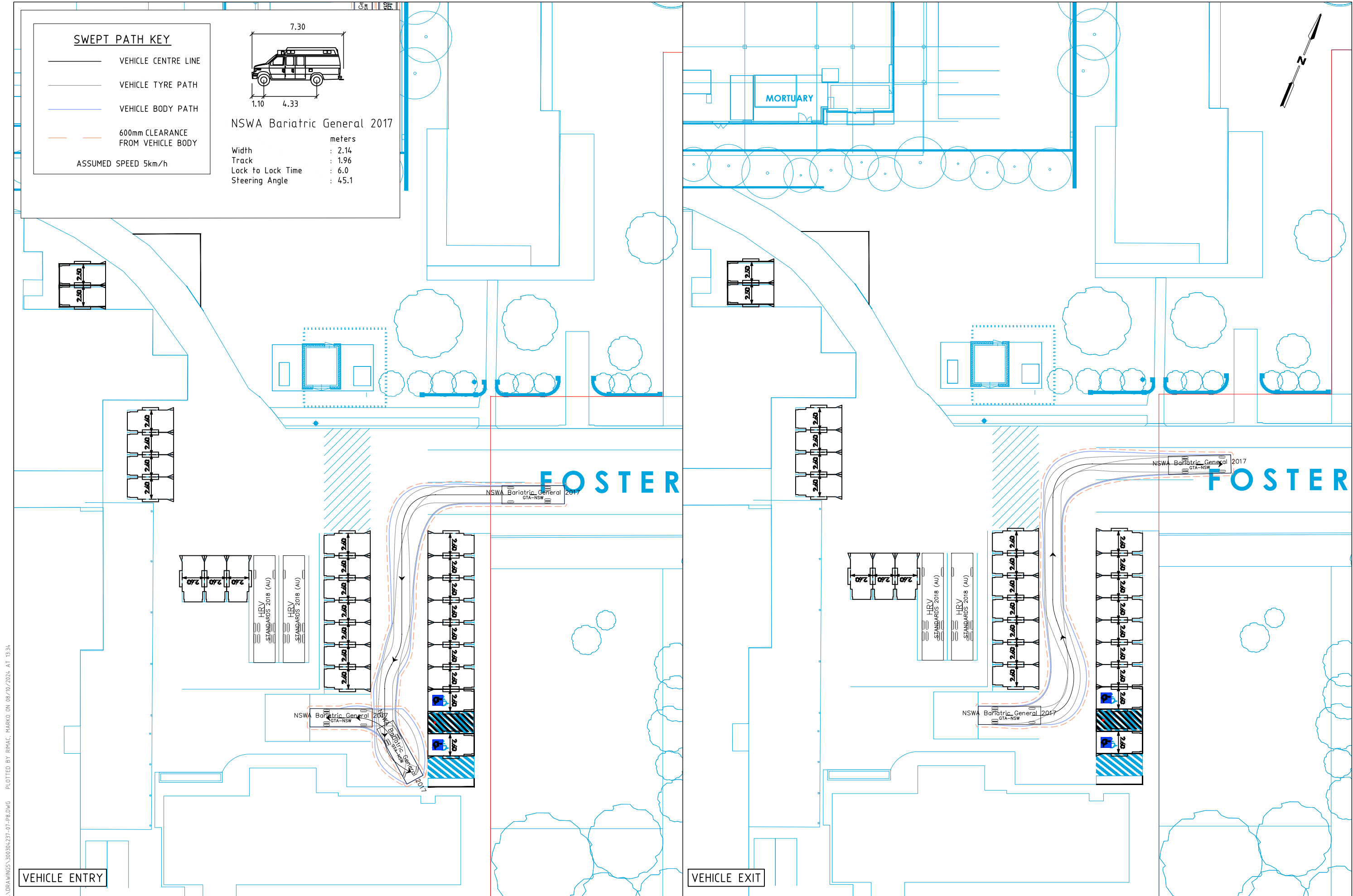
**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 600mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



NSW Bariatric General 2017

	metres
Width	: 2.14
Track	: 1.96
Lock to Lock Time	: 6.0
Steering Angle	: 45.1



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A3 0 2 4 8 1400

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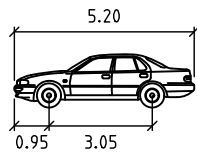
CESSNOCK HOSPITAL  
LOADING DOCK

**VEHICLE SWEEP PATH ASSESSMENT**

DRAWING NO. 300304237-07-15 SHEET 15 OF 18 ISSUE P8

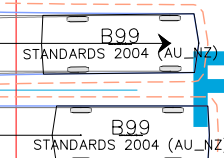
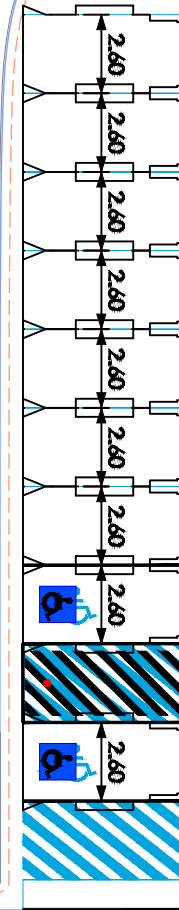
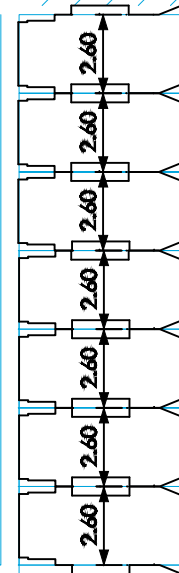
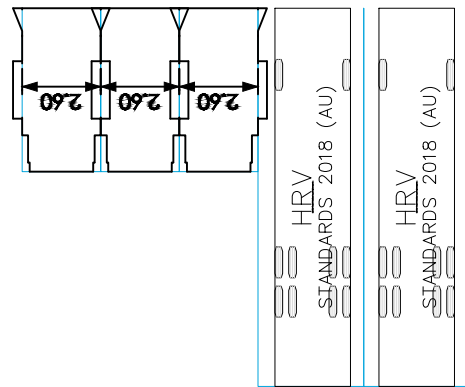
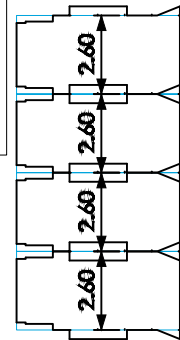
**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
  - VEHICLE TYRE PATH
  - VEHICLE BODY PATH
  - 300mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



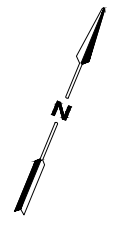
B99

- Width : 1.94 meters
- Track : 1.84
- Lock to Lock Time : 6.0
- Steering Angle : 33.9



**FOSTER S**

FOR INFORMATION  
DETAIL



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M.RIMAC

APPROVED BY  
K.McNATTY

DESIGN CHECK  
K.McNATTY

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SCALE  
A3 0 5 10 20 1:1000

CAD FILE NO.  
300304237-07-P8.DWG

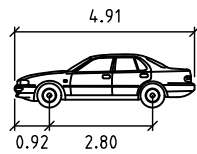
CESSNOCK HOSPITAL  
FOSTER STREET CAR PARK

VEHICLE SWEEP PATH ASSESSMENT

DRAWING NO. 300304237-07-16 SHEET 16 OF 18 ISSUE P8

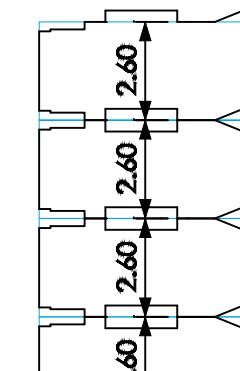
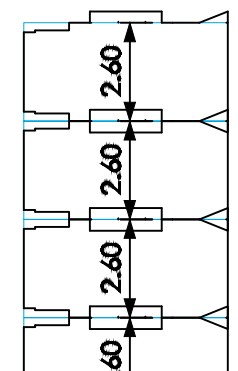
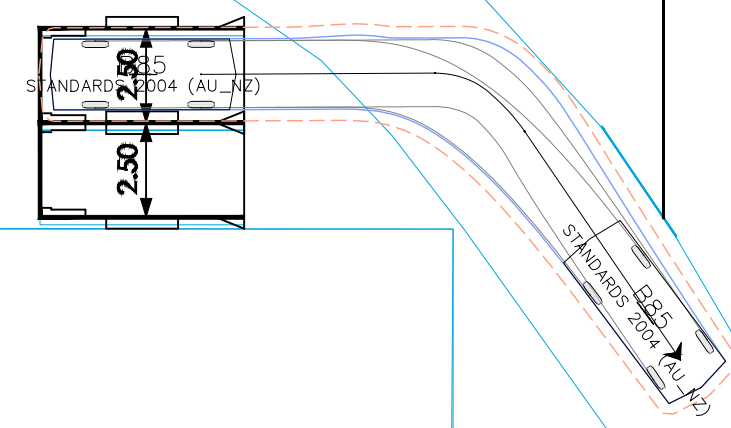
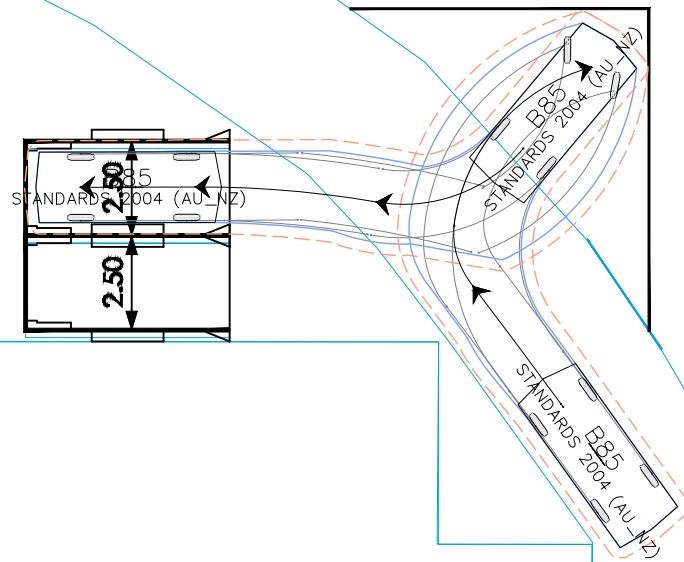
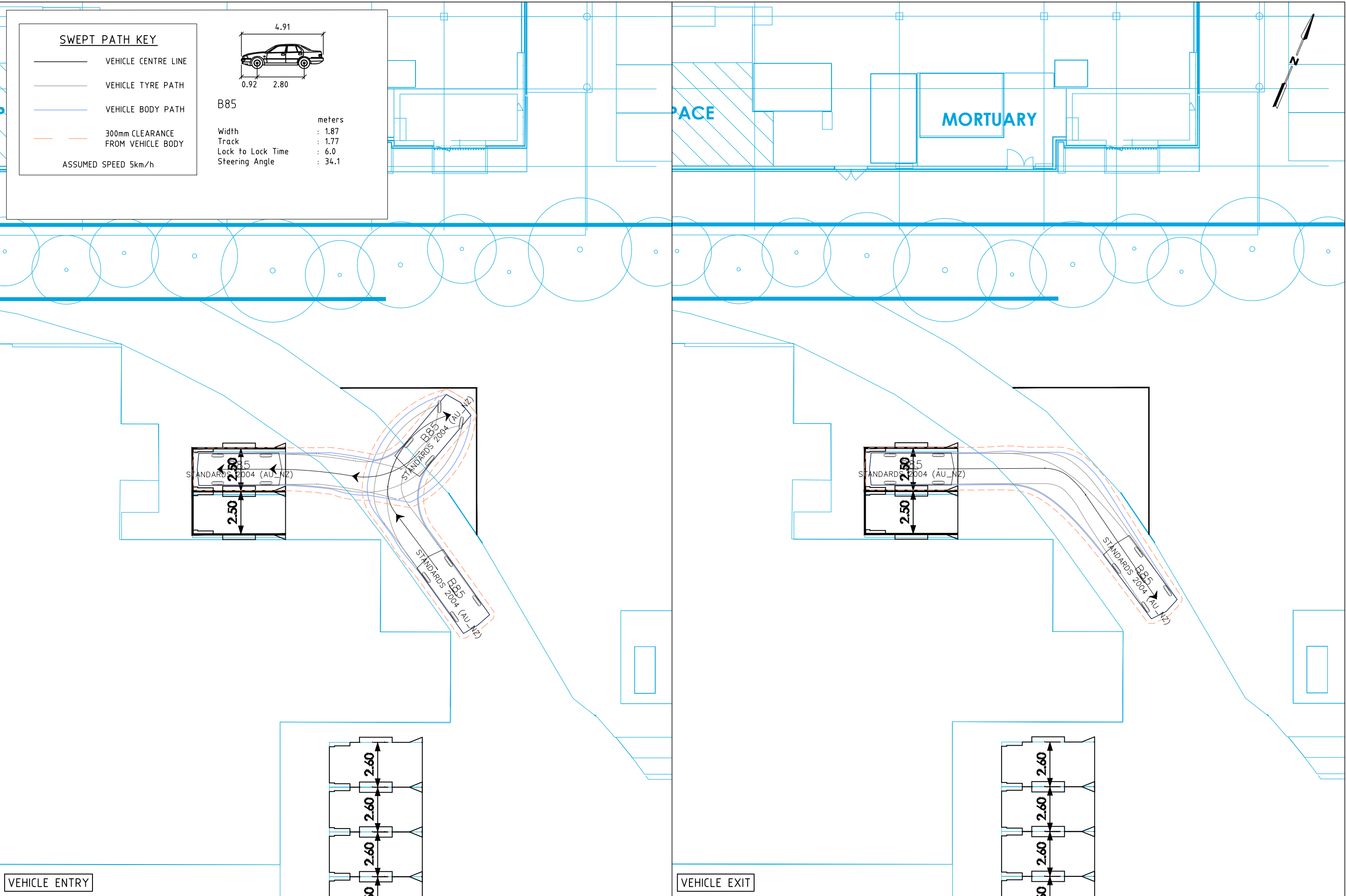
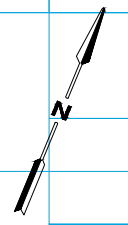
**SWEPT PATH KEY**

- VEHICLE CENTRE LINE
  - VEHICLE TYRE PATH
  - VEHICLE BODY PATH
  - - - 300mm CLEARANCE FROM VEHICLE BODY
- ASSUMED SPEED 5km/h



B85

Width : 1.87 meters  
 Track : 1.77  
 Lock to Lock Time : 6.0  
 Steering Angle : 34.1



VEHICLE ENTRY

VEHICLE EXIT



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DESIGN CHECK  
K.McNATTY  
  
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SCALE  
A3 0 1 2 4 1:200  
  
 CAD FILE NO.  
300304237-07-P8.DWG

CESSNOCK HOSPITAL  
STAFF PARKING SPACES

VEHICLE SWEEP PATH ASSESSMENT

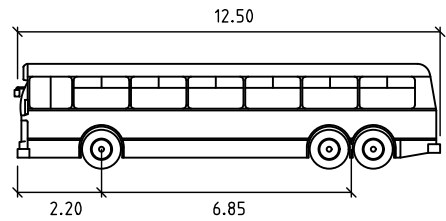
DRAWING NO. 300304237-07-17 SHEET 17 OF 18 ISSUE P8

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**SWEPT PATH KEY**

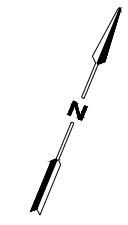
- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 10km/h



BUS

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6



# JURD STREET

ON-STREET PARKING

ON-STREET PARKING

BUS STOP  
AUSTROADS 2013 (AU)

- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

**FOH CAR PARK & DROP-OFF**  
20 SPACES

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CESSNOCK HOSPITAL  
BUS BAY

VEHICLE SWEEP PATH ASSESSMENT