
Victoria University Clinical Health Teaching Facility

Strategic Transport Strategy & Impact Assessment

Prepared for: Victoria University (Plenary Health)

Ref: 300305632 | Date: 19 October 2024



Revision

Revision	Date	Comment	Prepared By	Approved By
A	20 September 2024	Milestone 1 Issue	Daniel Winnie	Chris Coath
B	19 October 2024	Final	Daniel Winnie	Chris Coath

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For and on behalf of

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Executive Summary

This Strategic Transport Strategy & Impact Assessment report has been developed to assess the impact of the proposed Clinical Health Teaching Facility (CHTF) development at Victoria University's Footscray Park Campus and its strategic transport implications.

The development includes the demolition of the existing building C and G South of the Footscray Park Campus and the construction of the proposed 14,396sqm CHTF building and associated open urban realm, encouraging active transport and enhancing connection to a new bus stop.

No additional car parking is to be provided as part of the proposal representing a strategic decision to maximise the use of existing car parking availability on the campus and encourage the use of sustainable and active transport modes to the campus to support broader state and local government policy directions.

The parking demand generated by the development is expected to be accommodated within the university's existing car parking areas:

- Riverbank Car Park
- Footscray Park Campus Parking
- Footscray Park Campus (council parking area)
- 105 Ballarat Road Car Park
- Footscray Market Car Park

Surveys of parking areas, undertaken on Wednesday 12 June 2024, identified sufficient available car parking throughout the day to accommodate the parking demand generated by the CHTF development, which was calculated using travel survey data collected from existing staff and students at the campus.

The impact of traffic generated by the additional students attending campus is expected to have a negligible impact on the road network surrounding the campus due to the low volume of peak period traffic generation as a result of the universities staggered teaching block model. Traffic generated by the proposal will be dispersed to and from the identified university parking areas, with the primary destination being the Riverbank Car Park located off of Farnsworth Avenue.

To achieve the proposed travel mode share targets for the proposed CHTF development, a number of Green Travel initiatives have been identified to further reduce the reliance on private car travel for both students and staff of the centre. These initiatives include the provision of 24 new bicycle parking spaces at the CHTF building, in addition to the existing campus bicycle hub, as well as the new end of trip facilities to be provided within the centre. It is also recommended that the formal campus bicycle hub be expanded to provide an additional 18 bicycle parking spaces to support the permanent CHTF building occupants and mode shift aspirations.

In summary, the car parking demands of the proposed CHTF development are expected to be accommodated within the existing university parking areas; the traffic generated by the proposal will have a negligible impact on the operation of the local road network; and the provision of additional bicycle parking spaces and end of trip facilities, as well as other Green Travel initiatives, will support the development in achieving its travel mode share targets.

1. Introduction

1.1 Background and Proposal

The following Strategic Transport Strategy & Impact Assessment report has been prepared on behalf of Victoria University (Plenary Health) for the proposed Clinical Health Teaching Facility (CHTF) development at Victoria University's Footscray Park Campus.

The proposal involves the removal of the existing Building C & Building G South at the Footscray Park Campus and the construction of the proposed CHTF building. The CHTF building will include a loading dock at the internal ground floor level accessible from the VU High Street within the campus and new landscape entry. No additional car parking is being proposed. No alterations to campus vehicular access points are proposed.

1.2 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 existing parking in terms of supply (quantum) and layout
- service vehicle requirements
- pedestrian and bicycle requirements
- the traffic generating characteristics of the proposed development and the suitability of the proposed access arrangements for the site and on the surrounding road network
- establishment of Green Travel Plan initiatives.

1.3 Subject Site

The Victoria University Footscray Park Campus is located along the northern frontage of Ballarat Road, bounded by Hoadley Court and Mills Close in Footscray. Building C & G South on the campus are located on the immediate Ballarat Road frontage.

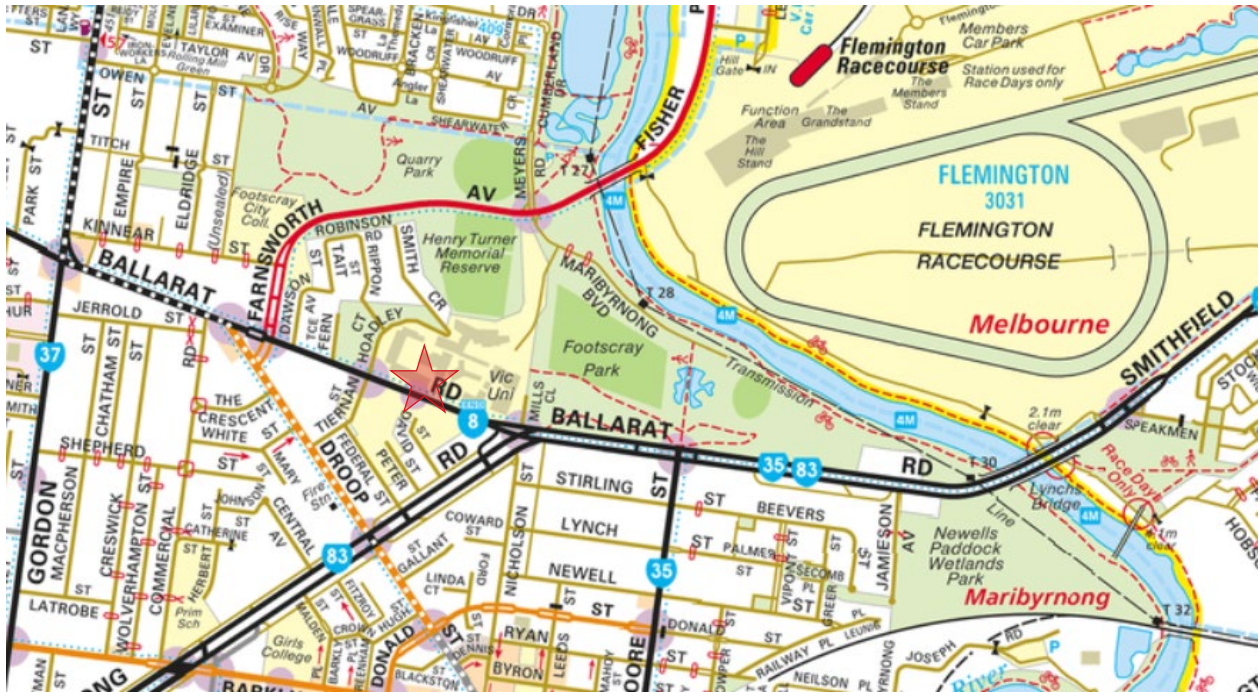
The campus is approximately 5 ha, located within a Public Use Zone (PUZ2) and is affected by a Development Contributions Plan Overlay (CPO), Parking Overlay (PO) and a Design and Development Overlay (DDO). Ballarat Road is located within a Transport Zone 2 (TRZ2)

The surrounding properties include a mix of low-density residential, retail and commercial land uses of the Footscray Activity Centre. The current Footscray Hospital construction site is situated opposite the campus on Ballarat Road and numerous parks (including, but not limited to, Footscray Park). Flemington Racecourse and Melbourne Showgrounds also in the vicinity.

The location of the subject site and the surrounding environs is shown in Figure 1.1, and the land zoning is shown in Figure 1.2.



Figure 1.1 – Subject Site and its Environs



Source Melway Publishing Pty Ltd

Figure 1.2 – Land Zoning Map



Source: Vicplan

1.4 References

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

- plans for the proposed development prepared by Denton Corker Marshall
- Car parking surveys undertaken on Wednesday 12 June 2024
- Maribyrnong Planning Scheme
- Australian Standard/New Zealand Standard, Parking Facilities (AS 2890)
- traffic and car parking surveys undertaken by Stantec as referenced in the context of this report
- an inspection of the site and its surrounds
- other documents as nominated.



2. Transport Policy

2.1 Strategic Context

There are a number of key State Government policy documents applicable to the subject land which provide guidance on appropriate land use and development. Those that are relevant in the context of transport planning are as follows:

- Plan Melbourne
- Transport Integration Act (2010)
- SmartRoads Policy
- Movement & Place

2.2 State Government Policy Context

2.2.1 Plan Melbourne

- Delivering a pipeline of large scale, city shaping infrastructure and urban renewal projects
- Delivering a new 'integrated economic triangle', connecting key employment clusters, industrial precincts and economic gateways.
- Integrating active transport development into existing and future land use to support a productive city
- Supporting 20-minute neighbourhoods by promoting local active transport choices and improving active / public transport infrastructure for the local area
- Footscray is identified as a Metropolitan Activity Centre

2.2.2 Transport Integration Act

- Victoria's principal transport statute
- Establishes a framework for the provision of an integrated and sustainable transport system in Victoria
- Six transport system objectives and eight decision-making principles
- Establishes a triple bottom line approach – economic prosperity, social and economic inclusion, and being resource efficient and environmentally responsible

2.2.3 SmartRoads

SmartRoads is a former VicRoads policy which outlined 'modal' priorities of the road network and underpinned strategies around land use and transport. It notes:

"There is no single solution to managing congestion on our roads. Sustainable management of congestion will require an integrated approach involving better management of the existing network, building new infrastructure, visionary land use planning, encouraging sustainable transport modes, and changes in behaviour by individuals, businesses and a level of government."

Under SmartRoads, all road Users will continue to have access to all roads. However, certain routes will be managed to work better for cars while others for public transport, cyclists and pedestrians during the various peak and off-peak periods.

In respect to the key roads adjacent to the Site, SmartRoads identifies Geelong Road is a preferred traffic route, Ballarat Road is a pedestrian priority area and a bus priority route, and Droop Street is a tram priority route.

SmartRoads identifies Geelong Road and Ballarat Road as bicycle priority routes, although it is noted that both corridors currently provide limited facilities for cyclists.

2.2.4 Movement & Place

Contemporary transport planning considers the use and classification of a street in terms of the movement function it provides alongside with the place function it serves.

For major highways and arterial roads, the movement function is paramount whereas the place function is all but irrelevant. In contrast, for minor residential streets, the place function is paramount, and the movement function is a lesser consideration.



The Movement and Place framework was established to replace SmartRoads and seeks to provide a consistent methodology for designing streets that are best suited to prioritising travel movement, and those where greater interaction between people and places can be encouraged. Movement and Place principles and framework are broadly illustrated in Figure 2.1.

In the immediate vicinity of the Site, it is evident that Geelong Road currently operates primarily as a movement corridor, while Ballarat Road has a stronger place function. With the development of the new Footscray Hospital, the place function of both roads can be expected to materially increase and thus change the way the roads should be designed.

Figure 2.1 – Movement & Place Framework



2.3 Council Policy Context

2.3.1 Clause 18 of the Maribyrnong Planning Scheme

- Contains a range of guidelines for transport planning
- Develop integrated transport networks to connect people to jobs and services and goods to market
- Promote walking and cycling when planning for new suburbs, urban renewal precincts, greyfield redevelopment areas and transit-oriented development areas (such as railway stations).
- Integrate public transport services and infrastructure into new development

2.3.2 Clause 45.09 of the Maribyrnong Planning Scheme

- The car parking overlay specifies reduced carparking rates for a number of land uses
- The Clause identifies the following parking objectives that are sought to be achieved:
 - *“Parking demand and supply satisfies user needs*
 - *Parking provision is minimised, where appropriate, in recognition of its role in generating vehicle trips and traffic congestion*
 - *Use of active and sustainable modes of transport is encouraged in preference to increased private vehicle travel, thereby reducing traffic congestion and noise and air pollution and increasing road safety.”*

2.4 Development response to Transport Policy

Encouraging the use of public transport and walking and cycling as modes of transport is central to achieving the above objectives.

No additional car parking is to be provided as part of the proposal as the CHTF development aims to reduce the reliance on private car travel and promote the use of public transport and bicycles for both staff and students.

The site is easily accessible by multiple forms of public transport, including bus, tram and train, and is within walking distance of a major activity centre. There are on/off-road cycle lanes along the nearby major roads etc. Additional bicycle parking and end of trip cycle facilities are to be provided and the site is located on or near a principal bicycle route.



The proposed development is a prime opportunity to promote the vision of this objective by encouraging the use of public transport, cycling, and walking and not encouraging an abundance of car parking within this area, and in turn an over use of motor vehicles.



3. Existing Transport Context

3.1 Local Road Network

3.1.1 Adjoining Roads

The campus is bound by Ballarat Road to the South, Hoadley Crescent to the West and Mills Close to the East. Ballarat Road is a primary arterial road, which feeds into other arterials including Geelong Road, Smithfield Road, Moore Street and subsequently Dynon Road. The adjoining arterial roads provide reasonable levels of services during peak periods, however Ballarat Road is known to experience congestion west of the site under peak conditions.

3.1.2 Intersections

The most notable intersection in the vicinity of the site is the intersection of Ballarat Road and Geelong Road. This intersection generally performs well during peak periods, which can be attributed to several turn bans and pedestrian limitations during these times.

West of the site, Ballarat Road can experience congestion at the Farnsworth Avenue and Gordon Street intersections during the peak.

3.2 Public Transport Infrastructure

3.2.1 Heavy Rail

Footscray railway station is a 900m walk from the subject site, providing a rail connection that is serviced by Sunbury, Werribee and Williamstown metropolitan train lines. The station is also serviced by Geelong, Ballarat and Bendigo regional services.

This station is well serviced and connects to the site with an array of active and public transport options.

3.2.2 Tram

The No. 82 Tram connects the Site to Footscray Station and Moonee Ponds. The tram route currently operates at 10-15 minute frequencies during the peak and 20-30 minute frequencies during off peak periods. The tram shares road space with general traffic.

3.2.3 Bus

There are two bus routes that operate along Ballarat Road and two along Droop Street that service the surrounding resident catchments (223, 406, 409, 472,). Bus stops are located abutting the Campus.

Shuttle bus services are operated by the University to take staff and students to and from public transport hubs and car parking locations. The shuttle bus services are summarised below.

Table 3.1 – VU Shuttle Bus Services

Shuttle	Operating Times	Frequency
VU Branded Shuttle from Footscray Station to Footscray Park Campus (staff and students, free to ride)	6:30am – 10:30pm Monday - Friday	15-20 minutes
VU Small Shuttle between Riverbank Parking Area and VU Footscray Park Campus (staff and student, free to ride)	6:30am – 10:30am & 3pm – 7pm	As passengers require it.

Source: Victoria University

3.3 Active Transport Infrastructure

3.3.1 Bicycle Infrastructure

The site is connected to the Footscray Activity Centre and Footscray Railway station via on-road bike lanes featured on Nicholson Street. Both Ballarat Road and Geelong Road are identified as priority bike routes under SmartRoads.

There are also established off-road shared user path network connecting to the site via the adjacent parkland to the North and East. This network runs via the Maribyrnong river and connects the site to surrounding catchments.



3.3.2 Walking Infrastructure

The campus site itself features a well connected network of wide footpaths between the various buildings. The site can be accessed from Footscray station and the Footscray Activity Centre via pedestrian paths provided on Droop Street and Nicholson Street.

Pedestrian paths are provided on both sides along the majority of the surrounding road network. Paths however are generally narrow and often close to the edge of the carriageway. These roads can act as a barrier for pedestrians, with crossing facilities that can be a poor experience for pedestrians (i.e. long wait times to cross, crossing over multiple phases, lack of separation, etc.). Signalised crossings are however available across Ballarat road at all signalised intersections and a new Pedestrian Overpass has been recently constructed as part of the New Footscray Hospital development. This overpass will provide very convenient access to the CHTF building.

3.4 Car Parking

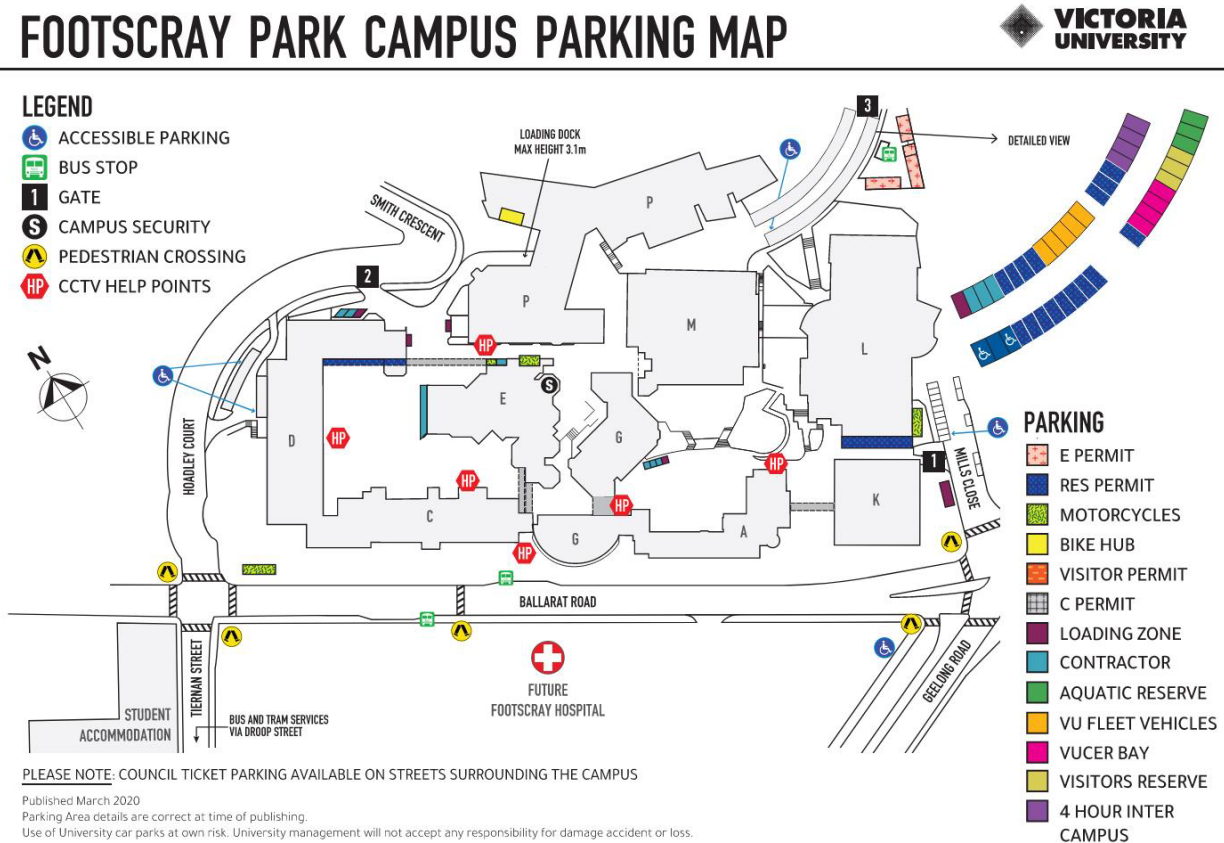
3.4.1 University parking Supply

There are four dedicated university car parking areas associated with the Footscray Park Campus for use by staff and students.

Footscray Park Campus Parking

There is an array of permit-controlled parking in and around the Footscray Park Campus which is available for use by university staff and/or students. The map attached in Figure 3.1 below details the type and location of parking available in relation to the campus.

Figure 3.1 – Footscray Park Campus Parking Map



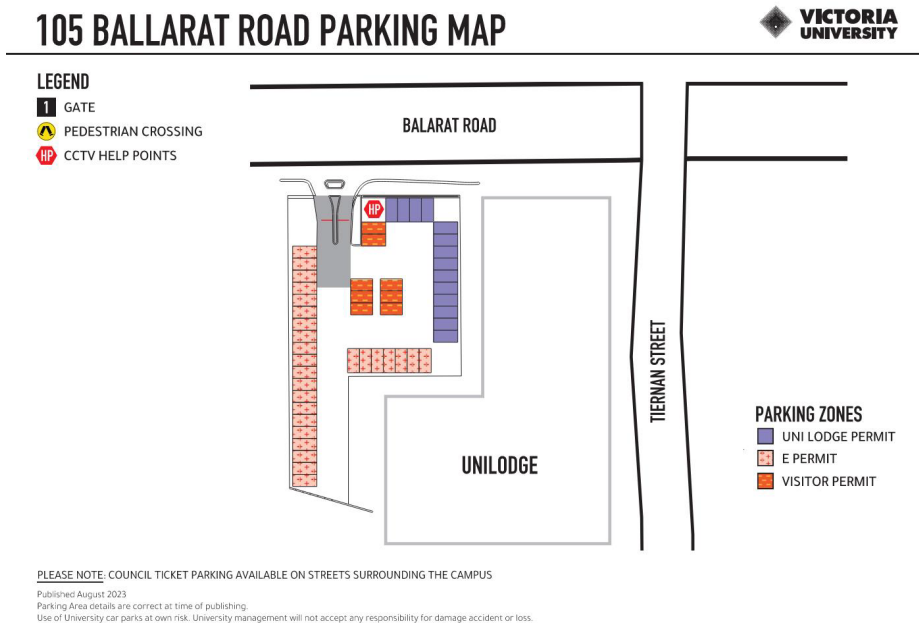
Source: Victoria University

There is a total of 60 permit controlled car parking spaces for use by staff/students in the vicinity of the Footscray Park campus.

105 Ballarat Road Car Park

The university car park at 105 Ballarat Road is a permit controlled parking area with a boom gate exit and entrance to prevent unauthorised entry. A map of the parking area is shown in Figure 3.2 below.

Figure 3.2 – 105 Ballarat Road Parking Map



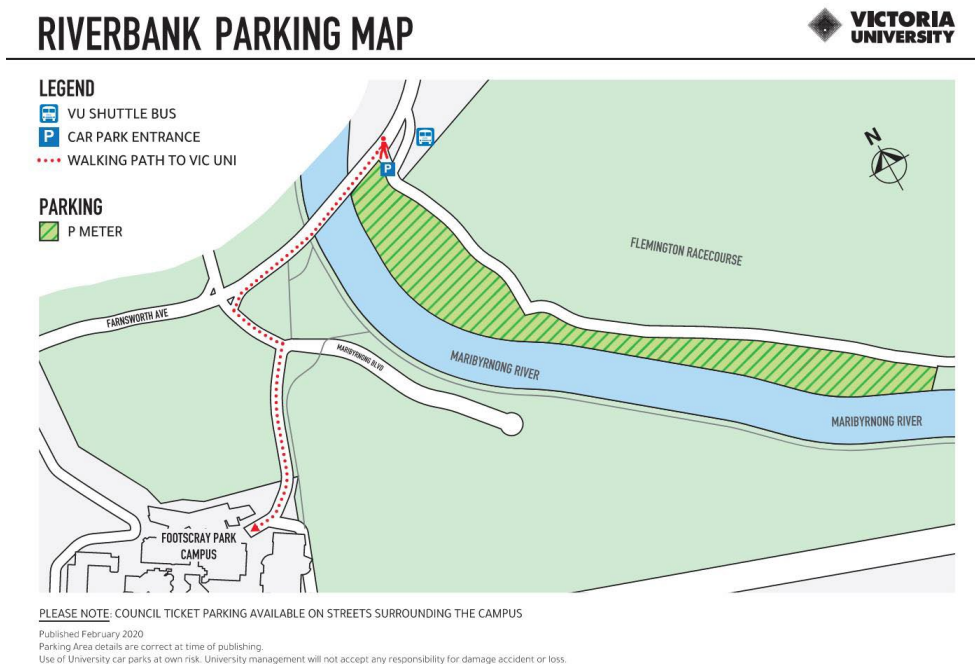
Source: Victoria University

There are a total of 48 permit controlled car parking spaces provided with the Ballarat Road parking area.

Riverbank Car Park

The Riverbank Car Park is located to the west of the Flemington Racecourse approximately 500m northeast of the Footscray Park Campus. The location of the car park in relation to the campus is detailed in Figure 3.3 below.

Figure 3.3 – Riverbank Car Park



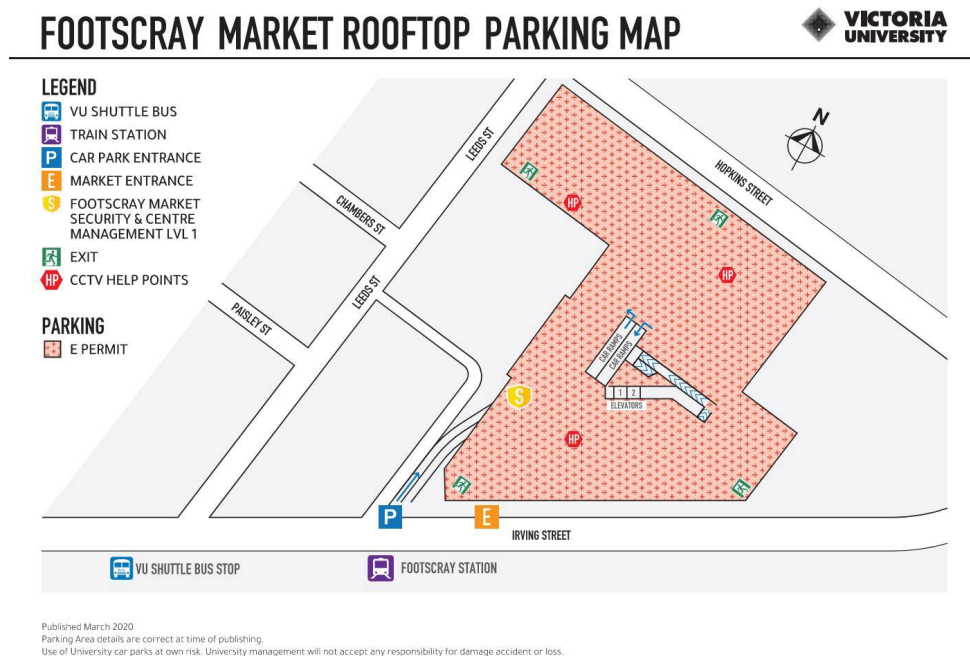
Source: Victoria university

The route identified above takes approximately 10 minutes to walk. A regular shuttle bus service is also available which drops users off at the northwest corner of the campus. The car park provides a total of 230 spaces for use by university staff and/or students, which are parking meter controlled between 06:30am and 11:30pm, Monday to Friday.

Footscray Market Car Park

Victoria University also leases the rooftop level of the Footscray Market car park for use by university staff which is located next to Footscray train station and the VU shuttle bus stop, as shown in Figure 3.4 below.

Figure 3.4 – Footscray Market Rooftop Parking Map



Source: Victoria University

There are 420 parking spaces available for use on the rooftop level of the Footscray Market car park.

3.4.2 Surrounding Parking Supply and Restrictions

There are various council operated parking areas within walking distance of the Footscray Park Campus, both off and on street, which are not restricted for university use but may be used by staff and students when travelling to the campus.

Off Street Car Parking

There is a large council operated car parking area to the northeast of the Footscray Park Campus located off Maribyrnong Boulevard less than 500m walking distance from the campus, as shown in Figure 3.5 below.

Figure 3.5 – Council Car Park - Footscray Park Campus



Source: MetroMap

There is a total of 415 parking spaces available in this area and the parking is ticket controlled between 8am and 6pm, Monday to Friday with no enforced time limit.

On Street Parking

On street parking is provided on most streets throughout the area surrounding the Footscray Park Campus with the most relevant being:

- Smith Crescent
- Hoadley Court
- Rippon Street
- Ballarat Road
- Tiernan Street
- Federal Street
- Droop Street

Car parking is controlled by various restrictions including, including permit zone spaces which prioritise parking for local resident needs, short term free parking, short term paid parking and longer term paid parking. The majority of on street parking restrictions are enforced between 8am and 6pm, Monday to Friday when the majority of university classes are held. These parking restrictions provide a balanced 'activity centre' parking approach, providing necessary protection for residential users but also managing this public asset for all nearby users.

3.5 Loading Arrangements

The existing loading arrangements for Building C and G South on the Footscray Park Campus occurs via a highly controlled internal road network controlled through the use of boom gates.

The internal road network is accessed from Hoadley Court, a local council street which intersects Ballarat Road through a controlled intersection. The court is shared by two recreational centres and also provides access to several low-density residential streets.

3.6 Context of Area

3.6.1 New Footscray Hospital

The new Footscray Hospital is currently under construction on the southern side of Ballarat Road across from the VU Footscray Park Campus, so it is likely to have an impact on the transport network surrounding the site. From a transport perspective, the Footscray Hospital development is characterised by:




- The provision of a new pedestrianised 'Hospital Street' that passes through the site linking the Ballarat Road main access / signals to the corner of Geelong Road and Federal Street.
- The provision of multiple pedestrian access points to the site
- The provision of 657 bicycle parking spaces, 1,224 carparking spaces, 32 motorcycle parking spaces, 14 ambulance bays, six additional ED drop-off spaces, and 12 other pick-up / drop-off spaces.
- The creation of new vehicle accesses into the site, including:
 - Ballarat Road signals (public Carpark and porte-cochere)
 - Geelong Road signals (staff Carpark and ED)
 - Geelong Road service road (west) (separate ambulance access)
 - Geelong Road service road (east) (loading access).
- It is noted that the porte-cochere, onsite staff and public carparking and ED are accessible from both signalised access points. No vehicle access to the local road network (i.e., Federal Street or Tiernan Street) is proposed to and from the Hospital.

3.6.2 Other Development

There are nearby transport infrastructure projects that will likely have an impact on transport movements in the vicinity of the Site. Notable projects in terms of impact or proximity are outlined in Table 3.2.

Table 3.2 – Nearby Transport Infrastructure Projects

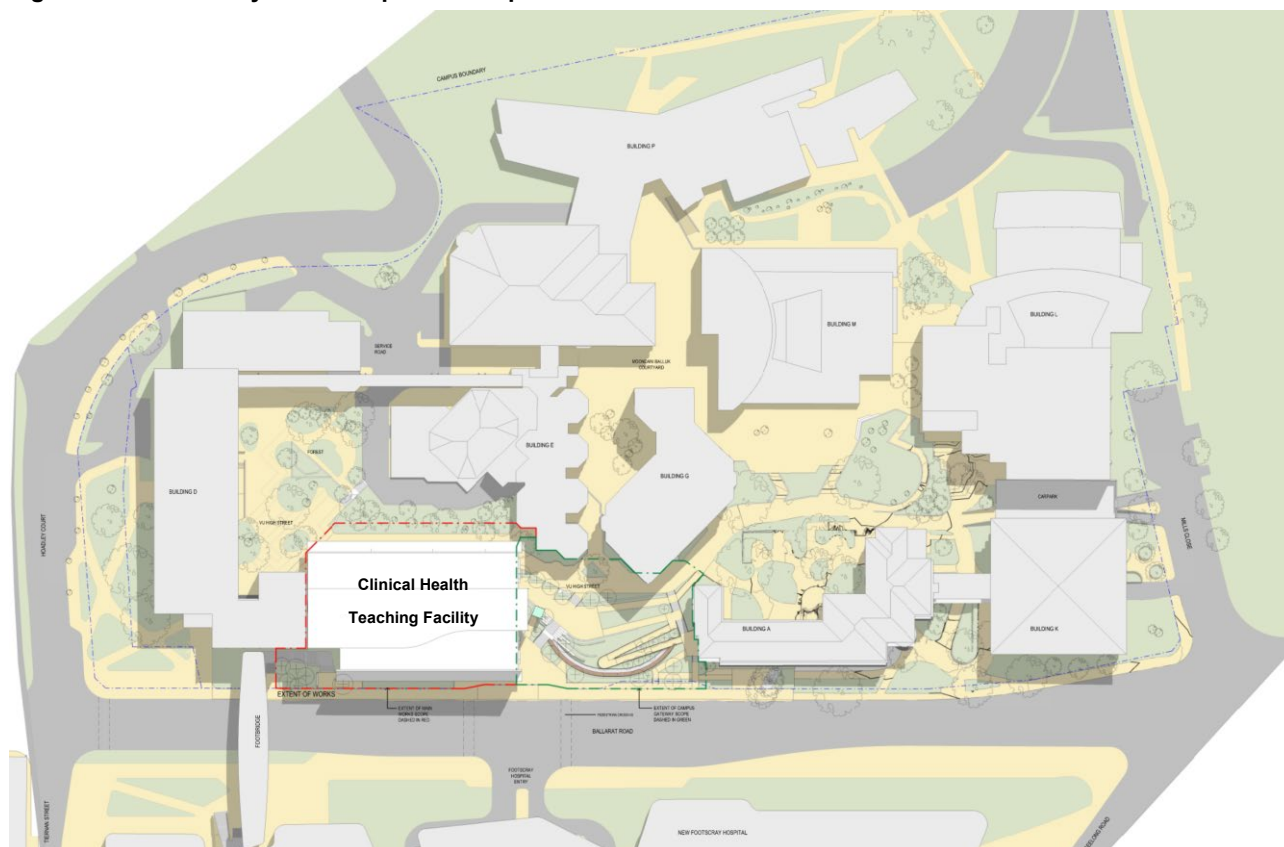
Project		Description
West Gate Tunnel Project		<ul style="list-style-type: none"> • The West Gate Tunnel Project will provide an alternative link to the West Gate Bridge and reduce heavy vehicle volumes from a number of inner west residential streets. • Construction of the West Gate Tunnel is expected to be completed in 2025 • Reference to the Victorian Integrated Transport Model suggests that traffic volumes will initially reduce on Geelong Road and Ballarat Road as a result of the Project, however, ultimately (+10 years) volumes will return to near existing levels.

4. Proposed Development

4.1 Proposed Land Use

The proposed development is for the construction of a Clinical Health Teaching Facility (CHTF) on the Victoria University Footscray Park Campus. This new development will replace the existing “Building C and G South” on campus, replacing the existing 4,867.3sqm building with the proposed 14,396sqm CHTF building and an open urban realm. The open public realm will enhance the connectivity of the campus to bus stops located on Ballarat Road, encouraging public and active travel modes for this building and the campus in general. The location of the proposed CHTF building in the context of the Footscray Park campus is identified in Figure 4.1.

Figure 4.1 – Footscray Park Campus Masterplan



Source: Denton Corker Marshall Architects

Changes to the overall university staff and student population across the campus is expected as a result of the proposed development and is summarised below.

- Existing population of Building C and G South will disperse across the rest of the Footscray Park Campus
- Teaching spaces within the Footscray Park Campus will accommodate the relocation of health staff and students from the VU St Albans campus
- A small population of Arts and Education students will be transferred to the VU Footscray Nicholson Campus
- The demolition of building G south will remove large format lecture theatres from the Footscray Park campus, which are no longer part of VUs teaching model, resulting in more temporally dispersed parking demands and traffic impacts by students.

The resultant change in total staff and student population at the Footscray Park Campus as a result of the proposed development is summarised in Table 4.1 below.

Table 4.1 – Footscray Campus Staff and Student Population

	Staff Members	Students
Footscray Park Campus – Existing	597	3,391



	Staff Members	Students
Footscray Park Campus – Proposed	516	3,867
Change in Total Population	Reduction of 81 staff members ^{[1][2]}	Increase of 476 students

Source: Victoria University

[1] Based on broader VU staff relocations to other VU campuses required to facilitate the delivery of the proposed CHTF development. The reduction represents the overall impact to the Footscray Park Campus

[2] For the purpose of presenting a conservative (on the high side) assessment, no reduction in staff numbers has been applied as part of the development's parking and traffic impact.

4.2 Transport Provisions

From a transport perspective, the proposed CHTF development is characterised by:

- 24 new bicycle parking spaces (12 hoops) for casual users are to be provided in proximity to the in CHTF Building, in addition to the provisions of the existing formal campus bike hub.
- A further 18 bicycle spaces will also be provided within the formal campus bike hub to support longer stay users.
- An on-site loading dock that is accessible from within the VU campus via existing campus vehicle access and security arrangements.



5. Transport Demands

5.1 University Operations Context

For the purpose of this assessment, Victoria University provided information regarding the operation of their campuses as it relates to both university staff members and students. The information provided detailed the staff and student numbers at the Footscray Park Campus, expectations and requirements around in person attendance on campus for staff members and the operation of university courses. The information provided is summarised below.

5.1.1 University Staff

Staff members of the Footscray Park Campus are required to attend work on campus a minimum of 3 days a week with the expectation that they spend the entire workday on site; the remaining days of work are allowed to be undertaken remotely. Therefore, it is expected that on any single day of the working week the staff population at the campus would be approximately 60% of the total employed.

5.1.2 Course Operation

Courses at the Victoria University are delivered using the 'block model' which typically includes three 3-hour teaching blocks spread across the day; typically, from 08:00 to 11:00, 11:30 to 14:30, and 15:30 to 17:30. The aim of the model is to reduce the total student population on campus at one time by allowing students the option to arrive for their assigned teaching block and depart afterwards.

There are a total of 186 teaching days in a year at the Footscray Park Campus split over two semesters each containing 4 blocks. The block model dates for 2024 are detailed in Table 5.1 below for reference.

Table 5.1 – Block Model Dates 2024

Semester	Block	Start Date	End Date
	Summer Block	15 Jan 2024	9 Feb 2024
Semester 1	Block 1	19 Feb 2024	15 March 2024
	Block 2	18 March 2024	19 April 2024
	Block 3	29 April 2024	24 May 2024
	Block 4	27 May 2024	21 June 2024
	Winter Block	1 July 2024	26 July 2024
Semester 2	Block 1	29 July 2024	23 Aug 2024
	Block 2	26 Aug 2024	30 Sept 2024
	Block 3	30 Sept 2024	25 Oct 2024
	Block 4	28 Oct 2024	22 Nov 2024

Source: Victoria University

5.2 Existing Travel Characteristics

To develop a greater understanding of the VU Footscray Park Campus' operation, the existing travel behaviour of staff and students, and the receptiveness to altering said behaviour, two separate questionnaires were prepared for university staff and students to complete. The resulting responses are summarised in the following.

5.2.1 University Students

Campus Attendance

Students of the Footscray Park Campus were also asked through the survey to identify the number of days they typically work at home and on campus each week; the results are detailed in Figure 5.1 below.



Figure 5.1 – Student Campus Attendance



Source: Staff Questionnaire

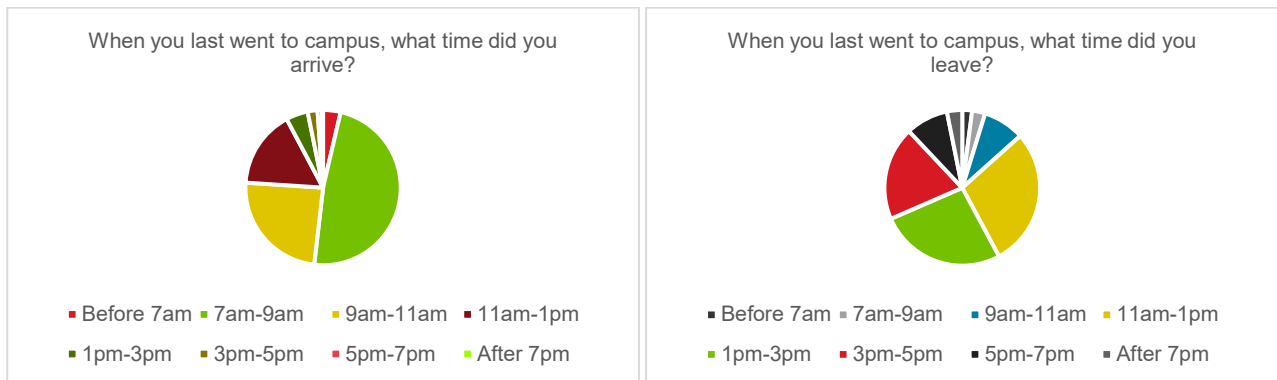
The responses identify that a significant majority of Footscray Park students (78%) attend classes on campus 3 days per week with only 6% attending 4 or more days. Nearly half of all students surveyed (48%) attend one class from home per week and another 34% attending none at all (i.e. studying remotely).

The results show that students typically attend the majority of their classes on campus with only 18% attending 2 or more classes from home however, close to 95% of students attend the campus for 3 days a week or less therefore, student attendance at the Footscray Park Campus is approximately 60% on any single day, before considering the block model.

Arrival and Departure Periods

Students were also asked at what period they last arrived and departed the campus with the responses summarised in Figure 5.2 below.

Figure 5.2 – Student Arrival and Departure Periods

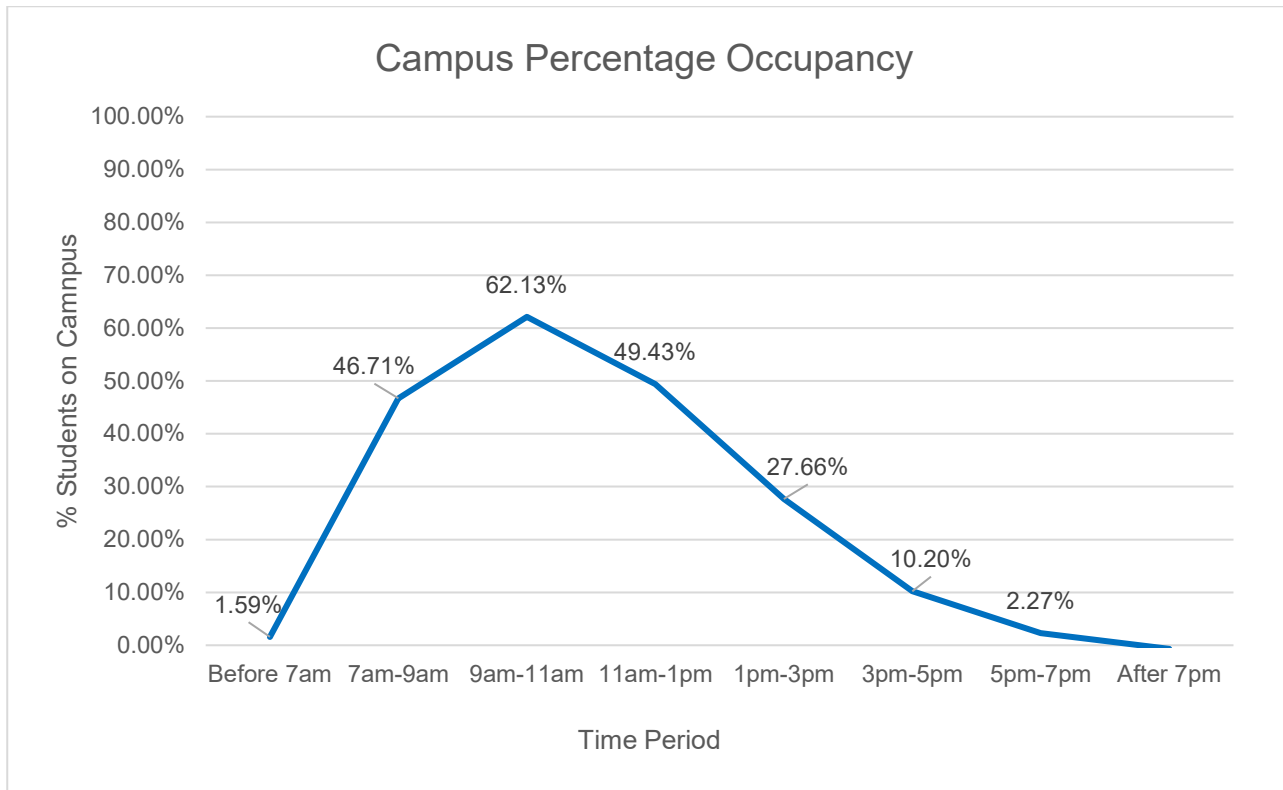


Source: Student Questionnaire

The survey responses show that nearly half of university students (48%) arrive at the campus between 7am and 9am, with the majority of the rest arriving between 9am and 11am (24%) or 11am and 1pm (16%). The typical period for departure varies significantly, with the most common being 11am – 1pm (29%), 1pm – 3pm (26%) and 3pm – 5pm (20%).

To determine the population of students on campus throughout the day, using the above data an accumulation of arrivals and departures can identify the percentage occupancy of students at the campus across the day. This is detailed in Figure 5.3.

Figure 5.3 – Campus Percentage Occupancy



Source: Student Questionnaire

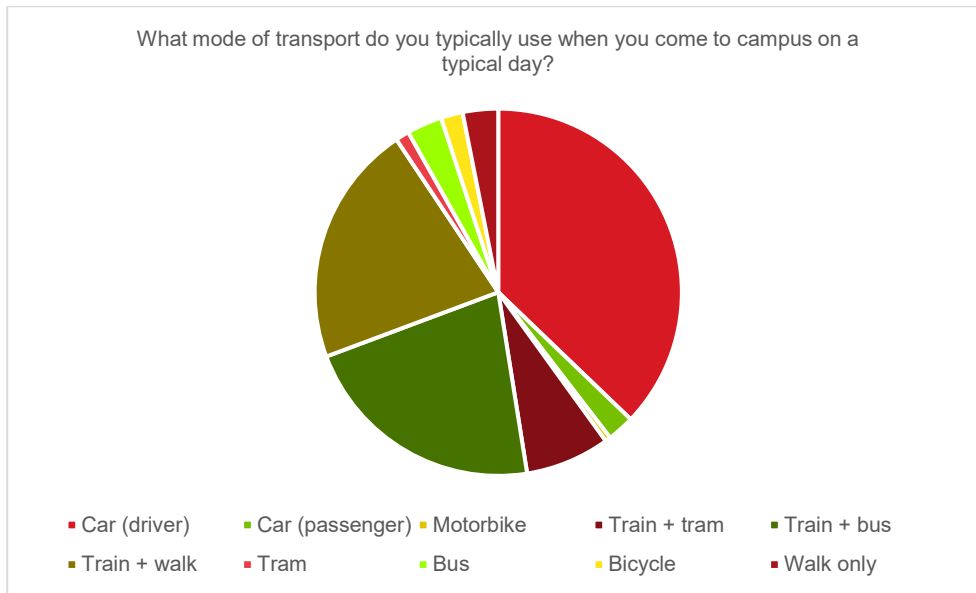
The graph identifies that the maximum percentage of students on campus at the same period is 62.13% between 9am and 11am which is representative of the crossover period between students attending the morning teaching block period (08:00 to 11:00) and students arriving for the early afternoon block (11:30 to 14:30). Therefore, the maximum percentage occupancy adopted for university students on campus is 62.13%.

These results are reflective of the 'Block Model' adopted by VU University which results in students arriving and departing at varying periods throughout the day depending on which of the three blocks their classes are scheduled for. Using this model helps the campus spread the effect of its on-site student population across the day, limiting negative impacts to on road traffic volumes and available car parking.

Typical Travel Modes

University students were also questioned regarding their typical transport mode when travelling to Campus, resulting in the mode splits detailed in Figure 5.4 .

Figure 5.4 – Student Typical Mode of Travel



Source: Student Questionnaire

Travel by car (driver) is the most common single mode of travel adopted by students of the Footscray Park Campus at 37% however, when considered together, public transport modes account for 55% with 'train+bus' and 'train+walk' being the most common at around 21% each. The results show that travel by public transport and by car (driver) account for the majority of student trips to and from the campus with low levels of walking (3%) and cycling (2%).

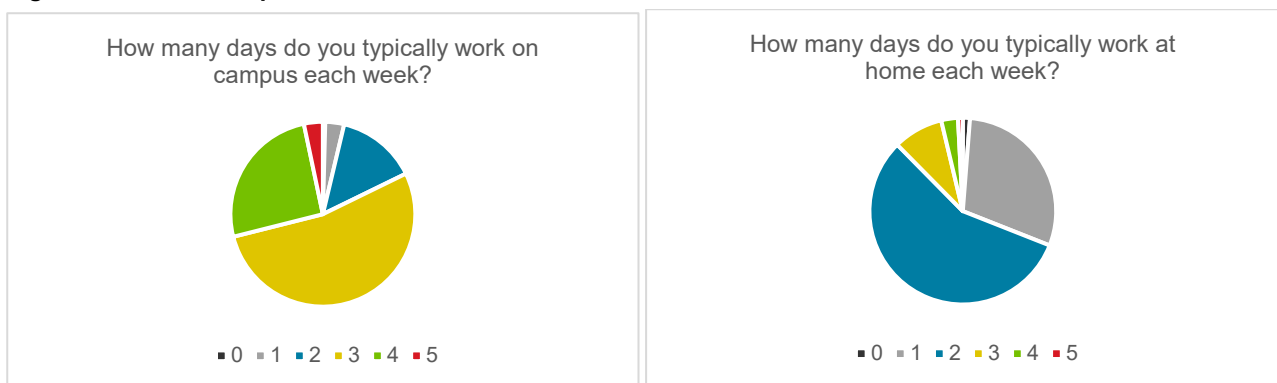
Additionally, it is noted that the previous survey undertaken by Victoria University in 2021 for students at the Footscray Park Campus identified a travel by car mode share of 57%, which highlights a 20% reduction in students travelling by private car over the last 3 years.

5.2.2 University Staff

Campus Attendance

University staff members were asked through the survey to identify the number of days they typically work at home and on campus each week; the results are detailed in Figure 5.5.

Figure 5.5 – Staff Campus Attendance



Source: Staff Questionnaire

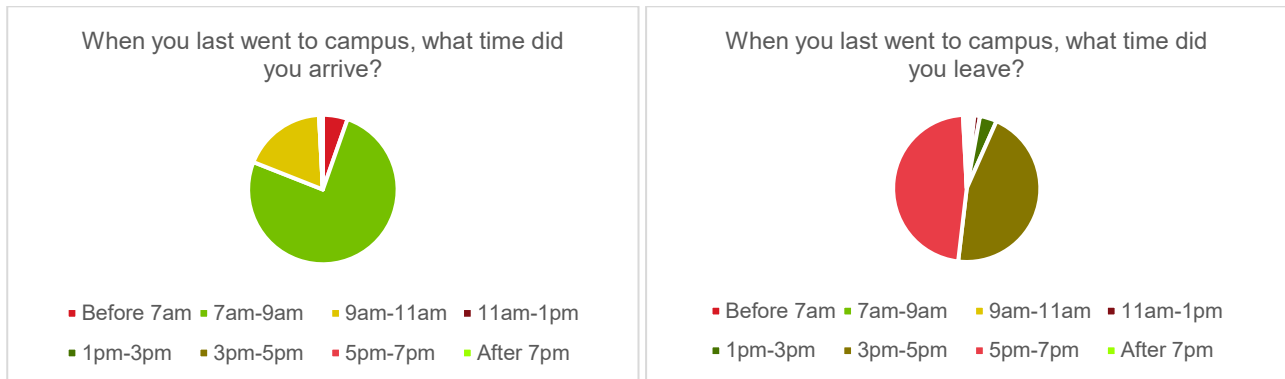
The responses identify that the majority of university staff members (82.3%) are meeting the VU operational requirements by attending the Footscray Park Campus at least 3 days a week. Around half (53%) attend campus 3 of the 5 days with a notable 26% attending for 4 days and 15% attending twice per week.

The results show that the VU requirements are typically being adhered to and on any single day the campus is likely to have around 60% of the staff population on site.

Arrival and Departure Periods

The survey asked members of staff to advise at what period they arrived and departed the campus the last time they attended from the date of survey; the results are detailed in Figure 5.6 over. This data provides important information around peak travel periods and length of stay at the campus.

Figure 5.6 – Staff Arrival and Departure Periods



Source: Staff Questionnaire

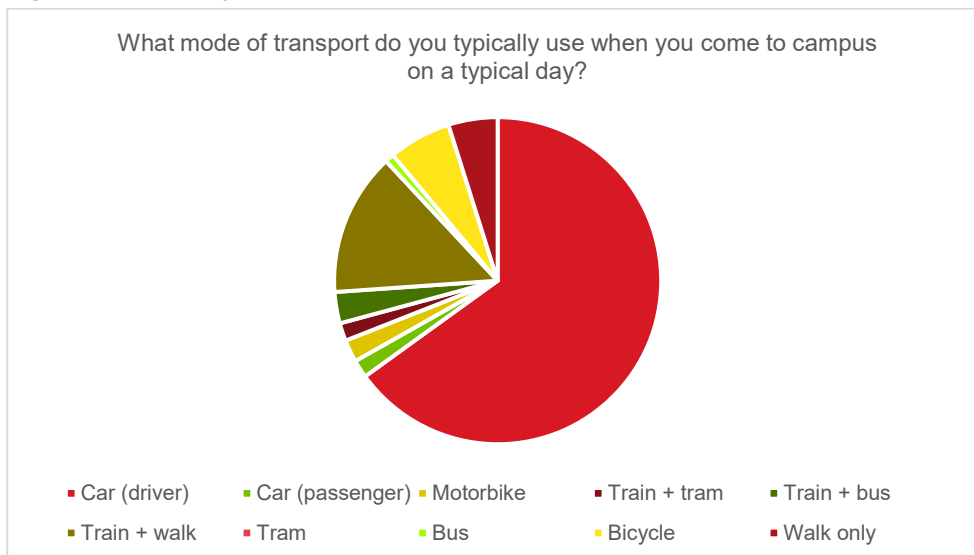
The figures above identify that the majority of staff members arrive at the campus between 7am and 9am (76%) and depart between 3pm and 5pm (45%) or 5pm and 7pm (47%), which is typical given the 9-5 nature of work at a University. Some notable outliers are staff members arriving before 7am (5%) and between 9am and 11am (18%).

The results show that university staff typically arrive in the morning and depart in the evening meaning that all staff members who attend campus on a single day would be on site at the same time during the afternoon period; resulting in 100% occupancy of on-site staff members.

Typical Travel Modes

Staff members were also asked to identify the mode of travel they typically take when travelling to the campus with the responses summarised in Figure 5.7.

Figure 5.7 – Staff Typical Mode of Travel



Source: Staff Questionnaire

As detailed in the above figure, travel by car (driver) is the most common mode of transport used by staff members when travelling to and from the university campus with 65% travelling this way. Other notable modes of transport employed by staff members include train and walk (14%), bicycle (6%) and walking (5%).

5.3 A Strategic and Sustainable Transport Approach – Mode Share Targets

Based on existing travel mode splits recorded by the staff and student surveys undertaken and presented above, the Footscray Park Campus is considered to have a higher dependence on private car travel than is typical across all of VU campuses. The results discussed above are from staff and students attending the Footscray Park Campus only however, responses were collected for all of the following campuses.

- City Tower Campus
- Footscray Park Campus
- Footscray Nicholson Campus
- St Albans Campus
- Sunshine Campus
- Werribee Campus
- VU Sydney Campus
- VU Brisbane Campus

The results of all student and staff responses show a differing mode of travel share than that of the Footscray Campus as detailed in Table 5.2.

Table 5.2 – Mode of Travel Share Comparison

Travel Mode	Victoria University Campuses Combined		Footscray Park Campus	
	Staff Members	Students	Staff Members	Students
Car (driver)	59.30%	29.39%	65.04%	37.17%
Car (passenger)	1.62%	2.35%	1.77%	2.40%
Motorbike	1.35%	0.26%	2.21%	0.48%
Train + tram	1.62%	6.21%	1.77%	7.43%
Train + bus	3.23%	17.44%	3.10%	21.82%
Train + walk	16.44%	29.33%	14.16%	21.34%
Tram	0.27%	1.50%	0.00%	1.20%
Bus	0.54%	4.31%	0.88%	3.12%
Bicycle	5.12%	0.78%	6.19%	1.92%
Walk only	4.04%	2.35%	4.87%	3.12%
Other	6.47%	6.07%	0.00%	0.00%

Source: VU Surveys

As detailed in the table above, the car (driver) travel mode for staff members is around 6% higher at the Footscray Park Campus than the average for VU campuses, and for students it is approximately 8% higher. The mode share targets for the proposed CHTF development is to reduce travel by private car to closer align with the average for all VU campuses, this target is primarily directed at students since there is no increase in staff levels associated with the proposed CHTF development.

As such, initial mode split targets have been set for the development and include consideration of the existing mode splits and their relative proportions between them, the transport facilities provided on-site, and what transport options could reasonably be used to access the site. Mode split targets for students of the development have been nominated in Table 5.3.

Table 5.3 – CHTF Development Mode Share Targets

Travel Mode	Footscray Park Campus	CHTF Development	Mode Share Change
Car (driver)	37.17%	30.00%	-7.17%
Car (passenger)	2.40%	3.40%	+1.00%
Motorbike	0.48%	0.48%	0.00%

Travel Mode	Footscray Park Campus	CHTF Development	Mode Share Change
Train + tram	7.43%	8.43%	+1.00%
Train + bus	21.82%	23.91%	+2.09%
Train + walk	21.34%	22.34%	+1.00%
Tram	1.20%	1.20%	0.00%
Bus	3.12%	3.12%	0.00%
Bicycle	1.92%	4.00%	+2.08%
Walk only	3.12%	3.12%	0.00%

Source: Student Survey



6. Car Parking Provision

6.1 Statutory Car Parking Requirements

Statutory requirements for the provision of car parking are set out in Clause 52.06 of the Maribyrnong Planning Scheme, with parking rates specified in Table 1 to Clause 52.06-5. The site is also located within a Parking Overlay: Schedule 2 to the Parking Overlay (PO2) at Clause 45.09 of the Maribyrnong Planning Scheme. The parking overlay provides the statutory car parking rates for varying land uses; however, the proposed development land use is not included. Therefore, according to the requirements of the overlay, the Column B rates specified in Table 1 of Clause 51.06-5 are to be adopted.

An assessment of the statutory parking requirements for the development proposal is set out in Table 6.1.

Table 6.1 – Statutory Car Parking Requirements

Use	Size	Statutory Parking Rate	Statutory Parking Requirement
Education	+476 total students	0.3 spaces to each student that is part of the maximum number of students on the site at any time	+143 spaces
Total requirement			143 spaces

The above assessment anticipates the development proposal has a statutory requirement of 143 spaces.

In this instance, there are no additional car parking spaces being proposed which spaces does not meet the statutory requirement and a permit is being sought to reduce this requirement and/or allow for a component of this requirement to be provided off-site.

6.2 Car Parking Demand Assessment

6.2.1 Decision Guidelines

With regard to not providing the statutory parking requirement on-site, the Planning Scheme indicates that a Car Parking Demand Assessment must assess the car parking demand likely to be generated by the proposal. The assessment must consider the following:

- *“The likelihood of multi-purpose trips within the locality which are likely to be combined with a trip to the land in connection with the proposed use.*
- *The variation of car parking demand likely to be generated by the proposed use over time.*
- *The short-stay and long-stay car parking demand likely to be generated by the proposed use.*
- *The availability of public transport in the locality of the land.*
- *The convenience of pedestrian and cyclist access to the land.*
- *The provision of bicycle parking and end of trip facilities for cyclists in the locality of the land.*
- *The anticipated car ownership rates of likely or proposed visitors to or occupants (residents or employees) of the land.*
- *Any empirical assessment or case study”*

The combination of these factors often results in car parking demand being generated at rates different to the statutory rates. An assessment of the likely car parking demand is presented below.

First Principles Assessment

The number of University Staff and Students on campus at any one time will vary depending on both the time of day and the day itself. As discussed in detail in Section 5 of this report, questionnaires were completed by both staff members and students to develop a greater understanding of their typical travel behaviours to the university campus and the results identified the following.

Staff members responses showed that the majority (82.3%) meet the VU operational requirements by attending the Footscray Park Campus at least 3 days a week, meaning that on any typical workday approximately 60% of staff can be expected to be on campus. Additionally, the vast majority of staff members arrive at the campus in the morning and depart in the evening, meaning that all staff members who attended work in person would be on site at the same time (100% occupancy).



Students identified that the vast majority (approximately 95%) attend campus on three or less days per week which means that on any typical day approximately 60% of the total student population would attend the campus at some point throughout the day. The survey results also identified the typical period of arrival and departure for university students which when processed into a percentage occupancy chart (Figure 5.3) showed that the peak daily occupancy of students at the campus is 62.13%.

Applying this information to the expected change in total student and staff population as a result of the proposed CHTF development results in the maximum daily population on Campus at any one period, as detailed in below in Table 6.2.

Table 6.2 – On Campus Population

	Total CHTF Building	Total Daily On Campus Population	Maximum Daily On Campus Population
Staff Members	-81	-49 (60% attendance)	-49 (100% occupancy)
Students	476	286 (60% attendance)	177 (62.13% occupancy)

As detailed above, the maximum expected change in the daily population at the Footscray Park Campus as a direct result of proposed CHTF development is a reduction of 49 staff members and an increase of 177 students.

Therefore, to determine the number of CHTF students which are expected to travel to campus by private car and require a parking space we must refer to the mode share targets discussed in Section 5.2.2 of this report. Applying the number of students expected on Campus at one time to the mode share targets results in the mode splits detailed in Table 6.3 below.

Notwithstanding this, to ensure a full and conservative assessment, Table 6.3 also details the student mode split based upon the existing Footscray Park travel mode share identified from the student survey.

Table 6.3 – Student Mode Share Splits

Transport Mode	CHTF Mode Share Targets		Footscray Park Campus Mode Share	
	Percentage	Students	Percentage	Students
Car (driver)	30.00%	53	37.17%	66
Car (passenger)	3.40%	6	2.40%	4
Motorbike	0.48%	1	0.48%	1
Train + tram	8.43%	15	7.43%	13
Train + bus	23.91%	42	21.82%	39
Train + walk	22.34%	40	21.34%	38
Tram	1.20%	2	1.20%	2
Bus	3.12%	6	3.12%	6
Bicycle	4.00%	7	1.92%	3
Walk only	3.12%	6	3.12%	6
Total	100.00%	177	100.00%	177

The results show that based on the mode share targets of the CHTF development, it is expected to generate a parking demand of 53 car parking spaces. Based on the existing Footscray Park Campus mode share there would be a demand of 66 parking spaces for students.

6.3 Adequacy of Parking Provision

6.3.1 Car Parking Provision

To determine the availability of university car parking for use by staff and students, Stantec undertook surveys of the following parking areas discussed in Section 3.4.

- Riverbank Car Park
- Footscray Park Campus Parking
- Footscray Park Campus (council parking area)

- 105 Ballarat Road Car Park
- Footscray Market Car Park

The surveys were undertaken on Wednesday 12 June 2024 at 09:30, 11:30 and 13:00 and the results are summarised in Table 6.4 below. The survey day is considered to represent a typical day during a 'teaching block' as described earlier within this report.

Table 6.4 – Parking Survey

Parking Area	Parking Supply (Total Spaces)	Parking Demand @09:30		Parking Demand @11:30		Parking Demand @13:00	
		% Occupancy	Vacant Spaces	% Occupancy	Vacant Spaces	% Occupancy	Vacant Spaces
Riverbank Car Park	230	73.5%	61	73.0%	62	74.8%	58
Footscray Park Campus Parking	60	68.3%	19	65.0%	21	61.7%	23
Council Car Park - Footscray Park Campus	415	99.8%	1	99.8%	1	99.3%	3
105 Ballarat Road Car Park	48	89.6%	5	89.6%	5	85.4%	7
Footscray Market Car Park	420	0.0%	420	0.0%	420	0.0%	420
Total	1,173		506		509		511
Total (exc Footscray Market)	753		86		89		91

Source: Stantec Parking Survey

As shown, the occupancy of each parking area remained relatively consistent over the survey period with a minimum total available parking spaces of 506 during the 09:30 survey. However, these values are significantly inflated by the 420 spaces at the Footscray Market Car Park where no parked cars were observed over the three survey periods. This is likely due to its distance from the campus making it not the preferred option for staff and students unless all other options were at capacity. Therefore, the Footscray Market Car Park has been discounted from this assessment to determine a more realistic assessment of university parking provision.

With the removal of the 420 Footscray Market spaces, the minimum available car parking spaces at the surveyed university car parks was 86 spaces during the 09:30 survey. These 86 spaces more than satisfy the parking demand of students at the CHTF development based on both the CHTF mode share targets (53 spaces) and the existing Footscray Park Campus mode share (66 spaces).

7. Sustainable Transport Infrastructure

7.1 Bicycle Parking

Clause 52.34 of the Maribyrnong Planning Scheme seeks to encourage cycling as a mode of travel through the provision of appropriate bicycle parking and associated facilities. The discussion and analysis presented below examines these requirements.

7.1.1 Statutory Requirements

Statutory requirements for the provision of bicycle parking are set out in Clause 52.34 of the Maribyrnong Planning Scheme. Based on this, the statutory requirements for the provision of bicycle facilities for the development proposal are set out in Table 7.1.

Table 7.1 –Statutory Requirement for Bicycle Facilities

Use	Size	Statutory Rate		Statutory Requirement	
		Employee	Student	Employee	Student
Education	No additional Staff Members 476 additional students	1 to each 20 employees	1 to each 20 full-time students	0 spaces	24 spaces

Source: Maribyrnong Planning Scheme

Table 7.1 indicates that the proposal has a statutory bicycle parking requirement of 24 bicycle spaces.

Stantec recommend that bicycle parking at the CHTF building is provided in accordance with the statutory requirements. Therefore, a minimum of 24 bicycle parking spaces should be provided proximate to the CHTF building for student use.

7.1.2 Associated Facilities

In addition to the requirement for bicycle parking, Clause 52.34-3 of the Maribyrnong Planning Scheme requires 1 shower for the first 5 employee bicycle parking spaces and 1 shower for each subsequent 10 employee bicycle parking spaces (if 5 or more employee bicycle parking spaces are required).

As no employee parking is required, no shower or change room facilities are statutorily required.

Notwithstanding the above, end of trip facilities (EOT) within the proposed CHTF building contain the following.

- 4 showers (2 male / 2 female)
- 24 lockers (12 male / 12 female)

Therefore, the EOT facilities provided exceed the statutory requirements of the planning scheme and are deemed acceptable.

7.1 Green Star & Sustainability Requirements

Maribyrnong City Council's "Sustainable Design Assessment in the Planning Process" (SDAPP) guidelines require non-residential buildings to provide bicycle parking at a rate of 10% of building occupants.

In addition, SDAPP requires workplaces to offer one shower per 10 bicycle spaces and one secure locker for each bicycle space provided. The number of bicycle spaces dictates the provision of associated facilities.

7.1.1 Bicycle Parking

As detailed, the bicycle parking rate is dictated by the number of building occupants. The CHTF building will have a permanent staff population of 183 staff members, resulting in a bicycle parking requirement of 18 spaces to achieve the desired 10% mode split to active transport.

7.1.2 Showers

Greenstar requirements for showers are based on building population. This methodology results in a requirement for 2 showers. Per the above statutory assessment, the proposed provision of 4 showers exceeds the Greenstar requirement and is acceptable.



7.1.3 Lockers

While there is no statutory requirement to provide lockers in an EOT facility, Greenstar requirements specify one locker for every 8 building occupants. Therefore, there is a Greenstar requirement to provide 23 lockers within the EOT facility which is exceeded by the provision.

7.2 Pedestrian Networks

Whilst no changes to pedestrian infrastructure external to the campus is being proposed as part of the CHTF development, the campus remains well connected to the pedestrian paths and routes in the surrounding area.

Additionally, improvement works to the surrounding pedestrian infrastructure are planned as part of the new Footscray Hospital development, including the following.

- **Improved public realm on Tiernan Street on Federal Street.**

The public realm (including landscaping) fronting Tiernan Street is proposed to be widened by approximately 7m to cater for additional pedestrian activity and activated land uses.

- **Improved pedestrian crossings**

Signalised pedestrian crossings are to be provided at each of the signalised access points to the hospital, including an 'all-ways' (scramble) crossing at the Ballarat Road signals.

- **Pedestrian Footbridge**

The current architectural scheme caters for the Pedestrian Footbridge design. The Pedestrian Footbridge is located across Ballarat Road between Tiernan Street and the proposed signals accessing the site.

7.3 Public Transport

No additional public transport services or infrastructure is being proposed as part of the proposed CHTF development however, as identified in Section 3.2. of this report there are a number of Train, Tram and Bus services accessible to and from the Footscray Park Campus. There are also two university operated shuttle bus services which provide staff and students a reliable transport option to both the Footscray Train Station and the Riverbank Car Park.

The shuttle bus service to the Riverbank Car Park is essential to support the expected increase in students parking at this location and, if require, the service can be improved to accommodate the additional student traffic.

Additionally, to help achieve the targeted increase in public transport mode share for university students at the CHTF development the shuttle bus service connecting Footscray Train Station and the campus can be improved and the frequency of services increased. The requirement for this can be monitored by continued survey of staff and student travel behaviours as well as monitoring the increased patronage on the services.



8. Traffic Impact

8.1 Overview

As outlined above, no new access or car parking is being proposed as part of the CHTF development at the Footscray Park Campus. It is expected that the existing university parking areas will be able to accommodate the traffic generated by the CHTF building.

8.2 Traffic Generation

As identified in Section 6.2, of the 476-student population increase to the Footscray Park Campus as a result of the proposed development, approximately 286 are expected to attend campus on any given day. For these students, there are multiple transport options to travel to the campus including private car, public transport, cycling and walking, all of which were included in the survey question detailed in Figure 5.4.

The results of the survey of existing Footscray Park Campus students identified a travel by car (driver) mode share of 37.13% whereas the mode share targets of the proposed CHTF development are aiming to reduce its share to 30%. Both mode shares have been applied to the daily student population to calculate the expected daily traffic generation of the proposed development and are detailed in Table 8.1 below.

Table 8.1 – Development Daily Traffic Generation

Mode Share	Car (driver) Share Percentage	Number of Students Driving	Daily Traffic Generation
Footscray Park Campus Mode Share	37.13%	106	212
CHTF Development	30%	86	172

No additional staff members are associated with the proposed development, with an overall reduction in staff members as a result of redistribution of resources to other campuses. Therefore, changes in staff population have not been included within the following analysis to maintain a conservative (on the high side) assessment.

8.3 Traffic Distribution

With there being no additional parking proposed as part of the CHTF development, the distribution of generated traffic is dictated by the existing university parking areas; the more available parking spaces at each parking area results in the higher volume of development traffic.

The expected distribution of development traffic has been calculated based on the results of the parking survey in Table 6.4 and the results are detailed in Table 8.2 below.

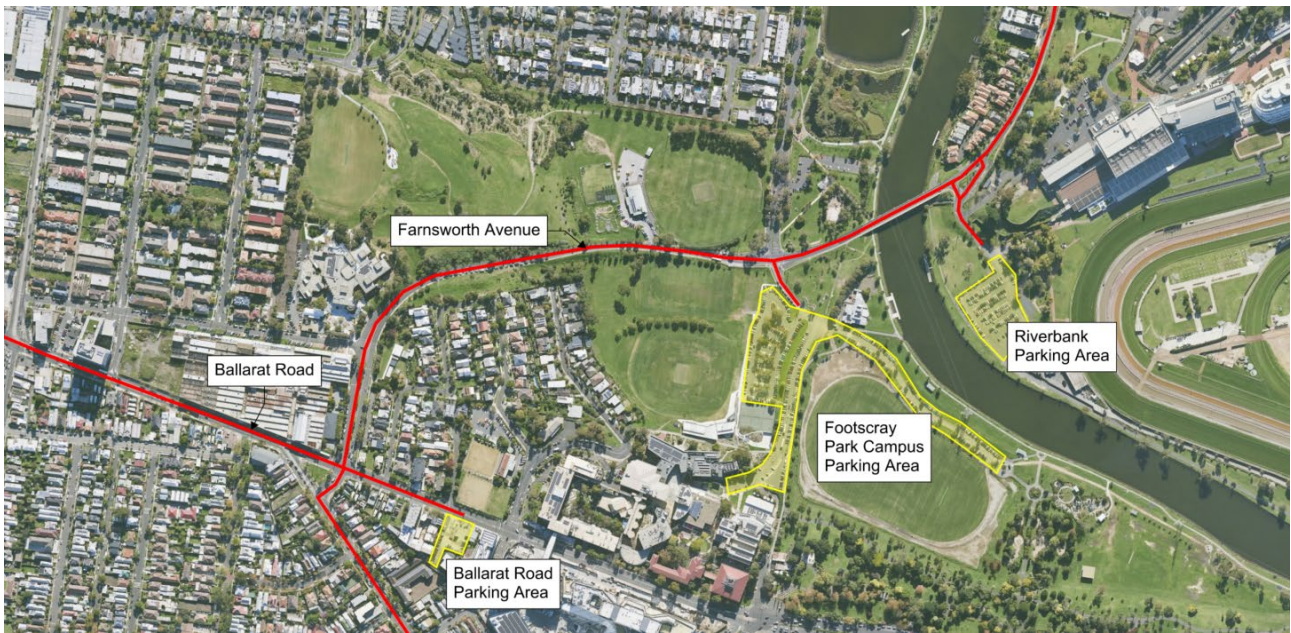
Table 8.2 – Development Traffic Distribution

Parking Area	Average Available Parking Spaces	Percentage Split / Traffic Distribution	Daily Traffic Generation
Riverbank Car Park	60	68%	144
Footscray Park Campus Parking	21	24%	50
Council Car Park - Footscray Park Campus	2	2%	4
105 Ballarat Road Car Park	6	6%	14
Total	89	100%	212

Source: Stantec Park Surveys

With 68% of the available parking spaces the majority of development traffic is expected to travel to the Riverbank Car Park and most of the rest travelling to the Footscray Park Campus Parking Area. Figure 8.1 details the location of the university parking areas and the expected routes of travel students would take to access them.

Figure 8.1 – Parking Areas and Expected Travel Routes



Source: MetroMaps

The two primary parking areas for the proposed development, Riverbank Parking Area and the Footscray Park Campus Parking Area, are both accessed from Farnsworth Road therefore, approximately 94% of development generated traffic is expected to travel on Farnsworth Road.

8.4 Traffic Impact

To determine the impact of CHTF development traffic on the local road network, an assessment of its impact on Farnsworth Avenue was conducted.

8.4.1 Existing Traffic Volumes

To determine the existing traffic volumes on Farnsworth Avenue, reference was made to SCATS detector volume data for the Farnsworth Avenue / Myers Road / Maribyrnong Boulevard intersection which serves as the access to the Footscray Park Campus Parking Area. Detector volume data from Wednesday 12 June 2024 was downloaded because this date represents a typical weekday operation during a university semester. The resulting volumes are detailed in Table 8.3.

Table 8.3 – SCATS – Daily Traffic Volumes

Corridor	Eastbound (Daily Traffic)	Westbound (Daily Traffic)	Two-way (Daily Traffic)
Farnsworth Avenue (east of intersection)	5,348 vehicle movements	4,303 vehicle movements	9,651 vehicle movements
Farnsworth Avenue (west of intersection)	4,206 vehicle movements	1,855 vehicle movements	6,061 vehicle movements

Source: SCATS Detector Volume Data

The daily two-way traffic movements on Farnsworth Avenue are identified to be 6,061 vehicle movements. This volume was then compared with the number of daily vehicle movements expected to be generated by the development on Farnsworth Avenue (94% of the total 212 movements) to generate the results in Table 8.4.

Table 8.4 – Development Traffic Percentage Impact

Corridor	Pre-Development Daily Traffic Volumes	Post-Development Daily Traffic Volumes	% Impact of Proposed Development Traffic
Farnsworth Avenue	6,061 vehicle movements	6,260 vehicle movements	3%

Therefore, with a 3% increase in daily traffic volumes on Farnsworth Avenue as a result of the proposed CHTF development, it is clear that the impact on the local road network would be negligible.



9. Loading & Waste Collection

9.1 Statutory Requirement

Clause 65 of the Maribyrnong Planning Scheme indicates that “*Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate: ... The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts.*”.

9.2 Loading Demand

Victoria University provided a detailed breakdown of the expected loading demand generated by the proposed CHTF development which includes loading services for a range of activities, including the following:

- Supplies & consumables
- (Swap) Linen washing services
- Community Kitchen
- Fluids, pharmaceuticals and samples
- Auspost (mail & parcels)
- Cadaver deliveries (4 times per year)
- Retail (assorted)
- Waste (assorted)
- Emergency vehicles
- Gas & fuel
- Facility Management Maintenance Services (Façade/Landscape/Mech/Elec/HVAC)

Each of the identified loading activities have been separated into categories based on their loading operation and are detailed below in Table 9.1 alongside their peak daily activity at campus and the estimated daily activity at the proposed CHTF Dock.

Table 9.1 – Summary of Loading Demand

Loading Activities	Vehicle Type	University Controlled	Loading Dock Access	Peak Possible Daily Activity (Campus)	Estimated Likely Daily Activity (CHTF Dock)
Emergency Vehicle	HRV	No	N/A	0	0
Waste (heavy)	HRV	No	VU Dock	5	0
Community Kitchen Bus	MRV	Yes	CHTF High Street	2	2
Waste (organic recyclables)	MRV	No	VU Dock	1	0
Assorted Smaller Activities (A)	SRV	No	CHTF Dock	15	10
Assorted Smaller Activities (B)	SRV	Yes	CHTF Dock	6	4
Cadaver Deliveries	Hearse	Yes	CHTF Dock	1	0
Total				30	16

Source: Victoria University

To further investigate the impact of the expected loading demand on the Footscray Park Campus and the proposed CHTF Dock, Victoria University conducted a schedule simulation identifying the impact of the peak and estimate daily activity over a 24-hour period. The results are summarised in Table 9.2.



Table 9.2 – 24 Hour Loading Activity

Daily Activity	Daily Activity (24 hour day)																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Peak Possible (Campus)	0	0	0	0	0	0	4	5	3	4	3	0	0	2	2	1	4	2	0	0	0	0	0	0
Estimated Likely (CHTF Dock)	0	0	0	0	0	0	2	2	2	2	2	0	0	1	1	1	2	1	0	0	0	0	0	0

Source: Victoria university

A detailed above, at 7am the peak possible loading activity would take place, with a total of 5 loading movements taking place within the hour; these activities are split over the three loading locations, VU Dock, CHTF Dock and CHTF High Street. A maximum of 2 loading movements are expected to take place within a 1-hour period at the proposed CHTF loading dock which would be easily accommodated.

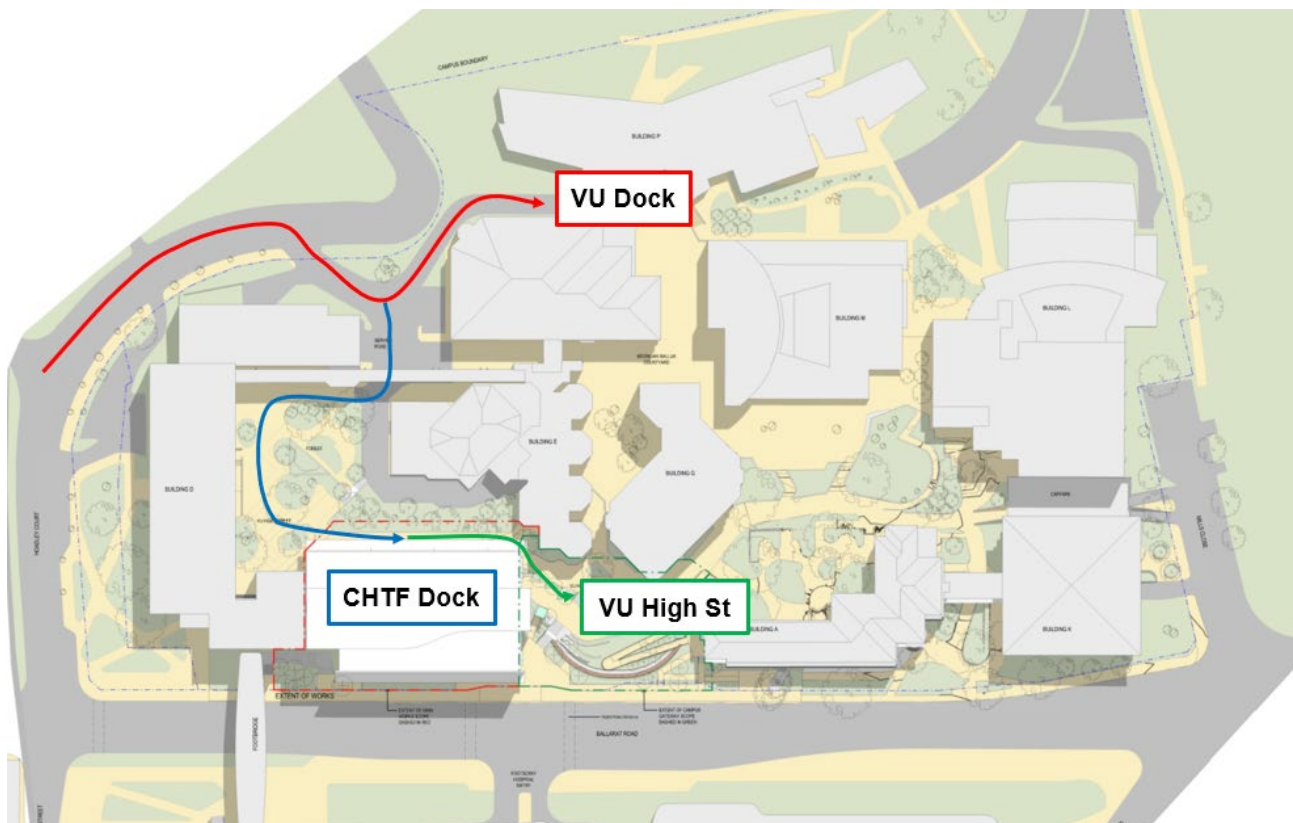
9.3 Proposed Loading Arrangement

As identified, three separate loading dock locations are to be used for loading activities generated by the propose CHTF development.

- VU Dock
- CHTF Dock
- CHTF High Street

The location loading docks and the approximate loading movements are detailed in Figure 9.1 below.

Figure 9.1 – Loading Dock Locations and Loading Movements



Source: Denton Corker Marshall Architectural Drawings

9.3.1 VU Dock

The VU Dock is an existing loading dock for the VU Footscray Park Campus located within Building P and accessed from the service road off of Hoadley Court which has a boom gate operation to prevent unauthorised access and to alert relevant university staff to the arrival of specific loading vehicles.

With regard to the demand generated by the proposed development, the VU Dock will serve as the loading dock for all heavy vehicle activities, primarily for waste removal activities. Waste from the CHTF building would be transported to the VU Dock using a 'Tug' vehicles where it can be loaded and removed by the relevant waste vehicles.

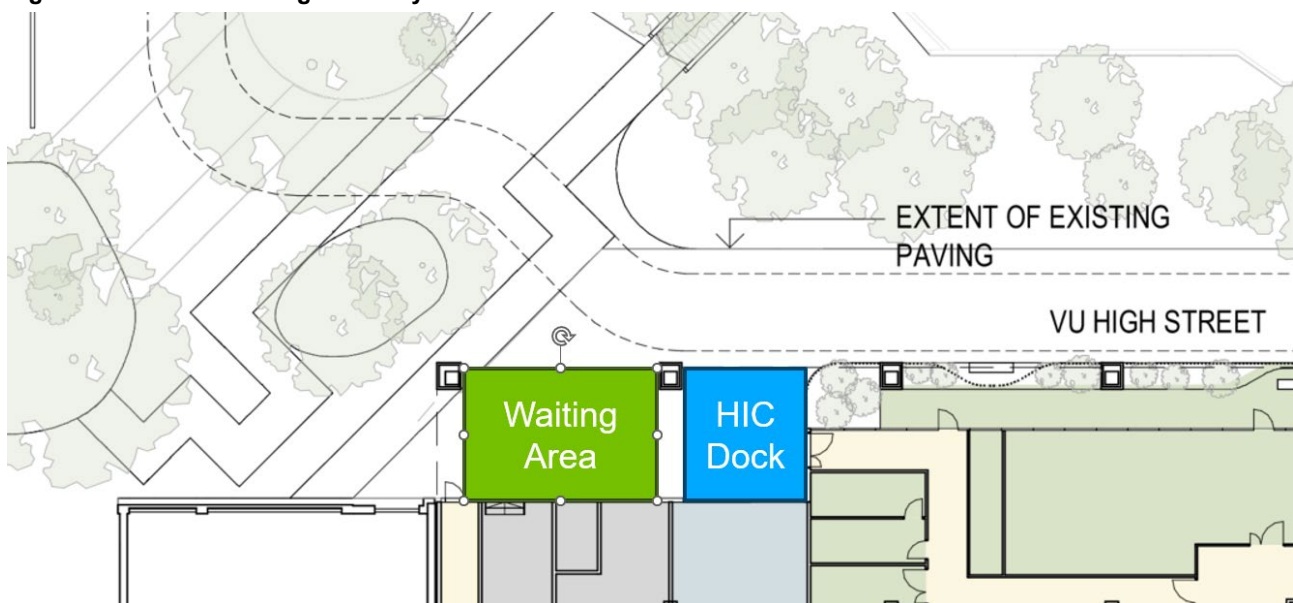
Given the VU dock is an established loading dock currently in use by the university campus and the proposed development does not require any specialist vehicles to access the dock, no swept path analysis is required at this location.

9.3.2 CHTF Dock

The CHTF Dock is a proposed new loading dock to be constructed at the internal ground floor level of the proposed CHTF building. Access to the CHTF dock would be taken via the service road and boom gate operation from Hoadley Court and along the internal service road, onto VU High Street before reversing into the dock to complete loading activities. Loading vehicles would then exit the campus via the same route.

The CHTF Dock has been designed to accommodate small rigid vehicles (SRVs) and a funeral hearse style vehicle for transporting cadavers to the university; no vehicle larger than this would use the CHTF Dock. The loading dock itself is capable of accommodating 1 vehicle at a time therefore, to prevent waiting vehicles from blocking the VU High Street whilst they wait for the dock to become available, a waiting area has been provided directly to the west as illustrated in Figure 9.2 below.

Figure 9.2 – CHTF Loading Dock Layout



Source: Denton Corker Marshall Architectural Drawings

Vehicle swept path assessments are included in Appendix A for reference demonstrating forward entry and forward departure movements are provided to this area. Further swept path assessments will be prepared during design development stages as landscaping and architectural plans are refined to ensure suitable access is provided.

9.3.3 VU High Street

The VU High Street loading location is not a loading dock but a dedicated pick up and drop off location for a minibus associated with the community kitchen programme operated by the university. The minibus would enter the site in the same manner as the loading vehicles for the CHTF Dock but would instead continue along the VU High Street to access the drop off / pick up location. The bus would then exit the campus by continuing through the campus and exiting via the carpark onto Mills Close.

Vehicle swept path assessments are included in Appendix A for reference demonstrating a west to east travel path for a minibus type vehicle along VU High Street.

9.4 Waste Collection

As identified earlier, much of the waste generated by the proposed is to be collected by heavy refuse vehicles from the VU Dock, with the waste being transport from the CHTF building to the dock using 'Tug' style vehicles. However, some

waste, including grease, and clinical and sanitary waste, would be collected by smaller vehicles directly from the CHTF Dock.

10. Green Travel Plan Initiatives

10.1 Victoria University Staff and Student Surveys

As discussed in detail throughout this report, to develop a greater understanding of existing travel behaviours at the Footscray Park Campus and other VU campuses, separate questionnaires were prepared to be completed by staff members and students of VU. Whilst the survey responses have aided significantly in identifying existing travel modes and patterns, the questionnaires were also developed to identify some initial ideas for initiatives to include as part of the Green Travel Plan for the CHTF development.

In order for the Green Travel Plan to be most effective, it needs to be accepted by staff members and students of the Footscray Park Campus. Below is a summary of the questions asked, with the key responses.

If you usually travel to campus by car, would you consider using public transport?

Staff Responses

- Yes – 26.5%
- No – 73.5%

Student Responses

- Yes – 36.4%
- No – 63.6%

If you answered 'yes' so the question above, which factors would influence you to use public transport more often?

- More public transport services
- Shuttlebus connecting to public transport services
- Better bus shelter facilities
- Better information about available public transport options
- Extension of services to run earlier or later than they currently do

If you usually travel to campus by car, would you consider cycling?

Staff Responses

- Yes – 15.9%
- No – 84.1%

Student Responses

- Yes – 8.5%
- No – 91.5%

If you answered 'yes' so the question above, factors would influence you to cycle more often?

- Wider and more accessible bike lanes
- More off-road and/or segregated bike lanes
- Secure bike parking
- Improved End of Trip facilities (showers, change rooms, lockers)
- Provision of a bicycle repair station
- Safer road conditions

10.2 Initiatives

10.2.1 Overview

As stated above, the CHTF development achieves one (1) Green Star point by achieving the goals set out in section 5 of this report.



It is acknowledged that the ability to significantly change mode shift and achieve the Green Star points will be reliant on the implementation of the measures set out below. It is recommended that these measures be incorporated alongside any initiatives that have already been implemented over the years.

The list of actions highlighted below provides recommendations on strategies which will assist in achieving the mode splits required to achieve the green star accreditation.

10.2.2 General

- Assign a Travel Plan co-ordinator / working Group
- Organise a travel plan lunch event to promote all options to staff
- Promote all options to Students at induction events
- Provide transport related information (e.g. maps) to new staff and students in an induction package
- Continue to undertake an annual staff and student travel survey

10.2.3 Walking

- Provide/improve the end of trip facilities, providing showers, change rooms and lockers for staff and students
- Utilise the annual travel survey to identify employees and students living near campus that currently or may be interested in walking to work and provide personal walking route maps and opportunities for them to meet
- Produce maps showing safe walking routes and crossing facilities to and from the university campus with distances and travel times of the local 20 min catchments and to local facilities, such as shops and public transport stops
- Have a few umbrellas handy at reception for rainy days – perhaps bearing the VU logo
- Review condition of existing footpaths connecting the campus with local facilities (which paths can be informed by the annual travel surveys)
- Take part in 'National Walk to Work Day' Annually

10.2.4 Cycling

- Improve the end of trip and bicycle parking facilities, increasing the number of spaces available to staff and students, and improving the facilities to make a higher quality experience for cyclists (such as improved way-finding signage)
- Utilise the annual travel survey to identify employees and students living near work that currently or may be interested in cycling to work and provide personal walking route maps and opportunities for them to meet
- Produce maps showing cycling routes for various level of confidence to and from the campus with distances and travel times of the local 20 min catchments and to local facilities, such as shops and public transport stops
- Provide sufficient bicycle parking to meet aspirational targets
- Have good, secure bicycle parking in an easily accessible location with signage
- Provide bicycle parking for visitors
- Provide lockers for a change of clothes
- Review condition of existing bike facilities connecting the campus with local facilities (which facilities can be informed by the annual travel surveys)
- Upgrade or provide new bike facilities to meet staff needs, especially within the 20 min catchments of the Council sites, local shops and public transport stops (which facilities can be informed by the annual travel surveys)
- Supply a workplace toolkit consisting of puncture repair equipment, a bike pump, a spare lock and lights
- Provide insurance cover for bikes being parked within University parking facilities
- Participate in annual events such as 'Ride to Work Day'
- Encourage / provide cycle training to staff and students

10.2.5 Public Transport

- Advocate for reviews, upgrades and/or provide new bus routes to meet staff and student needs, both during commutes and throughout the day (which routes of areas to be investigated can be informed by the annual travel surveys)
- Develop a map showing public transport routes to work by distance and time, as well as the comparison with car travel (including walk times)
- As part of the annual travel survey investigate interest from staff in being in the Myki commuter club (requires minimum of 10 people)



- Ensure Myki are available at the workplace for work travel during the day
- Allow would-be Public Transport users to sample using PT (Free one day travel myki)

10.2.6 Carpooling

- Set up a carpooling database and organise postcode lunches or breakfasts
- Incorporate this database into the existing online platforms available at work to assist in the ease of use for staff and students.
- Develop a marketing campaign associated with the use of Uber pool and other online carpooling ride platforms
- Utilise company cars to provide carpooling opportunities to local shops during lunch time, and public transport stops at the start and end of the day
- Develop a University office policy on carpooling

10.2.7 Travel for Work

- Provide electric car charging stations as per recommended rates by Green Star
- Require all new University vehicles to be hybrid and electric



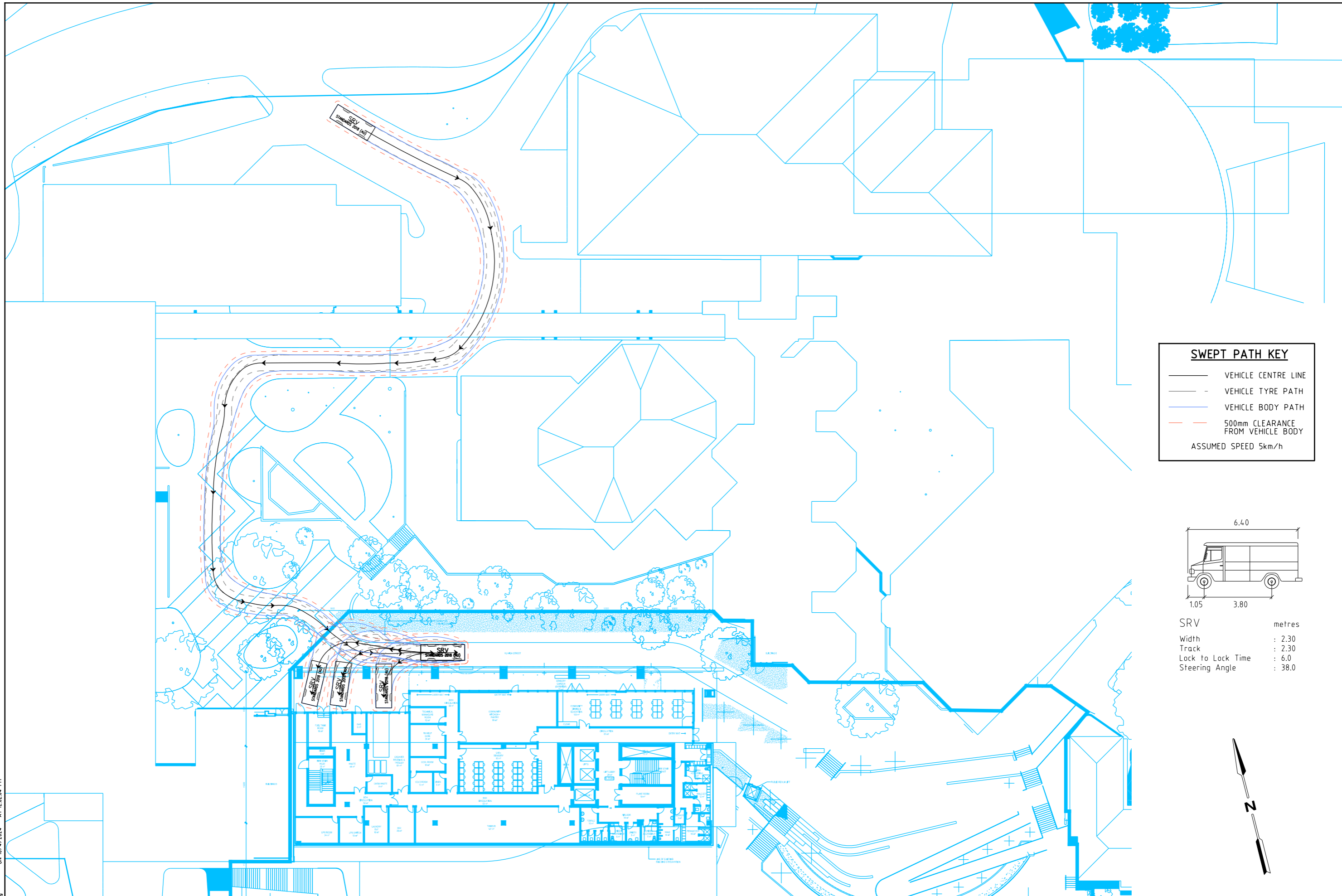
11. Conclusions

The following conclusions are made based on the analysis and discussions presented within this report:

- The proposal to not provide additional car parking as part of this development represents a strategic decision to maximise the use of existing car parking availability on the campus and encourage the use of sustainable and active transport modes to the campus to support broader state and local government policy directions.
- Car parking surveys at the Footscray Park Campus indicate suitable parking provision is available to accommodate the additional demand associated with the proposed CHTF development.
 - The proposed development generates a statutory car parking requirement of 143 spaces.
 - Having consideration to the operational nature of classes, existing travel characteristics of students to the campus and mode share targets, it is anticipated that the development will generate an additional peak parking demand of 53 spaces. The proposed development does not include any additional car parking supply and as such additional demands will be required to be accommodated within the surrounding University car parking supplies, or more broadly in the surrounding area.
 - The minimum number of available parking spaces at the surveyed university car parks was 86 spaces in the morning, excluding the 420 free parking spaces at the Footscray Market car park.
 - Therefore, the existing parking supply at the campus is more than capable of accommodating the demand generated by the CHTF development.
- Traffic impacts of the proposed development is likely to be spread throughout the surrounding road network and will have a negligible impact on the surrounding road network.
- A suite of Green Travel initiatives have been identified within this report to assist in supporting the use of alternate transport modes of travel for both staff and students.
 - It is recommended that 24 casual bicycle parking spaces (12 hoops) are provided in proximity to the CHTF building to support statutory student bicycle parking.
 - End of trip facilities are proposed within the CHTF building which support Greenstar requirements. It is also recommended that the formal campus bicycle hub be expanded to provide an additional 18 bicycle parking spaces to support the permanent CHTF building occupants and mode shift aspirations.
 - The site is also well served by sustainable transport options including walking cycling and public transport modes of travel. These alternate modes of travel form an important focus for the campus to support Greenstar aspirations for the subject building and more broadly sustainable travel outcomes for the campus as a whole.

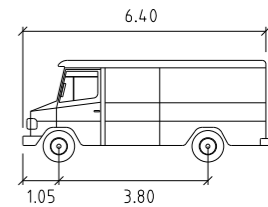


Appendix A. Loading Vehicle Swept Paths



SWEPT PATH KEY

	VEHICLE CENTRE LINE
	VEHICLE TYRE PATH
	VEHICLE BODY PATH
	500mm CLEARANCE FROM VEHICLE BODY
ASSUMED SPEED 5km/h	



SRV	metres
Width	: 6.40
Track	: 3.80
Lock to Lock Time	: 6.0
Steering Angle	: 38.0

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B. ARMSTRONG

APPROVED BY
C. COATH

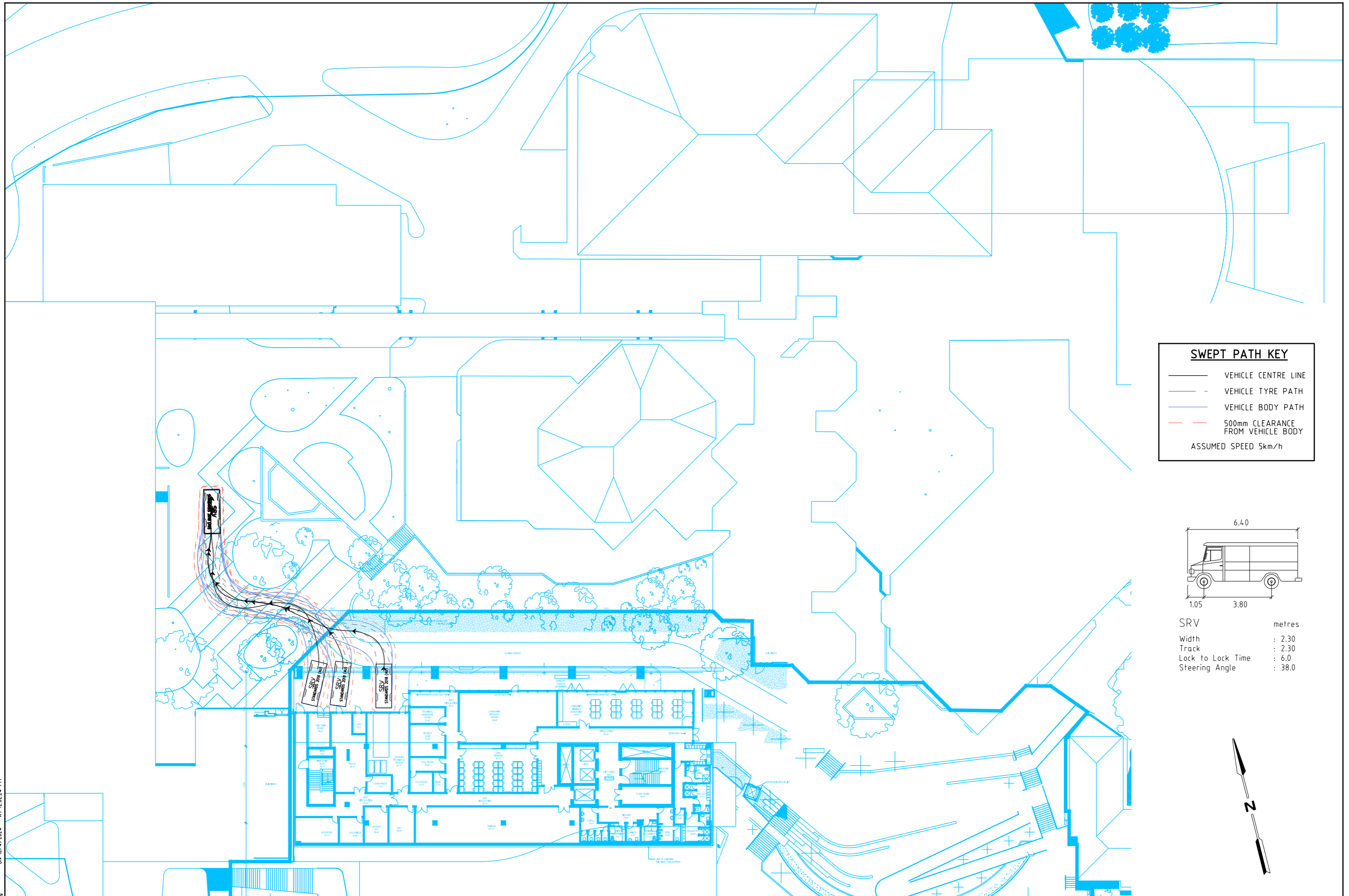
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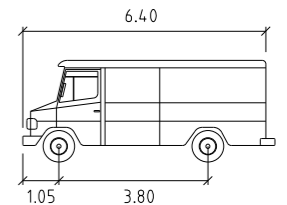
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FOOTSCRAY VIC 3011
SWEPT PATH ASSESSMENT



SWEPT PATH KEY

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

ASSUMED SPEED 5km/h



SRV	metres
Width	: 2.30
Track	: 2.30
Lock to Lock Time	: 6.0
Steering Angle	: 38.0



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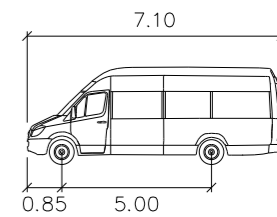
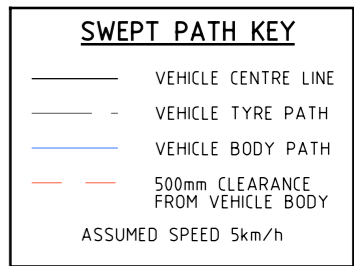
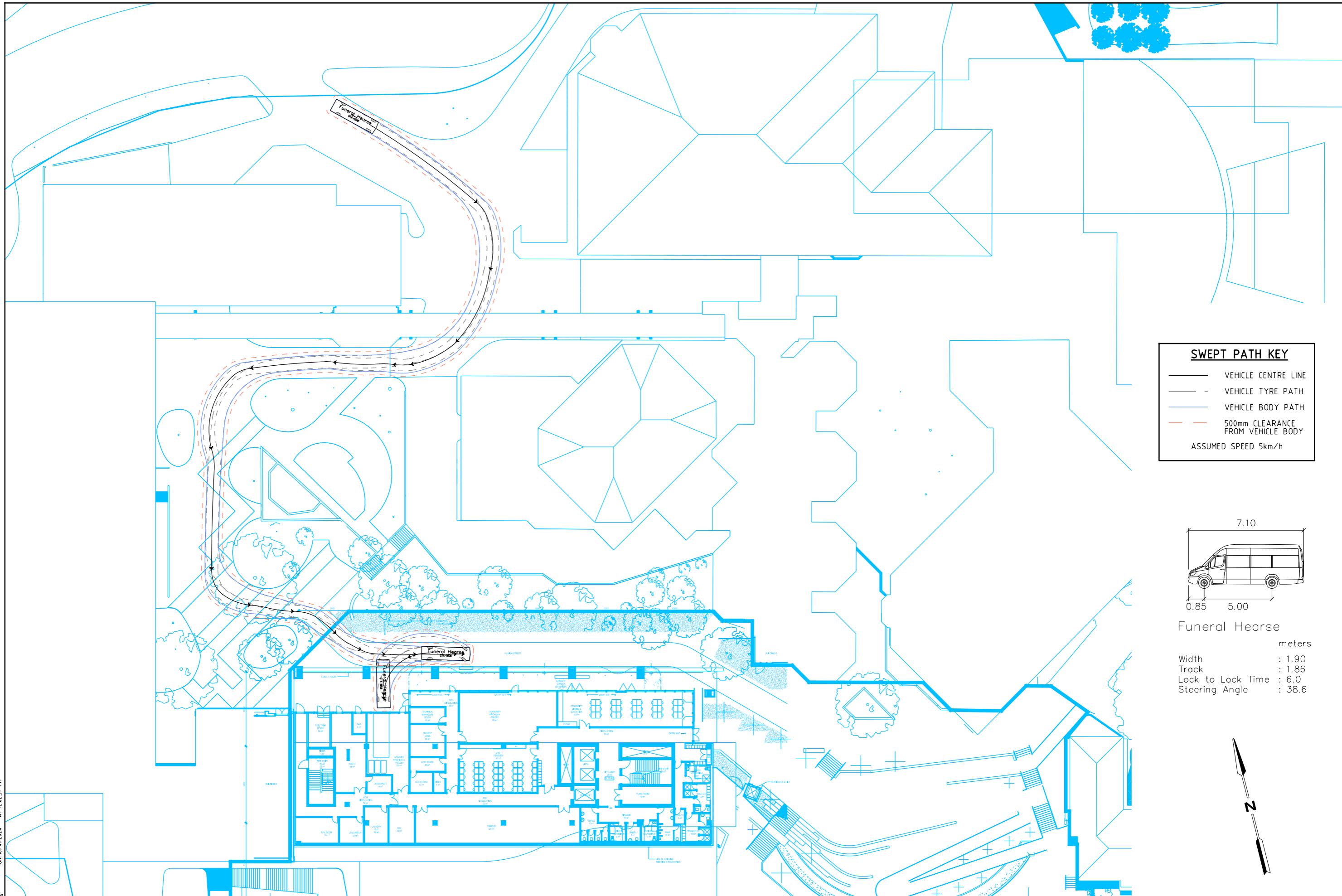
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Funeral Hearse

	meters
Width	: 1.90
Track	: 1.86
Lock to Lock Time	: 6.0
Steering Angle	: 38.6

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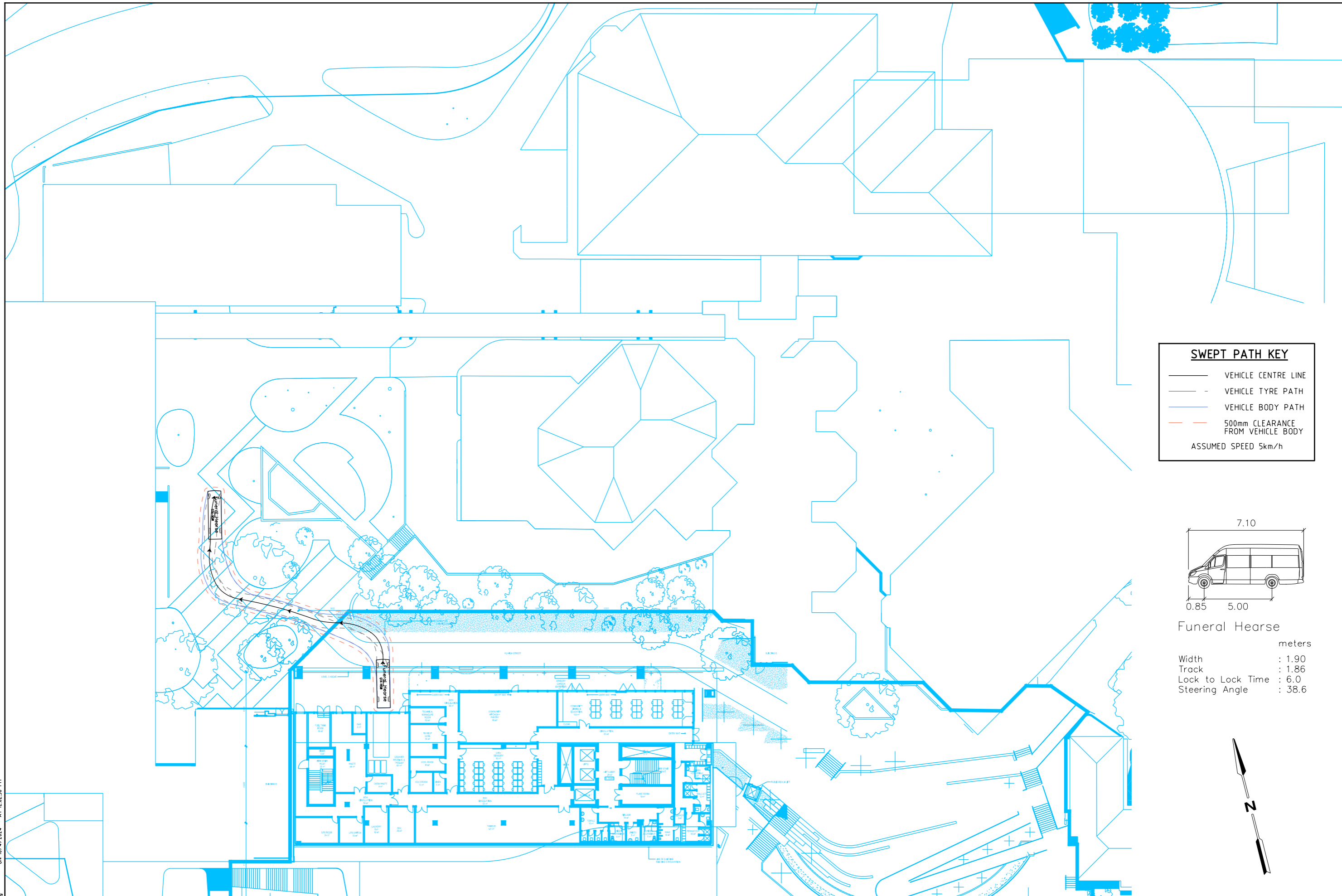
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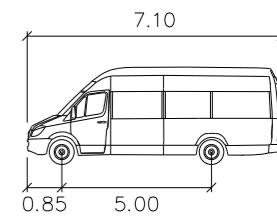
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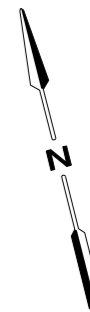
SWEPT PATH KEY

	VEHICLE CENTRE LINE
	VEHICLE TYRE PATH
	VEHICLE BODY PATH
	500mm CLEARANCE FROM VEHICLE BODY
ASSUMED SPEED 5km/h	



Funeral Hearse

	metres
Width	: 1.90
Track	: 1.86
Lock to Lock Time	: 6.0
Steering Angle	: 38.6



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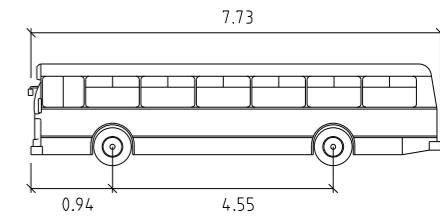
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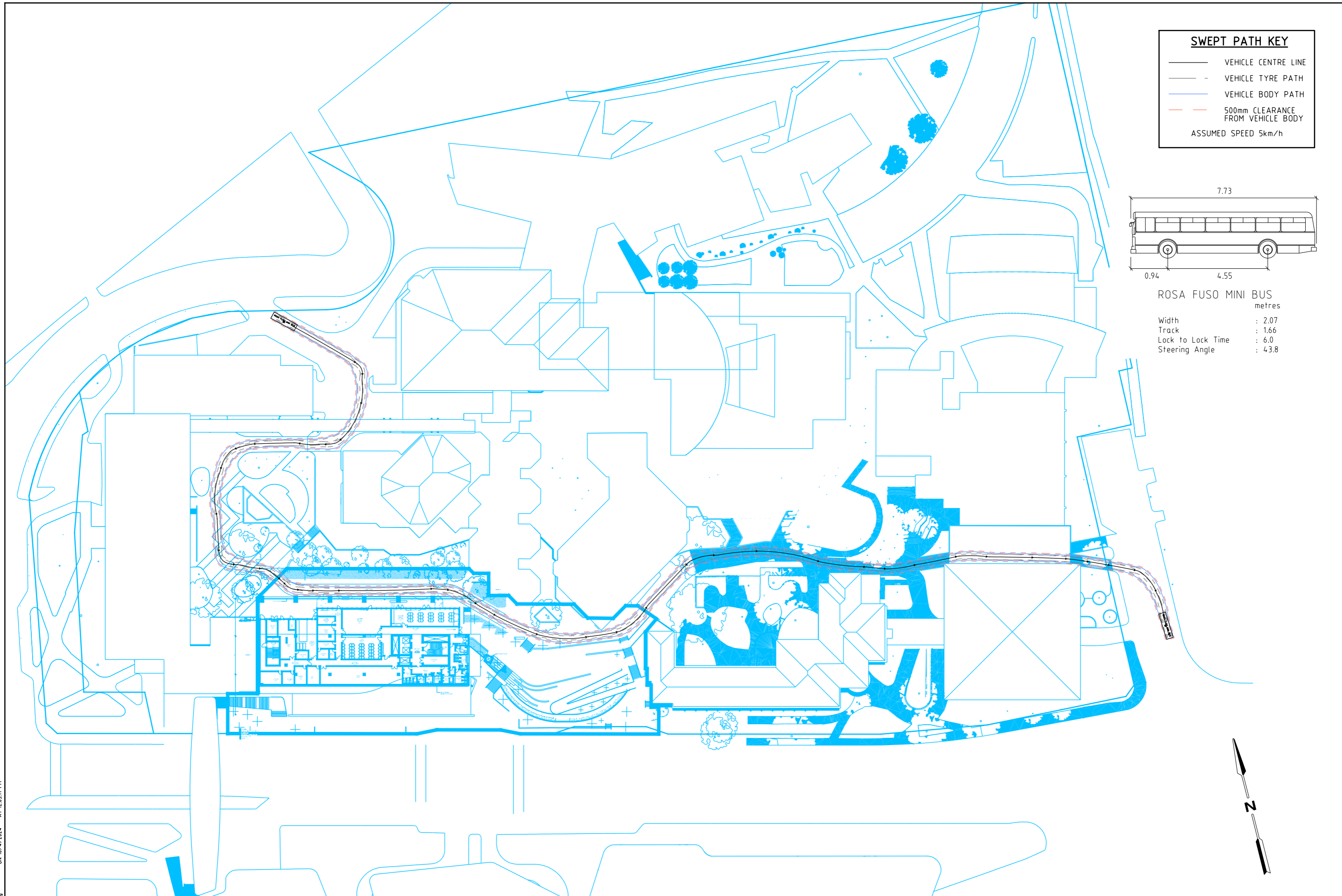
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SWEPT PATH ASSESSMENT

SWEEP PATH KEY	
	VEHICLE CENTRE LINE
	VEHICLE TYRE PATH
	VEHICLE BODY PATH
	500mm CLEARANCE FROM VEHICLE BODY
ASSUMED SPEED 5km/h	



ROSA FUSO MINI BUS	
metres	
Width	: 2.07
Track	: 1.66
Lock to Lock Time	: 6.0
Steering Angle	: 43.8



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