37°50'12"S 144°58'33"E

CONSULTANT ADVICE NOTICE

To:	Joe Grech	From:	John-Paul Maina
Company	**Human Habitats**	Company:	**IMPACT®**
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CC			
PROJECT:	480 Swan Street, Richmond	Reference:	IMP191103CAN02F01.docx
Subject	RESPONSE TO COUNCIL RFI & DoT CONDITIONS		

Preamble

The following provides our response to

- City Of Yarra RFI comments received via email on 25th May 2020 from
  - Council's Strategic Transport Unit and
  - Council's Civil Engineering Unit,
- Department of Transport (DoT) comments received via email on 10th June 2020.

For ease of reference we have provided the comments and response in a table format.

City of Yarra: Strategic Transport Unit

Council Comments	Response
Bicycle Parking	
Visitors:	
A minimum of 66 visitor bicycle spaces must be provided in a location easily accessible to visitors of the site. All visitor spaces should be provided as a horizontal bicycle rail and must meet clearance and access-way requirements of AS2890.3 or be otherwise to the satisfaction of the responsible authority	Noted and Agreed. Additional 2 bicycle spaces are to be provided to achieve the best practise rate of 66 spaces. All visitor spaces are planned as horizontal spaces.
It is recommended that at least 4 hoops are relocated from the southern side of the building to Swan Street.	Noted. Consideration will be given to redistributing visitor parking with the intent to increase parking along Swan Street as appropriate, including the relocation of four existing hoops at the corner of Burnley and Swan Street
It is also recommended that wayfinding signage is installed, to direct visitors to the visitor bicycle parking at the western and southern sides of the building	Noted. Wayfinding signage is to be incorporated as appropriate to guide visitors to parking areas to the western and southern sides of the building.

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Employees:	
A minimum of 326 employee bicycle spaces must be provided within a maximum of two secure compounds.	Noted and Agreed. Additional 44 employee bicycle spaces are to be provided to achieve the best practise rate of 326 spaces.
Electric Vehicles	
Council's BESS guidelines encourage the use of fuel efficient and electric vehicles (EV). Whilst it is acceptable no EV charging points are installed during construction, to allow for easy future provision for electric vehicle charging, car parking areas should be electrically wired to be 'EV ready' to enable future installation of EV chargers	Noted and agreed.
Green Travel Plan	
The GTP is generally adequate, however should be modified to include: (a) Security arrangements to access the employee bicycle storage spaces; (b) The types of lockers proposed within the change-room facilities, with at least 50% of lockers providing hanging storage space; and (c) Signage and wayfinding information for bicycle facilities and pedestrians pursuant to Australian Standard AS2890.3. The GTP should also be updated to include the endorsed ground floor plan showing details of the bicycle parking and end of trip facilities.	Noted. Green Travel Plan is to be updated once the ground floor plan is endorsed to include the additional information as requested.

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City of Yarra: Civil Engineering Unit

Council Comments	Response
Traffic Impact	
The gap analysis performed by Impact Traffic Engineering suggests that there is sufficient capacity to comfortably accommodate the development's traffic without impacting on the traffic operation along Swan Street. The applicant should confirm how it was concluded that traffic exiting the development can satisfactorily enter the traffic stream of Swan Street. Impact should also clarify the figures in Tables 3 to 6 of the traffic report. How were the figures in Columns 'AM Peak' and 'PM Peak' derived? There is very little detail on the impact of traffic that would be queued at the Burnley Street signalised intersection. Given the siteís car park access is located approximately 100 metres from Burnley Street, any stationary traffic queues extending back from Burnley Street could block access to the site.	As described within AustRoads Guide to Traffic Management Part 3: Transport Study and Analysis Methods, the critical acceptance headway and the follow-up headway are two basic terms which describe how a driver will decide whether to enter or depart a traffic stream The critical acceptance headway describes the minimum headway between conflicting vehicles that is acceptable to an entering minor-stream driver or exiting major stream driver. Critical acceptance headway and the follow-up headway values are nominated within AustRoads Guide to Road Design Part 4A. In summary, the studies commissioned on Tuesday 19th November 2019 and Wednesday 20th November 2019, recorded each vehicle that passed the study location with a time stamp on each movement, and when queues extended to the study location, the duration of the queue was recorded and discounted from the gap analysis calculations. This data allowed a calculation of the critical acceptance headway and the follow-up headway at the proposed site access. As an example, data relating to vehicle flows was recorded as follows: — Car 1: travelling west recorded at 7:01:29 / Car 2 travelling west recorded at 7:01:59 — Car 1 travelling east recorded at 7:01:39 / Car 2 travelling east recorded at 7:01:59

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	In this example, there is a 30 second gap between Car 1 and Car 2 (Westbound traffic stream), and a 20 second gap between Car 1 and Car 2 (eastbound traffic stream). Based on the critical acceptance headway and the follow-up headway values nominated within AustRoads Guide to Road Design Part 4A, the 30 second gap in the westbound traffic steam can accommodate in theory, 9 left turn movements and 9 right in movements. For right turn out movements' consideration needs to be given to both eastbound and westbound traffic streams. In this example, there is a 10 second gap between Car 1: travelling west at 7:01:29 and Car 1 travelling east at 7:01:39. This 10 second gap is only sufficient for 1 right turn movement. Where queues extend to the study location, the data is recorded in a manner that recognises the presence of queues and thus no gaps available. These calculations are repeated for every vehicle recorded passing the site, the outcomes of these calculations are what are presented at Table 3 & 4. Table 5 & 6 take the findings from Table 3 & 4 and introduce a discount on the theoretical values to provide a practical intersection capacity. The practical intersection during the peak hour as demonstrated in the report shows that there are sufficient critical acceptance headway and the follow-up headways to accommodate the projected volumes to / from the proposed development.
Impact has recommended for a 'Keep Clear' road marking treatment to be installed at the developmentís vehicle entrance. This would prevent any stationary traffic from blocking the car park	Noted and agreed.

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entrance at the site. This recommendation is considered reasonable.	
Impact is to confirm if the implementation of traffic signals at the car park entrance is appropriate to reduce the traffic delays along Swan Street and possible traffic queuing within the site	The AustRoads Guide to Traffic Management Part 6 notes the following warrants for signals. Traffic volume: Where the volume of traffic is the principal reason for providing a control device, traffic signals may be considered, subject to detailed analysis when the major road carries at least 600 veh/hour (two-way) and the minor road concurrently carries at least 200 veh/hour (highest approach volume) on one approach over any four hours of an average day Continuous traffic: Where traffic on the major road is sufficient to cause undue delay or hazard for traffic on a minor road, traffic signals may be considered when the major road carries at least 900 veh/hour (two-way) and the minor road concurrently carries at least 100 veh/hour (highest approach volume) on one approach, over any four hours of an average day. The traffic volume warrants are not met in respect to number of vehicles arriving from the site access, and in respect to continuous traffic and delay, gap acceptance studies have confirmed that there are a suitable number of gaps in the traffic stream to enable vehicles to enter and exit the site without delay on Swan Street. Accordingly, traffic signals are not warranted nor required. A position that has been confirmed by the Department of Transport.
Design	
Can the median traffic island inside the vehicle accessway as shown on the Ground Floor plan be removed to provide a wider carriageway?	The median traffic island is introduced to accommodate a boom gate and controller. This cannot be removed.
Visibility sight triangles are to be superimposed and dimensioned on the drawings as required by Design standard 1.	These are shown on the accompanying plans
To be dimensioned on the plans. The headroom clearance is required to determine if there is	Noted. Architectural plans will be updated to include head room clearance.

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sufficient headroom height for delivery and waste collection vehicles accessing the loading bay.	
The floor to ceiling height clearance within the basement car park levels are to be dimensioned on the plans.	Noted. Architectural plans will be updated to include head room clearance.
Columns setbacks are to be designed in accordance with AS/NZS 2890.1:2004. If the columns cannot be relocated, can the parking spaces adjacent to columns be widened to allow car doors to be opened or could the spaces adjacent to columns be allocated for small cars? The column depths are also to be dimensioned on the plans.	Columns cannot be located to achieve strict compliance with AS/NZS 2890.1:2004. This outcome is not uncommon in car parks below multi-storey buildings due to structural requirements. Importantly, spaces within the car park will be used by office related trips. These trips are typically single occupant trips. Thus, full compliance with door opening for all doors would not compromise usability.
The applicant is to consider leaving the security gate open during the AM peak period to allow vehicles to enter the site without the operation of the security gate.	Access control during business hours will be managed via a boom gate and card reader located within the site. The security gate at the building perimeter will remain opening during busines hours.
The swept path diagrams for a B99 design vehicle and an oncoming B85 design vehicle entering and exiting the development via Swan Street are to be provided.	Refer accompanying plan.
The ground clearance check requires the applicant to obtain a number of spot levels which include the reduced level 2.0 metres inside the property, the property boundary level, the bottom of kerb (invert) level, the edge of the channel level and a few levels on the road pavement - in this case, for Swan Street. These levels are to be shown on a cross sectional drawings, with dimensions, together with the B99 design vehicle ground clearance template demonstrating access.	Noted. Ground Clearance assessment to be undertaken at detail design stage.
The canopy along the site's Swan Street and Burnley Street road frontages must be setback 750 mm from the front of kerb to satisfy the Building Regulations 2018.	Noted.

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Department of Transport

DoT Comment
As Council will be aware, the Department have considered a previous application for this site through a Planning Scheme Amendment and Planning Panel several years ago. At the time, there was considerable debate at the Panel about the provision of traffic signals to access the site, delays to trams along Swan Street and public realm works to integrate Burnley Station and surrounds. The new use and development has less car parking spaces and places emphasis on the site's public and active transport access which is welcomed. The Department have reviewed the new application and have concluded that traffic signals can be waived in this instance provided access is restricted to a left in left out arrangement like the application at the adjoining property to the east
Impact Observation
We agree that the need for signals is no longer warranted, however we question the merit of restricting access to left in / left out only. Whilst it is acknowledged that left-in/left-out access arrangements have the least impact on the arterial road network from a performance and safety perspective, at this location, the right turn movement inbound cannot be conveniently and readily redistributed to suite the access limitations. Accordingly, there is a risk that a left in / left out limitation will induce undesirable and unintended behaviours, such as U-Turn movements along Swan Street. This outcome would be worse from a road performance, and safety perspective than permitting the right turn in movement at the site access. Accordingly, we consider that a suitable balance between performance and safety would be to only restrict right turn movements out, with all other movements permitted i.e. left in / right in/ left out. Note: The left in / left out arrangements at the adjoining property to the east would have been the only suitable access arrangement in the context of signals at the site access to the development.
DoT Comment
The Department have also recommended a detailed road safety audit for the site and public realm works to assess and improve pedestrian / cycle movements and traffic safety to and from the site and surrounds
Impact Observation
Noted and Agreed.

DoT Conditions	Response
1. Before the development commences (excluding demolition), or other time agreed to in writing with Head, Transport for Victoria, amended plans to the satisfaction of the Head, transport for Victoria (TfV) must be submitted to and approved by the Responsible Authority. The plans must be drawn to scale with dimensions and three copies must be provided. These plans must be generally in accordance with the plans submitted to TfV with the application but are to be modified to show:	

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a) the installation of signs, line marking, splitter island and associated road works permitting only 'left turn in' and 'left turn out' vehicular access from Swan Street (informed by the Road Safety Audit);	As noted above, there is a risk that a left in / left out limitation will induce undesirable and unintended behaviours, such as U-Turn movements along Swan Street. This outcome would be worse from a road performance, and safety perspective than permitting the right turn in movement at the site access. Accordingly, we consider that a suitable balance between performance and safety would be to only restrict right turn movements out, with all other movements permitted i.e. left in / right in/ left out. This consideration will be further informed by the Road Safety Audit.
b) modification as required and/or removal of any existing car parking spaces, street tree/s and associated road works on the south side of Swan Street to accommodate the new vehicular access arrangement;	Noted.
c) retention of Metro Train bus replacement space in the Burnley Street underpass;	Noted.
d) tram shelter and associated works in an agree location on Swan Street;	Noted.
e) a landscaping plan and schedule;	Outside our area of expertise.
f) demonstrate compliance with air, light and fire requirements without reliance on railway land, and;	
g) any recommendations of the road safety audit	Noted. As discussed above and subject of course to the findings of an independent road safety audit, we consider that a suitable balance between performance and safety would be to only restrict right turn movements out, with all other movements permitted i.e. left in / right in/ left out. If such a recommendation were put forward in the Road Safety Audit, how would this be addressed noting the specificity of Condition 1a in relation to permitting only 'left turn in' and 'left turn out' vehicular access?

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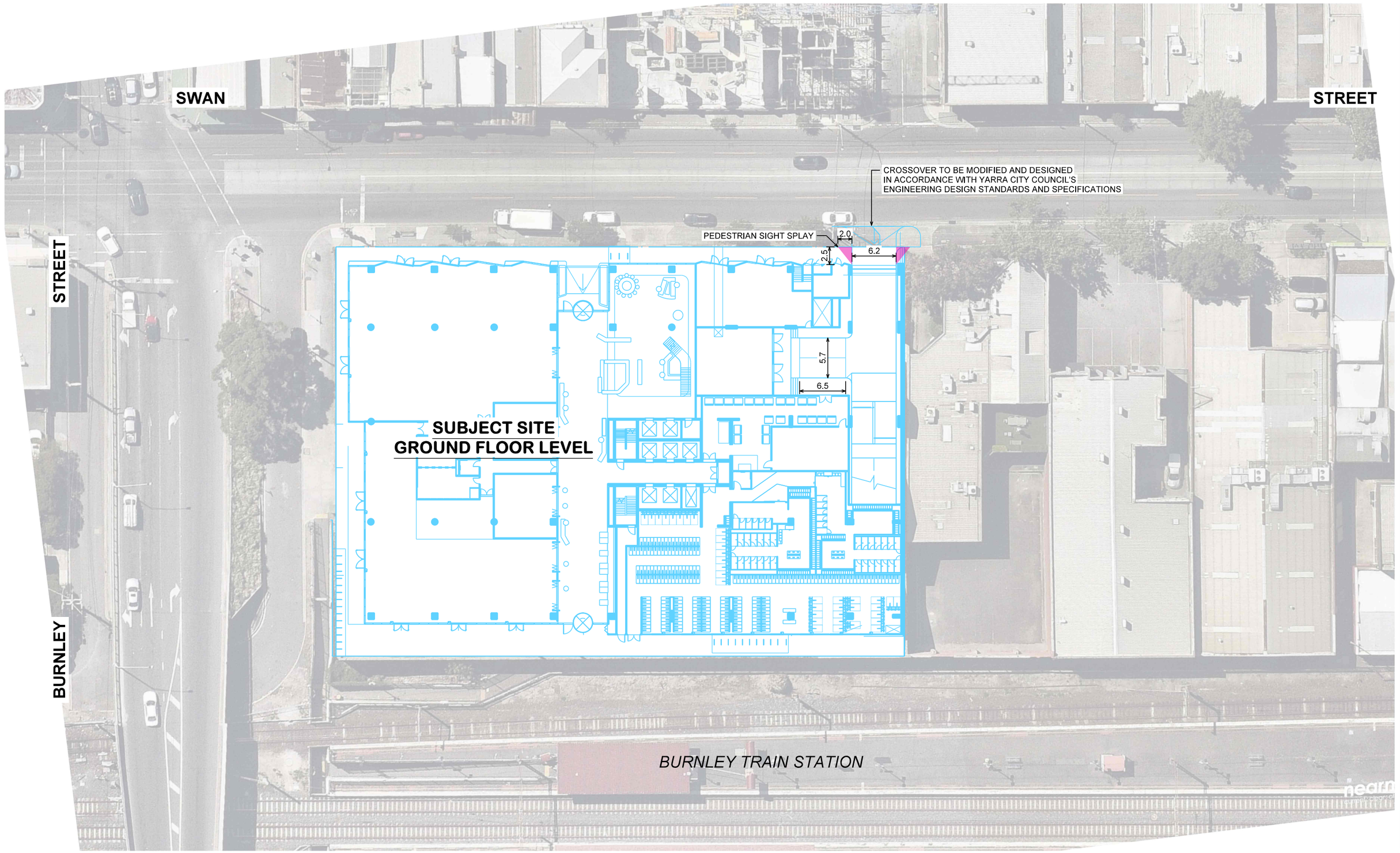
DoT Conditions	Response
2. Before the development commences (excluding demolition), unless otherwise agreed in writing with TfV, the permit holder must submit a formal road safety audit, (including a function layout plan) by a suitable qualified consultant, to the satisfaction of TfV and the Responsible Authority. The audit must include, but not limited to:	
i) the function and layout of the left in left out Swan Street access,	As noted above, some flexibility is required in relation to the specificity of permitting only 'left turn in' and 'left turn out' vehicular access, noting that a suitable balance between performance and safety would be to only restrict right turn movements out, with all other movements permitted i.e. left in / right in/ left out.
ii) pedestrian, cycle and vehicle access/egress arrangements (including pedestrian crossings at/in vicinity of the intersection of Swan & Burnley Streets)	Noted.
iii) loading arrangements,	Noted.
iv) buildings and works within the public realm,	Noted.
v) internal circulation/layout,	Noted.
vi) lighting and vegetation impact on adjoining roadway/s.	Noted.
3. Unless otherwise agreed in writing with TfV within six (6) months of the occupation of the development the permit holder must submit a post development road safety audit, to the satisfaction of TfV, demonstrating that all works associated with the approved road safety audit have been tested and any reasonable alterations required are completed to the full cost of the permit holder and to the satisfaction of TfV.	Noted.
11. Prior to the occupation of the development, all works outlined on the endorsed plans for the left in left out only access must be completed with associated signs, to the satisfaction of TfV at the full cost to the permit holder.	As noted above, some flexibility is required in relation to the specificity of permitting only 'left turn in' and 'left turn out' vehicular access, noting that a suitable balance between performance and safety would be to only restrict right turn movements out, with all other movements permitted i.e. left in / right in/ left out.



GENERAL NOTES:
1. ALL DIMENSIONS ARE TO FACE OF KERB AND CHANNEL UNLESS NOTED OTHERWISE.
2. DECLARED ROAD - SWAN STREET (SPEED ZONE 40KM/H).
3. BASE INFORMATION FROM NEARMAP AERIAL PHOTOGRAPHY DATED 23.02.2019 AND ARCHITECTUS DA1003[C]_Ground Floor.dwg DATED 16.04.2020

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MELWAY ONLINE REF: MAP 2H E10

SCALE
1:500 @ A3

Client
CHARTER HALL

Status
PRELIMINARY

Project
MIXED USE DEVELOPMENT
480 SWAN STREET, RICHMOND
YARRA CITY COUNCIL

Date
2020-06-12

Drawn / Approved
JT / JPM

Revision Description
ISSUED FOR INFORMATION

Title
SITE LAYOUT PLAN
GROUND FLOOR

Drawing Number
IMP191103 - DG-01-01

Revision
H

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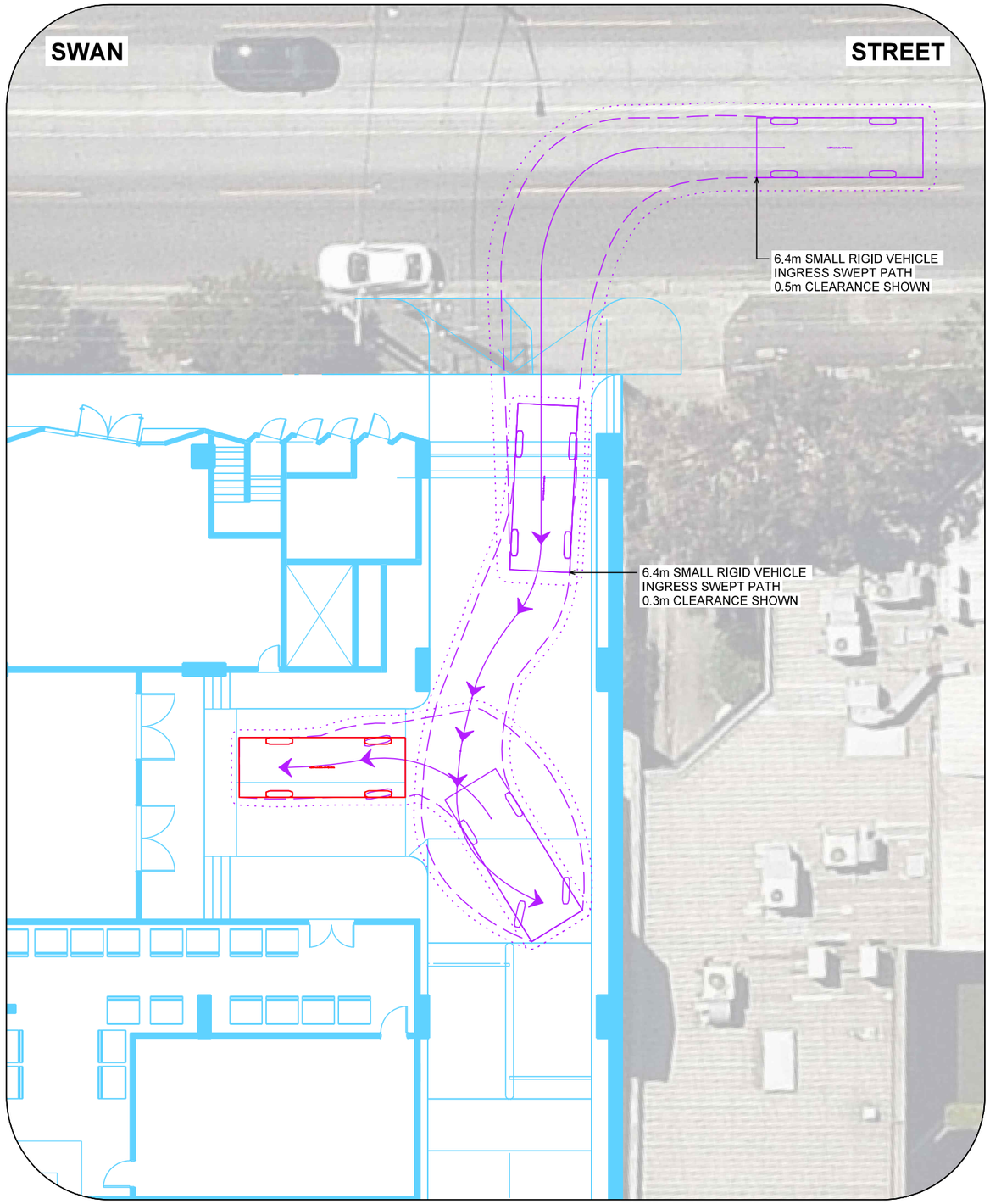

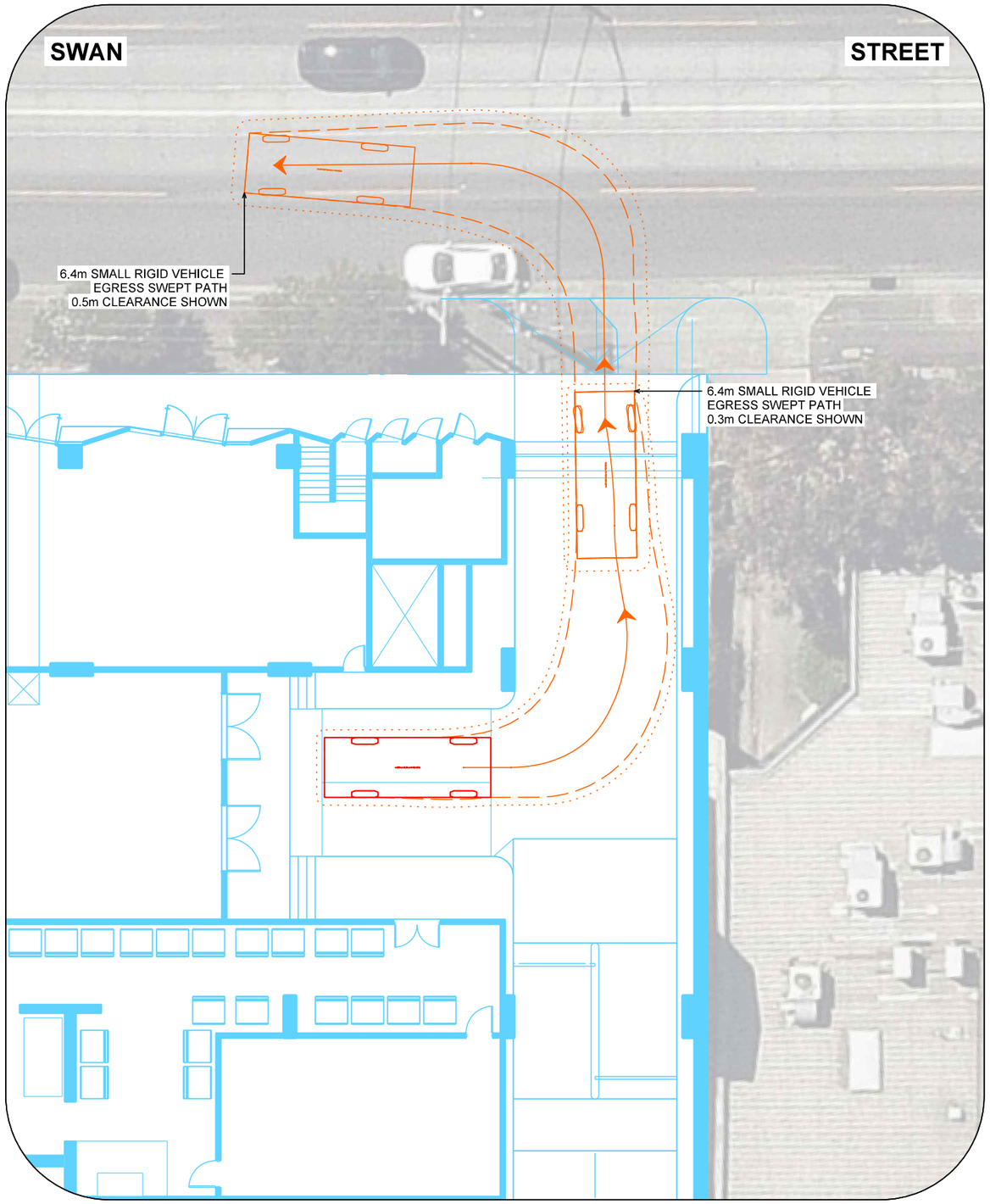

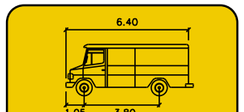

6.4m SMALL RIGID VEHICLE

	METERS
WIDTH	: 2.50
TRACK	: 2.50
LOCK TO LOCK TIME	: 6.0
STEERING ANGLE	: 38.0

Charter Hall

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N

MELWAY ONLINE REF: MAP 2H E10

SCALE
1:200 @ A3

Client
CHARTER HALL

Status
PRELIMINARY

Project
MIXED USE DEVELOPMENT
480 SWAN STREET, RICHMOND
CITY OF YARRA

Date
2020-06-12

Drawn / Approved
JT / JPM

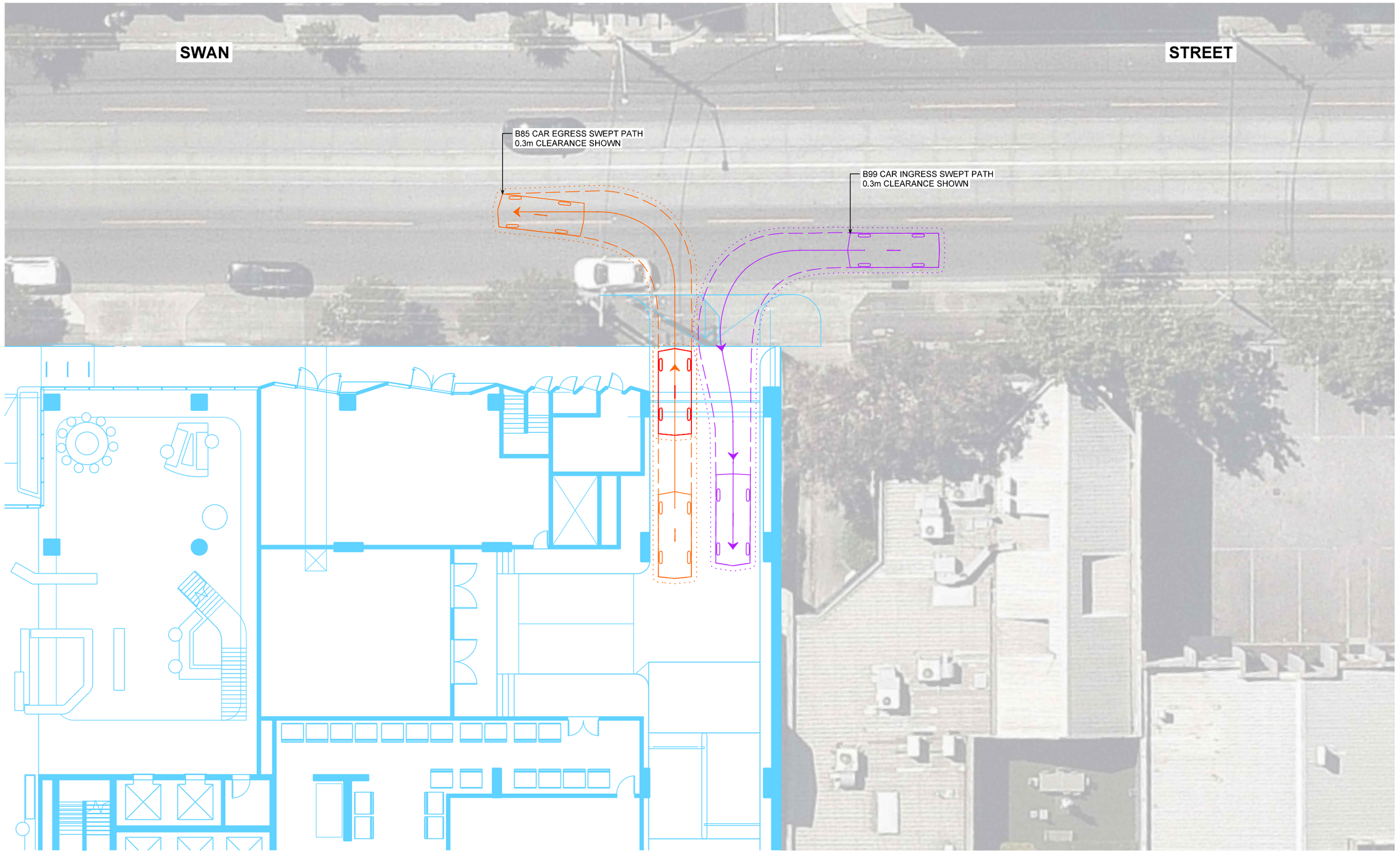
Revision Description
ISSUED FOR INFORMATION

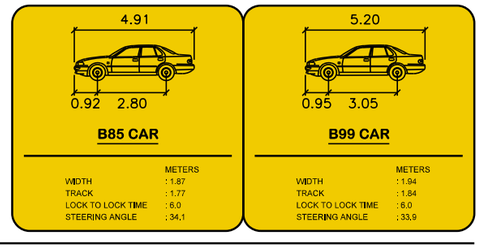
Title
GROUND FLOOR
LOADING SWEPT PATH ANALYSIS
6.4m SMALL RIGID VEHICLE

Drawing Number
IMP191103 - DG-01-02

Revision
H

12/06/2020 12:53:13 PM





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MELWAY ONLINE REF: MAP 2H E10

SCALE
1:200 @ A3

Client
CHARTER HALL

Status
PRELIMINARY

Project
MIXED USE DEVELOPMENT
480 SWAN STREET, RICHMOND
CITY OF YARRA

Date
2020-06-12

Drawn / Approved
JT / JPM

Revision Description
ISSUED FOR INFORMATION

Title
GROUND FLOOR
PASSING SWEPT PATH ANALYSIS
B85 & B99 CARS

Drawing Number
IMP191103 - DG-01-03

Revision
H

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