TTW Structural Civil Traffic Façade

Preliminary Site Access Management Plan

CMRI Gene Technologies Building

State Significant Development No.: 45576956

Prepared for Children's Medical Research Institute

12 May 2026

212012

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Revision Register

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Section 1 Introduction

1.1 Introduction

This preliminary Site Access Management Plan (SAMP) has been developed to assess and address the operational impacts of heavy vehicle access to the proposed redevelopment of the Gene Technologies Building (GTB) of the Children's Medical Research Institute (CMRI), located at 214 Hawkesbury Road, Westmead.

The site is located within the Westmead Health and Education Precinct, and directly adjoins several medical research and clinical services buildings. The site location is shown in Figure 1 below. The site is bounded by Hawkesbury Road to the southeast and Research Lane to the southwest.

Figure 1: Site Location
Source: Nearmap (modified)

1.2 Report Objective

TTW has been engaged by the Children's Medical Research Institute to provide traffic and transport consultancy services for the proposed State Significant Development Application (SSD-45576956) of the Gene Technologies Building redevelopment project, herein known as CMRI. This preliminary SAMP has been prepared in response to the Department of Planning, Housing and Infrastructure's (DPHI) request for additional information regarding heavy vehicle site access, following the exhibition period for the SSDA.

This SAMP outlines the frequency, timing and routing of all heavy vehicle movements associated with CMRI. The plan defines off-peak access periods, identifies the frequency of monthly movements, and outlines mitigation measures to minimise impacts on the adjacent infrastructure, in particular, pedestrian footpaths and light rail operations. The plan also includes site-specific driver instructions and procedures for monitoring heavy vehicle movements.

It should be noted that this SAMP only addresses the operational impacts of heavy vehicle site access. Any other traffic and transport considerations for the SSDA have already been addressed in the Transport and Accessibility Impact Assessment (TAIA), preliminary Construction Traffic Management Plan (CTMP), and preliminary Green Travel Plan (GTP) prepared as part of the SSDA.

Section 2 Operations and Design

2.1 Site Access

Heavy vehicles will access CMRI via a left-in-left-out arrangement at the Hawkesbury Road – Research Lane intersection, as illustrated in Figure 2. This movement is required for CMRI's operational purposes, as the intersection is the sole access for non-emergency vehicles to CMRI. These movements include service vehicles to the loading dock and staff vehicles to the underground car park. Section 2.4 provides further details on the types of access movements.

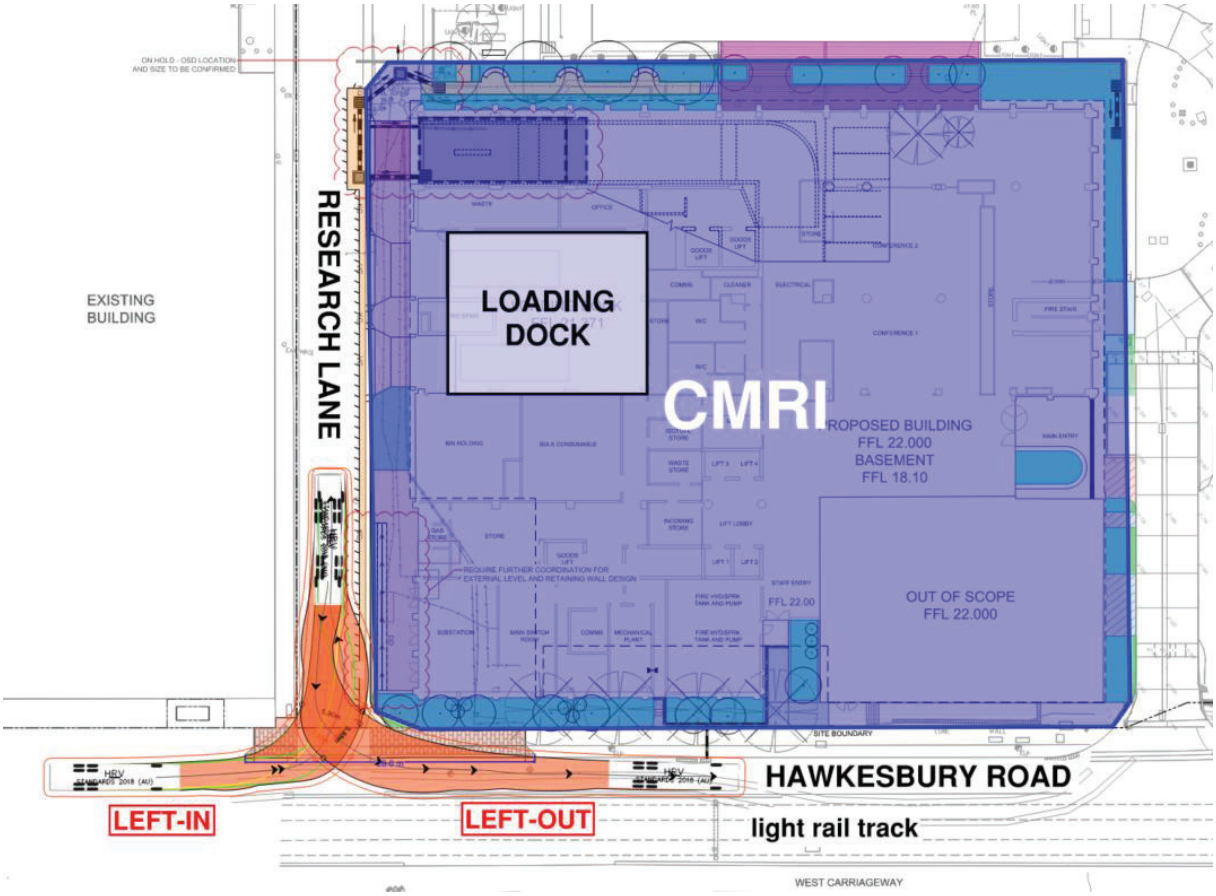


Figure 2: Access Arrangement
Source: TTW (drawing no.: 212012-TTW-00-DR-CI-03011_1 overlay, Rev [C])

2.2 Design Vehicle

As advised by CMRI, the largest vehicle utilised will be similar to a 12.5-metre Heavy Rigid Vehicle (HRV). The HRV as defined by AS 2890.2 has therefore been used in the subject assessment. The adopted vehicle profile and dimensions used for swept path analysis are illustrated in Figure 3.

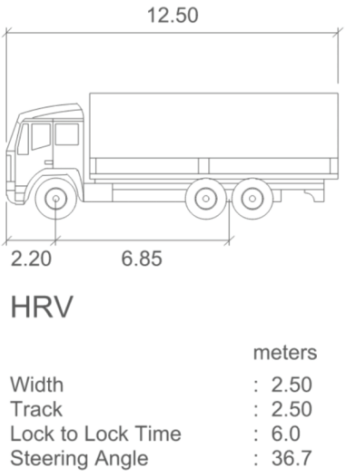


Figure 3: Heavy Rigid Vehicle Profile
Source: Autodesk AutoTURN

As detailed in Section 2.3 below, swept path analysis has been undertaken using the HRV.

2.3 Movement Assessment

Figure 4 below demonstrates a swept path analysis at the subject site, which shows a HRV performing a left-in-left-out movement at the Hawkesbury Road – Research Lane intersection. For the full extent of the analysis see Appendix A.

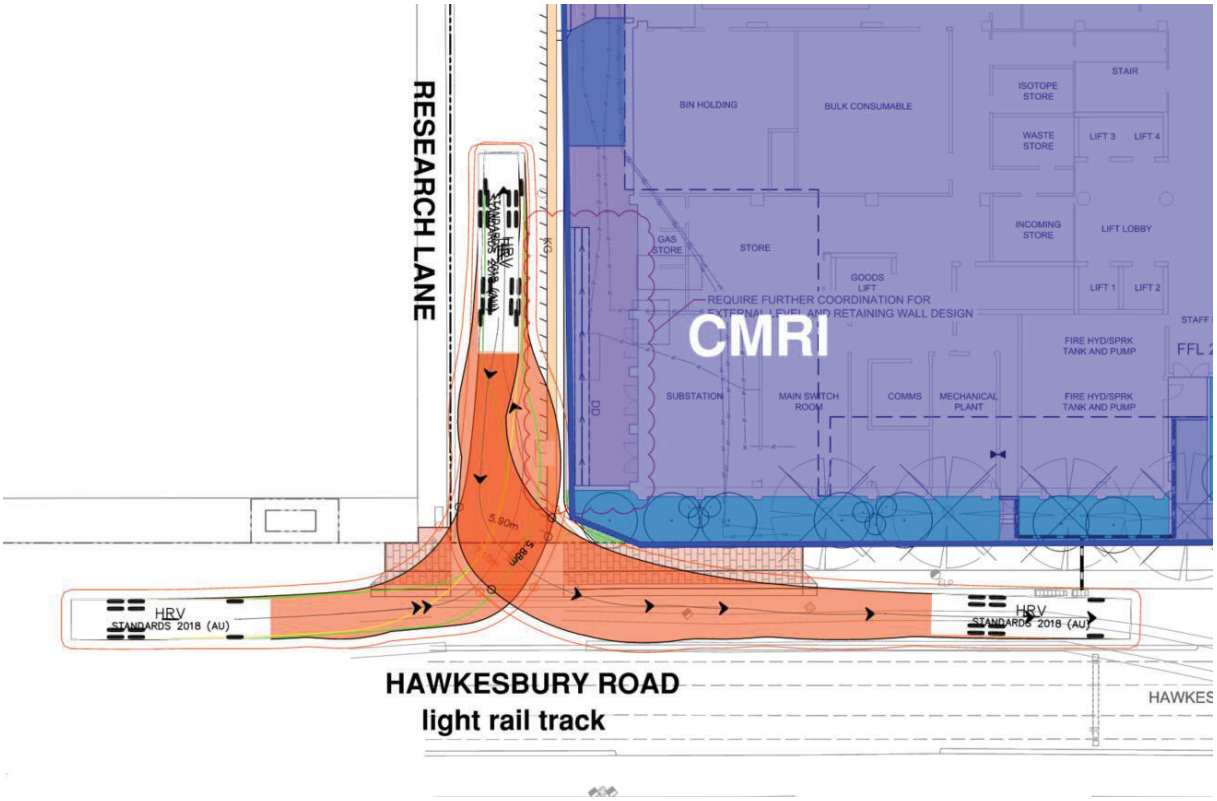


Figure 4: Swept Path Analysis

Source: TTW (drawing no.: 212012-TTW-00-DR-CI-03011_1 overlay, Rev [C])

As shown above, the proposed extent of pavement and driveway crossover have been modified to ensure that HRV movements can occur outside the light rail corridor. The swept path analysis above demonstrates that the vehicle body can be wholly accommodated within the driveway crossover zone and the vehicle lane of Hawkesbury Road. Section 2.5 details any potential impacts as a result of such vehicle movement.

That said, given the proximity of the vehicle movement to the adjacent footpath, landscaping, and light rail infrastructure, measures are suggested to ensure the safety of all user groups. Section 3 outlines the recommended measures and procedures.

2.4 Operational Details

Table 1 below provides a summary of the expected type and frequency of various service vehicle movements, while Table 2 summarises the total movements over various operating periods. Note that in addition to the nominated HRV, smaller service vehicles such as the 8.8-metre Medium Rigid Vehicles (MRV), and the 6.4-metre Small Rigid Vehicles (SRV) will also be utilised.

Table 1: Service Vehicles Movement Details
Source: CMRI

Delivery Type	Service Vehicle Size	Operating Times / Hours	Frequency
Nitrogen Truck	MRV / HRV	7:00 am – 11:00 am	weekly
Nitrogen Truck	MRV	7:00 am – 9:00 am	weekly
Coregas (carbon dioxide) Truck	MRV / HRV	2:00 am – 5:00 am	weekly
Waste Collection	10.5 m waste truck	3:00 am – 6:00 am	daily
Bedding Pallet	MRV	7:00 am – 3:00 pm	every 3 weeks
Feed Pallet	MRV	7:00 am – 3:00 pm	every 3 weeks
FedEx	MRV	7:00 am – 3:00 pm	daily
Toll	SRV / MRV	7:00 am – 3:00 pm	daily
DHL	SRV / MRV	7:00 am – 3:00 pm	twice daily
Cope	MRV	7:00 am – 3:00 pm	fortnightly
MNX	SRV	7:00 am – 3:00 pm	twice daily
Australia Post	SRV	7:00 am – 3:00 pm	twice daily

Table 2: Service Vehicles Movement Summary

Total Frequency		
Daily	**Weekly**	**Monthly**
9 movements	67 movements	292 movements

Table 3: Light Rail Servicing Periods
Source: Transport for NSW

Servicing Period	Approximate Frequency
5:00 am – 7:20 am	every 10 minutes
7:20 am – 7:20 pm	every 7 – 8 minutes
7:20 pm – 11:30 pm	every 10 minutes
11:30 pm – 1:30 am	every 15 minutes

Based on movement details summarised in Table 1, only two services – nitrogen trucks and Coregas trucks, have the potential to utilise HRVs. Both services occur on a weekly basis only, in the context of overall servicing demand, this represents a minor proportion of service vehicle movements: with only up to two potential HRV movements per week, and approximately 67 movements per week, this equates to less than 3% of the weekly servicing movements. The very low frequency significantly minimises any interaction opportunities between HRVs and light rails, thereby reducing any associated safety risks. Importantly, these services are identified as being capable of utilising either MRVs or HRVs, meaning that HRVs are not always required.

In terms of delivery timing, one of the weekly HRV movements occurs outside light rail operating periods, resulting in no interface with the light rail corridor. The other HRV movement may occur during light rail operating hours and potentially within peak periods; however, given that this occurs only once per week, it is considered acceptable when assessed against the frequency and predictability of the light rail services (see Table 3).

Due to the infrequent use and minimal overlap with light rail operations, these numbers are considered to be infrequent and deemed acceptable.

2.5 Analysis of Impacts

2.5.1 Light Rail Infrastructure

As shown in Section 2.3 above, both entry and exit movements of the HRV would be operating adjacent to the Hawkesbury Road light rail track.

That said, the swept path analysis shows that the pavement / driveway crossover upgrade would allow HRV movements to be wholly contained within the vehicular domain, with no requirement to cross into the light rail corridor. Therefore, there are no anticipated impacts to the light rail infrastructure as a result of the HRV movement. The two are anticipated to operate independently, with no operational overlap. For details of the relevant management and monitoring measures see Section 3.

2.5.2 Pedestrians

Due to the wide turning movement required to avoid the light rail corridor, the driveway crossover at the pedestrian footpath is longer than what would be typical or preferred, with a total crossover length of approximately 28 metres.

Under the provisions of Road Rules 74 and 75, drivers are required to give way to pedestrians walking along Hawkesbury Road when entering or leaving Research Lane. This is reinforced by the existing continuous footpath treatment and paving design, which would be retained. Therefore, while the crossover is larger than usual, pedestrians retain the right of way. Visibility for drivers to the footpath is good in both directions, for drivers to be able to identify nearby pedestrians.

HRV movements are not expected to result in adverse impacts to the pedestrian footpath / pedestrians, provided the appropriate management measures such as signage placement and traffic control, are implemented and maintained. Such measures will ensure pedestrians are adequately alerted to service vehicle movements and can continue to use the footpath without undue disruption.

Besides, as detailed in Section 2.4 above, vehicle movements are expected to be infrequent, of short duration and outside of peak hours. Pedestrian volumes along Hawkesbury Road during these times are expected to be relatively minor.

Based on the proposed controls, HRV movements can be managed in a predictable manner, with pedestrian safety maintained at all times. Accordingly, no impacts on pedestrians are anticipated as a result of the site access arrangement.

2.5.3 Pavement and Landscaping

As detailed further in this report, appropriate traffic management measures will be implemented to manage HRV movements and protect the surrounding infrastructure.

The section of pavement (identified in Figure 5 below) over which HRVs will travel on has been designed to a heavy-duty standard, with sufficient structural capacity to safely accommodate HRVs without a risk of pavement distress or damage. Accordingly, no adverse impacts on the pavement are anticipated as a result of HRV movements.

Landscaping elements located adjacent to the vehicle path are not expected to be affected, provided HRVs movements remain within the designated access area.

On this basis, the potential for pavement degradation or damage to landscaping can be negated. No impacts to pavement or adjacent landscaping are therefore anticipated during site operations.

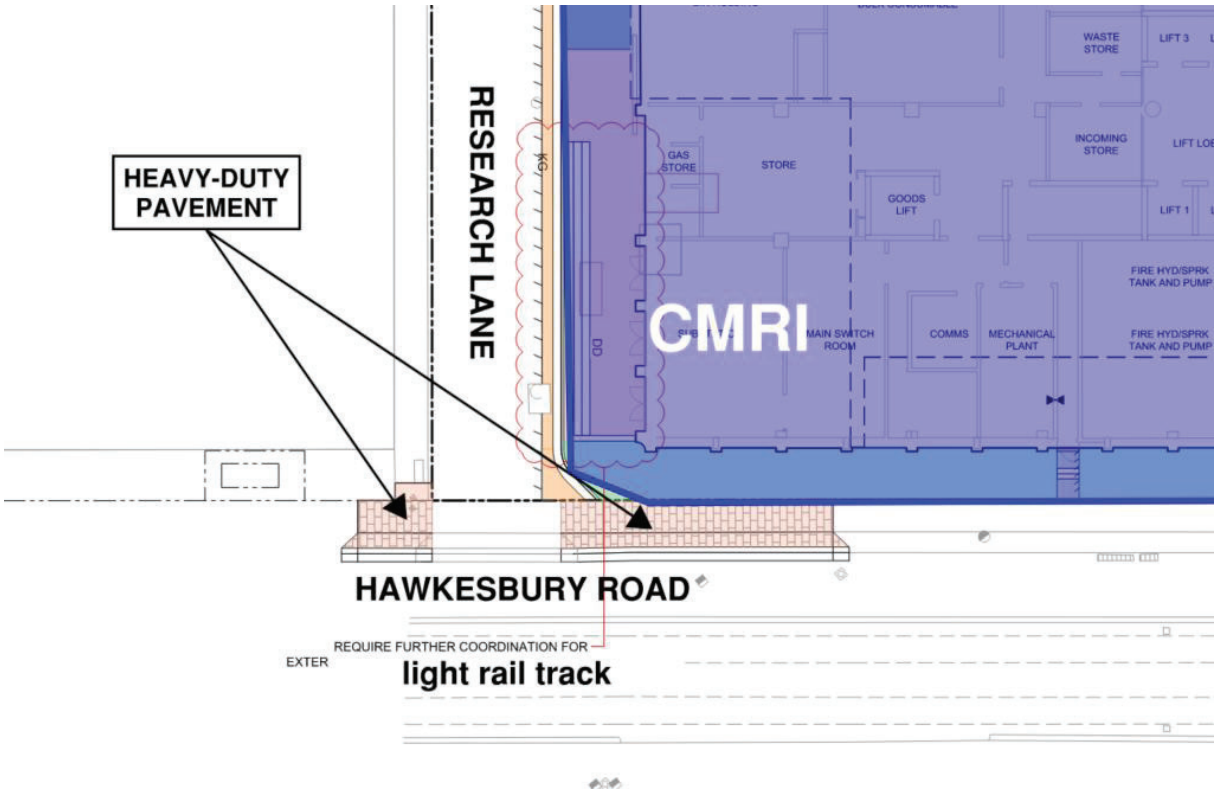


Figure 5: Pavement Design
Source: TTW (drawing no.: 212012-TTW-00-DR-CI-03011, Rev [C])

Section 3 Management and Compliance

The details presented in the following section are indicative and preliminary only. Subject to the approval of the SSDA and consultation with relevant authorities, a detailed Site Access Management Plan can be prepared prior to the operation of CMRI to ensure the implementation of the proposed measures and procedures, if deemed necessary by DPHI.

3.1 Access Management

As summarised in Section 2.4, anticipated HRV movements are infrequent and are generally expected off-peak, therefore it is not considered necessary to introduce an enforceable limit on HRV access. There may be unforeseen circumstances under which a peak period delivery may occur. Given that the swept path analysis shows that these movements can be accommodated without introducing adverse impacts to the light rail corridor and other nearby infrastructures, these unforeseen infrequent events would be considered tolerable.

That said, prior to arrival at the site, it is suggested that drivers undertake an induction briefing to be made aware of the site constraints, and the following are recommended:

- Drivers are to notify the relevant personnel (e.g., Dock Manager) on-site before attending the site. Drivers are to be provided with each party's contact details, and methods of communication are to be outlined clearly.
- Drivers are to be made aware of the proximity of the adjacent light rail infrastructure, and that the access manoeuvres must be performed in low speed.
- A copy of the detailed Site Access Management Plan (or the most relevant up-to-date document).

3.2 Operational Signage and Vehicle Delineation

Signage are recommended to be installed at relevant locations (e.g. the access point at the Hawkesbury Road – Research Lane intersection) to ensure pedestrians are aware of service vehicle movements in the vicinity. Locations of these signs are to be confirmed on completion of the development, an example of a warning signage is provided in Figure 6.

Figure 6: Signage Example
Source: TfNSW Sign Register

In addition to signages, pavement markings are also recommended to clearly delineate vehicle travel paths and reinforce intended circulation patterns and guide vehicles safely through the site. Figure 7 below shows an example of such marking nearby the site, at the Hawkesbury Road – Hainsworth Street intersection.

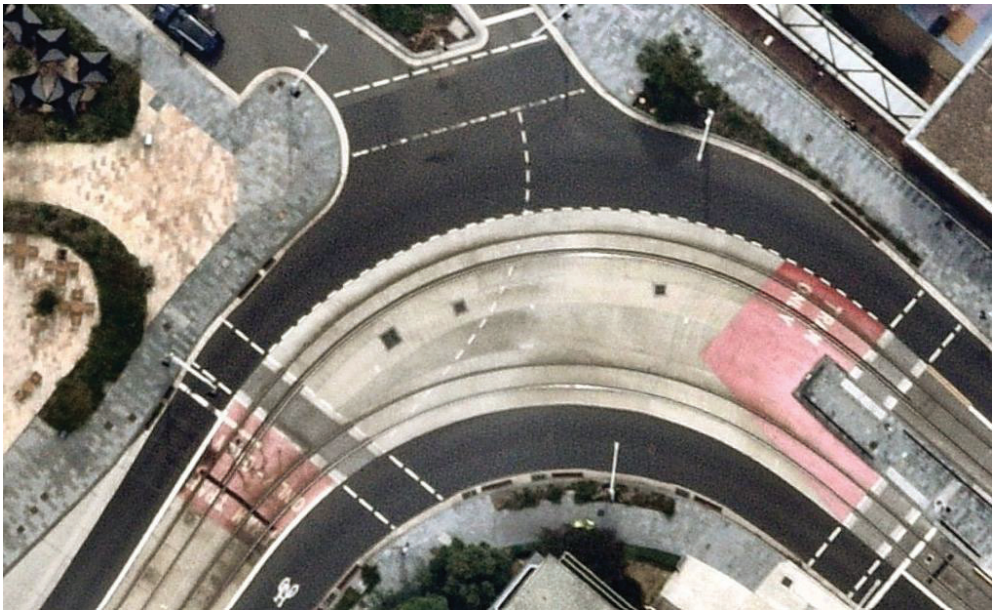


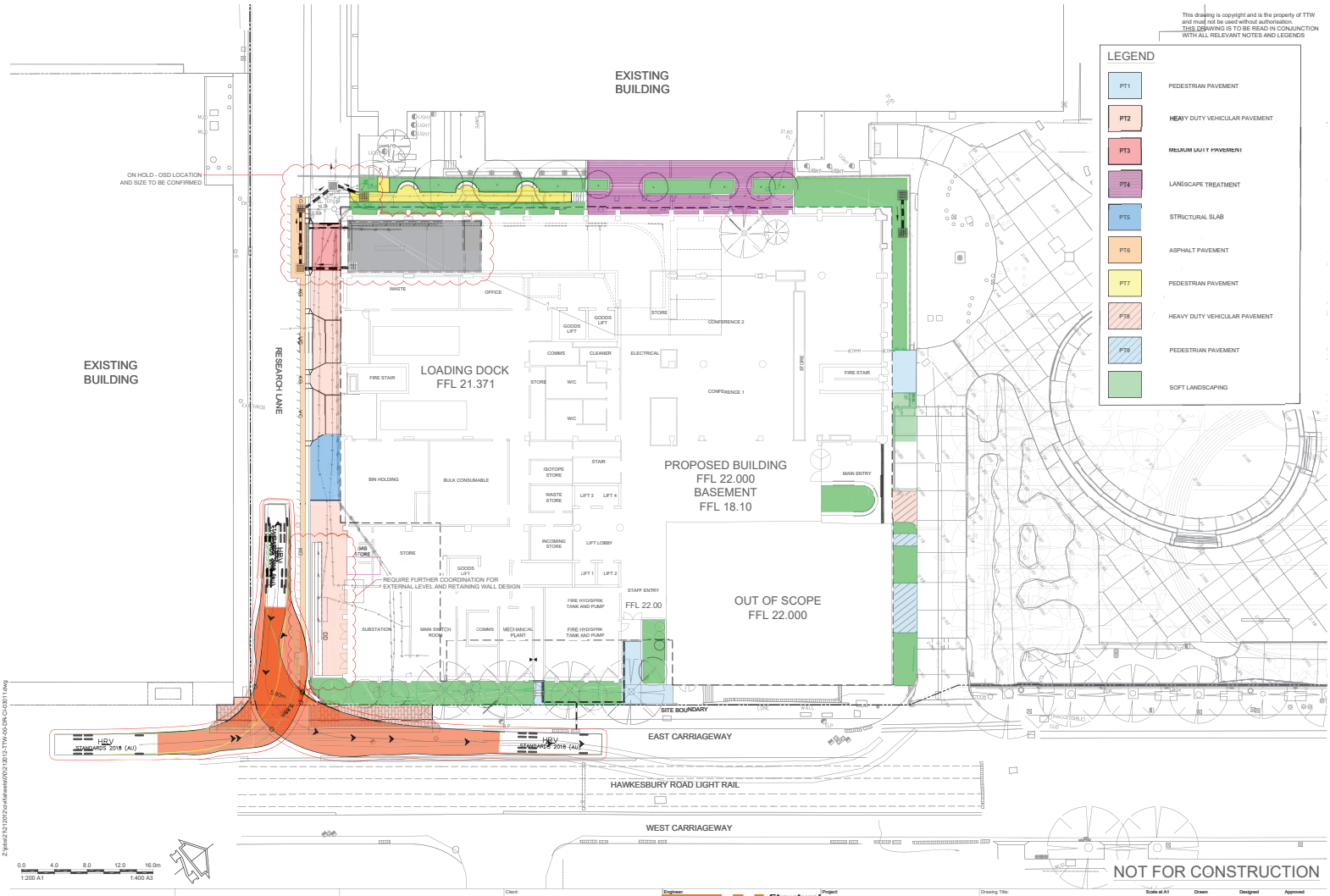
Figure 7: Vehicle Delineation Pavement Marking
Source: Nearmap

3.3 Ongoing Monitoring

To ensure the management of such access arrangement is operating satisfactorily, the measures outlined in the detailed SAMP should be reviewed and monitored over time. To assist in monitoring the operations, the following should be considered:

- Undertake observations to inform whether service vehicle arrivals and departures are consistent with the permitted timeframe.
- Record the number of service vehicles accessing the site on a regular basis, to ensure that is consistent with the maximum permissible frequency as noted in Table 1.
- The person-in-charge (e.g., dock manager) should monitor the access arrangement to ensure that the turning movement is wholly contained within the nominated domain.
- Keep records of any accidents or near misses occurring within or around the access point.
- Review any complaints received from any users.

Appendix A Swept Path Analysis



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